

**10th INTERNATIONAL CONFERENCE ON
EMERGING TRENDS IN ENGINEERING AND
TECHNOLOGY**

ICETET'23

28th & 29th April 2023



Organized by

PANDIAN SARASWATHI YADAV ENGINEERING COLLEGE

Arasanoor, Madurai – Sivagangai Highway,

Tamil Nadu – 630 561.

INDIA

PREFACE

The Tenth International Conference on Emerging Trends in Engineering and Technology [ICETET'23] was conducted on 28th and 29th April 2023. The ICETET'23 was sponsored by Pandian Saraswathi Yadav Engineering College.

Pandian Saraswathi Yadav Engineering College was established in September 2000, by “Hind Rattan” Mr. Malaysia S. Pandian, with the sole aim of rendering quality technical education to economically weaker and down-trodden students. This college is located predominantly in a rural area on the State Highway (SH-33) connecting Madurai and Thondi. It is situated 25km from Madurai (towards Thondi) and 15km from Sivagangai (towards Madurai).

The college offers Ten UG Programmes, Five PG Programmes and Three Ph.D Programmes. The infrastructural and instructional facilities are created as per AICTE (All India Council for Technical Education), New Delhi and Anna University, Chennai norms with state-of-the-art equipments and highly qualified and motivated faculty members.

The aim of this conference is to bring together the most distinguished scientists, research scholars, academicians and PG scholars to discuss the latest technological developments as well as further directions in the field of Civil, Mechanical, Electrical and Information and Communication Engineering.

We would like to express our sincere thanks to our beloved chairman, “Hind Rattan” Mr. Malaysia S. Pandian, for providing us all the support for the conduct of this conference. We also express our sincere gratitude to Er. S. P. Varadharajan, Managing Director for the support towards the conference, we gratefully acknowledge Dr. R. Raja, Principal, for having shared his decades of experience in configuring this conference.

We sincerely thank Dr. K. R. Premlatha, M.E., Ph.D (Convenor, ICETET'23) Head of the CSE department for her suggestion in making this conference a grand success. We express our thanks to all the technical and advisory committee members for their cordial relation during various process of the conference.

Organizing Committee

ICETET'23

About the College

Pandian Saraswathi Yadav Engineering College [PSYEC] was established in the year 2000 by a NRI entrepreneur “Hind Rattan” Mr. Malaysia S. Pandian, the Chairman of PSYEC, with vision to educate more rural students in the field of engineering and technology in order to pave the way for industrial prosperity and socio-economic development of our country. PSYEC is located on Madurai – Sivagangai National Highway, 27km from Madurai. The campus is spread over 70 acres of land in a serene atmosphere, free from pollution and it is highly conducive for studies. PSYEC is 22 years old, ISO 9001:2008 certified Institution. The course offered in PSYEC are approved by AICTE, New Delhi and affiliated to Anna University, Chennai. PSYEC offers 10 UG, 5 PG and 3 Ph.D., programmes in Engineering and Technology.

About the Departments

Initially the department of CSE, ECE and EEE was started in the year 2000. The department of IT was started in the year 2001. The department of Mechanical Engineering was started in the year 2006 and the department of Civil Engineering was started in the year 2007. All these departments have well qualified and highly experienced faculty members with Ph.D. degrees. PSYEC has signed MOU with many corporate and conducts training and certification Programme and also campus drives for the placement. PSYEC a member of ICT Academy of the Tamil Nadu Government conducts authorized seminars and workshops to our faculty members. Also, PSYEC is a member of CII, which organizes many of the guest lecturers from various industries and corporate and motivates the students to become entrepreneurs. Many students are active members of associations like IEEE, ISTE, CSI etc. Faculty members of all these departments are actively involved in research in various engineering disciplines and Technologies.

KEYNOTE ADDRESS



Mr. Emiliano De Laurentiis,

Founder & Edtech Innovator,

Knowledge Avatars Inc. (AI-powered tutors),

North Adams, Massachusetts,

United states

Forming a Symbiotic Relationship with AI

Abstract:

Steve Jobs said that computers are a tool to expand our minds, not for the passive absorption of information. The Internet has yet to quite live up to that expectation. Can AI bring us to a Socratic learning environment? How can AI help to extend your capabilities as teachers and students? In this keynote, Emiliano De Laurentiis will consider the history and motivation behind using AI, look at its applications today, and project its evolution in education over the next few years. As AI becomes more integrated into our daily lives, it is important to consider how we can form a symbiotic relationship with this technology. Here are a few ways to do so:

Collaborate: One way to form a symbiotic relationship with AI is to work alongside it to achieve shared goals. For example, in the workplace, employees can use AI-powered tools to automate repetitive tasks, freeing up time for more creative work. **Learn from AI:** AI can analyze large amounts of data and provide insights that humans may miss. By analyzing these insights, humans can learn from AI and make more informed decisions. **Train AI:** Humans can help improve AI algorithms by providing data sets for machine learning and fine-tuning AI models. This process can lead to better accuracy and more useful AI applications. **Maintain ethical standards:** As AI becomes more integrated into our lives, it is important to maintain ethical standards and ensure that the technology is used for the benefit of all. This includes protecting privacy and avoiding bias in AI algorithms. **Embrace new possibilities:** Finally, to form a symbiotic relationship with AI, it is important to embrace new possibilities and be open to exploring new ways that AI can improve our lives. This can involve experimenting with new AI-powered tools or developing new applications of AI technology. Overall, forming a symbiotic relationship with AI involves working collaboratively with the technology, learning from it, maintaining ethical standards, and embracing new possibilities. By doing so, we can ensure that AI is used in a way that benefits everyone.

KEYNOTE ADDRESS



Dr. HO LINGEE,

Associate Professor,

Faculty of Chemical Engineering & Technology,

University Malaysia Perlis (UniMAP),

Malaysia

SUSTAINABLE WASTEWATER TREATMENT FOR REMOVAL OF ORGANIC POLLUTANTS IN WASTEWATER

Abstract:

Sustainable wastewater treatment involves the use of technologies and processes that are environmentally friendly, economically viable, and socially acceptable. When it comes to the removal of organic pollutants from wastewater, there are several sustainable treatment methods that can be used: Biological Treatment: This involves the use of microorganisms to break down organic pollutants into simpler and less harmful substances. The most common biological treatment methods are activated sludge, trickling filters, and biofilm reactors. Phytoremediation: This method involves the use of plants to remove pollutants from wastewater. Plants can absorb and metabolize organic pollutants, converting them into less harmful substances. Wetlands, constructed wetlands, and Phyto treatment systems are some of the common phytoremediation methods. Membrane filtration: This method involves the use of membrane filters to physically separate organic pollutants from wastewater. Membrane filtration includes microfiltration, ultrafiltration, nanofiltration, and reverse osmosis. Adsorption: This method involves the use of materials like activated carbon, zeolites, and silica gel to adsorb organic pollutants from wastewater. Advanced Oxidation Processes (AOPs): AOPs involve the use of chemical reactions to break down organic pollutants into simpler and less harmful substances. Some of the common AOPs are ozonation, UV radiation, and Fenton's reagent. Overall, sustainable wastewater treatment for the removal of organic pollutants involves the use of various methods that can be combined to achieve the desired results. It is important to consider the environmental, economic, and social impacts of these treatment methods when selecting the appropriate one for a specific application.

ORGANIZING COMMITTEE

CHIEF PATRONS

“Hind Rattan” Malaysia S. PANDIAN Ex.,M.L.A.,
Chairman, PSY Group of institutions

Mr. P. SARAVANAN
Managing Director, PSY Group of institutions

Er. S. P. VARADHARAJAN
Managing Director, PSY Group of institutions

PATRONS

Dr. R. RAJA, M.E., Ph.D.,
Principal, PSYEC

Dr.M.Murugan, M.Sc., M.Phil., PGDCA., Ph.D.,
Director, Academic & Research, PSY Group of institutions

Dr.R.Palanichamy, M.Tech., Ph.D.,
Director, Academic & Research, PSYEC

CONVENER

Dr.K.R.PREMLATHA, M.E.,Ph.D.,
HOD-CSE, PSYEC

CO-CONVENER

Dr.A.ASKARUNISA, M.E.,Ph.D.,
Professor-CSE, PSYEC

ORGANIZING CHAIR

Dr. G. SUBRAMANIAN, M.Sc., M.Phil., Ph.D.,

Dr. K. KUMARESAN, M.Sc., M.Ed., Ph.D.,

Dr. C. MURUGAN, M.E., Ph.D.,

Dr. S. MEENAKSHI SUDARVIZHI, M.E., Ph.D.,

Dr. S. RAJAMUNESWARAN, M.E., Ph.D.,

Dr. K. D. JAGANATHAN, M.E., Ph.D.,

Dr. S. MANIKANDAN, M.E., Ph.D.,

Dr. S. REGINA, M.E., Ph.D.,

Dr. M.R. MANIKANDAN, M.Sc., M.Phil., Ph.D.,

Dr. J. INDRA MERCY, M.A., M.Phil., Ph.D.,

Dr. A. MARICHAMY, M.Sc., M.Phil., Ph.D.,

Dr. C. THIRUVALAR SELVI, M.Com., M.Phil, Ph.D.,

Prof. M. RADHA KRISHNAN, M.E.,

Prof. S. PANDIMEENA, M.E.,

Prof. P. PADMASRI, M.E.,

Prof. P. JERLIN BELSIYA, M.Sc., M.Phil., B.Ed.,

CO-ORDINATORS

Mr. S. KARTHIKEYAN, AP/CSE

Ms. S. YOGESHWARI, AP/MECH

Ms. M. KASTHURI, AP/CIVIL

Mr. N. SARAVANA BABU, PLACEMENT HEAD

Mr. T. PONVEL MURUGAN, AP/MECH

Mr. R. PANDITHURAI, AP/MECH

Mr. S. POUNRAJ, AP/MECH

Mr. J. GIRISH GOWTHAM, AP/EEE

Table of Contents

DEPARTMENT: CIVIL ENGINEERING

S.No.	Paper ID	Title of the Paper & Author(s) Name	Page No.
1.	ICCE101	WASTEWATER TREATMENT BY PHYTOREMEDIATION USING WATER HYACINTH AND DUCKWEEDS <i>V.Vasanthasena¹, Dr.P. Ganeshprabhu², S. Brintha³</i>	CE1
2	ICCE102	REPLACEMENT OF COARSE AGGREGATE AND FINE AGGREGATE WITH COCONUT SHELL AND QUARRY DUST <i>S.Bhuvaneshwari¹, I.ReginaMary²</i>	CE1
3	ICCE103	FLEXURAL BEHAVIOUR OF REINFORCED CONCRETE WITH POLYPROPYLENE AND CRIMPED STEEL FIBER <i>S.Chithradevi¹, I.ReginaMary²</i>	CE2
4	ICCE104	GREEN CONCRETE USING FOUNDRY SAND AND FLYASH <i>C.K.Abinaya¹</i>	CE2
5	ICCE105	UTILIZATION OF RECYCLED PLASTIC WASTE AS REPLACEMENT OF COARSE AGGREGATE IN PERVIOUS PAVER BLOCK <i>J. Miruthunch Ram¹, A. Vijayendran², Mr. K. Hariharan³</i>	CE3
6	ICCE106	FLEXURAL BEHAVIOR OF CONCRETE BEAM WITH PARTIAL REPLACEMENT OF QUARRY DUST AS FINE AGGREGATE <i>Dr. S.Thilagavathi¹, G. Gayathri²</i>	CE3
7	ICCE107	EXPERIMENTAL STUDY ON PARTIALLY REPLACEMENT OF CEMENT BY USING RICE STRAW ASH <i>C. Aruljenifar¹, S. Praveena², J. Lilly john³, G. Gayathri²</i>	CE4

8	ICCE108	<p style="text-align: center;">USANCE OF GROUNDNUT SHELL ASH AND WASTE CARDBOARD PULP IN CONCRETE</p> <p style="text-align: center;"><i>S. Muthulakshmi¹, K. Priyadharshini², S. Bhuvani³, Mrs.P.Dennis Flora²</i></p>	CE4
9	ICCE109	<p style="text-align: center;">UTILIZATION OF SOFT DRINK BOTTLE CAPS AND PALM FIBRE IN CONCRETE</p> <p style="text-align: center;"><i>V.Ragavi¹, T.Ajitha², V.Divya³, G.Mangaiyarkarasi⁴</i></p>	CE5
10	ICCE110	<p style="text-align: center;">ANALYSIS AND DESIGN OF STEEL TRUSS TOWER CONFIGURATION AND BRACINGS BY USING STAAD PRO</p> <p style="text-align: center;"><i>K.Subabalaji¹, K.Kathiravan²</i></p>	CE5
11	ICCE111	<p style="text-align: center;">BUILDING EFFECTIVENESS COMMUNICATION RATIOS FOR IMPROVED BUILDING LIFE CYCLE</p> <p style="text-align: center;"><i>S.Harikrishnan¹, S.Muthumari²</i></p>	CE6
12	ICCE112	<p style="text-align: center;">EXPERIMENTAL PROCESS OF GROUND WATER POLLUTION AT SIVAGANGAI DISTRICT</p> <p style="text-align: center;"><i>G. Vignesh¹, S.Yasin², P.Kavi Priya Devi²</i></p>	CE6
13	ICCE113	<p style="text-align: center;">CONSTRUCTION CHEMICALS IN INDIA – A MARKET SURVEY</p> <p style="text-align: center;"><i>P. Kishore¹, M. Azhaguraj², Sakthivel Ramanathan³</i></p>	CE7
14	ICCE114	<p style="text-align: center;">EXPERIMENTAL STUDY OF BIO-COAGULANT AND CHEMICAL COAGULANT FOR WASTEWATER TREATMENT</p> <p style="text-align: center;"><i>M.Rohini Shanmugapriya¹</i></p>	CE7
15	ICCE115	<p style="text-align: center;">EXPERIMENTAL INVESTIGATION OF LITRACON USING WASTE OPTICAL FIBRES</p> <p style="text-align: center;"><i>Jeyasurya.P¹, Pradeep Raj.N², Theerankumar.M³, Vinoth.S⁴, R.Sigappy⁵</i></p>	CE8
16	ICCE116	<p style="text-align: center;">PERFORMANCE OF COLUMN WITH DIFFERENT MATERIALS IN CLAY SOIL</p> <p style="text-align: center;"><i>Ms. Raci. Mahizhini¹</i></p>	CE8

17	ICCE117	<p>WATERPROOF WEATHERING TILES</p> <p style="text-align: center;"><i>S.A.Varsha¹, K.Jana Priya², V.Aishwarya³, S.Venkada Priya⁴</i></p>	CE9
18	ICCE118	<p>ANALYSIS AND DESIGN OF STEEL FOOTOVER BRIDGE BY USING STAAD PRO</p> <p style="text-align: center;"><i>C. Meena¹, Ms. R. Parameshwari²</i></p>	CE9
19	ICCE119	<p>EXPERIMENTAL INVESTIGATION ON USAGE OF WASTE BRICK AND KADAPPA STONE AS PARTIAL REPLACEMENT OF COARSE AGGREGATE</p> <p style="text-align: center;"><i>G. Vijayaprasanth¹, Mr.B. Muthumari²</i></p>	CE10
20	ICCE120	<p>EXPERIMENTAL INVESTIGATION ON PARTIAL REPLACEMENT OF CEMENT BY RICE HUSK ASH AND FINE AGGREGATE BY PLASTIC WASTE ON CEMENT BLOCK</p> <p style="text-align: center;"><i>Vickram.R.R¹, Ms.G. Anitha²</i></p>	CE10
21	ICCE121	<p>AN EXPERIMENTAL INVESTIGATION ON STRENGTH OF CONCRETE BY PARTIAL REPLACING M-SAND WITH STEEL SLAG AS FINE AGGREGATE</p> <p style="text-align: center;"><i>K. Ponvannan¹, S. Harikrishnan²</i></p>	CE11
22	ICCE122	<p>EXPERIMENTAL INVESTIGATION ON USAGE OF AGRO WASTE AND GLASSWASTE AS PARTIAL REPLACEMENT OF COARSE AGGREGATE</p> <p style="text-align: center;"><i>M.Hariharan¹, Mr.P. Vinoth Kumar²</i></p>	CE11
23	ICCE123	<p>EXPERIMENTAL STUDY ON PARTIAL REPLACEMENT OF COARSE AGGREGATE IN CONCRETE BY USING PEBBLE STONES AND MARBLE WASTE</p> <p style="text-align: center;"><i>K.Syed Ali Ibrahim¹, Ms.G.Anitha²</i></p>	CE12
24	ICCEST1	<p>A REVIEW PAPER ON SEWAGE WASTE WATER TREATMENT IN DISARRAY OF MADURAI</p> <p style="text-align: center;"><i>Ms.M.Kasthuri¹</i></p>	CE12
25	ICCEST2	<p>DEVELOPING SUSTAINABLE RAILWAY INFRASTRUCTURE WITH LUMINOUS CONCRETE SLEEPERS</p> <p style="text-align: center;"><i>Ms. G.Ragha Dharini¹</i></p>	CE13

26	ICCE124	<p>FLEXURAL BEHAVIOUR OF CONCRETE REINFORCED WITH POLYPROPYLENE AND CRIMPED STEEL FIBRE</p> <p style="text-align: center;"><i>Mrs.I.Regina Mary¹, Dr.T.Bhagavathi Pushpa²</i></p>	CE13
27	ICCEST3	<p>EXPERIMENTAL RELATIONSHIP BETWEEN MECHANICAL STRENGTH OF PARTIAL REPLACEMENT OF GRANITE AS COARSE AGGREGATE</p> <p style="text-align: center;"><i>Dr.S.Meenakshi Sudarvizhi¹, Jeeva Prasath²</i></p>	CE14
28	ICCE125	<p>EXPERIMENTAL STUDY ON CONVENTIONAL BRICK AS PARTIAL REPLACEMENT OF SUGARCANE BAGASSE ASH AND COCONUT FIBRE</p> <p style="text-align: center;"><i>M.Parvesh Musaraf¹, C.Ravikumar²</i></p>	CE14
29	ICCE126	<p>AN EXPERIMENTAL INVESTIGATION ON GGPS PARTIALLY REPLACEMENT WITH CEMENT</p> <p style="text-align: center;"><i>M.Sudarsini¹, P. Vinothkumar²</i></p>	CE15
30	ICCE127	<p>EXPERIMENTAL INVESTIGATION OF PAPER PULP AND CLOTH WASTE PARTIALLY REPLACED IN CONCRETE</p> <p style="text-align: center;"><i>M.Veerachandran¹, S.Harikrishnan²</i></p>	CE15
31	ICCEST4	<p>EXPERIMENTAL INVESTIGATION ABOUT THE BEHAVIOURS OF ACCELERATING ADMIXTURES ON PROPERTIES OF CONCRETE</p> <p style="text-align: center;"><i>Mr. D.Selvaganesh¹</i></p>	CE16
32	ICCEST5	<p>EXPERIMENTAL INVESTIGATION ABOUT THE PYROLYSIS PROCESS BY USING WOOD SAW DUST AND SHREDDED PLASTIC WASTE</p> <p style="text-align: center;"><i>Mr. D.Selvaganesh¹</i></p>	CE16
33	ICCEST6	<p>EXPERIMENTAL INVESTIGATION ABOUT THE REMOVAL OF CHROMIUM IN WASTEWATER BY USING LOW – COST ADSORBENT</p> <p style="text-align: center;"><i>Mr. A . Suthan M.E¹</i></p>	CE17
34	ICCE128	<p>INVESTIGATION ON THE FLEXURAL BEHAVIOR OF GEOPOLYMER FERROCEMENT SLABS WITH NANO-SILICA</p> <p style="text-align: center;"><i>M.Nanthini¹, Dr. R. Ganesan²</i></p>	CE17

35	ICCE129	<p>A STUDY ON BEHAVIOUR OF AXIALLY LOADED STEEL CONCRETE COMPOSITE LONG COLUMNS WITH BASALT, ARAMID, CARBON AND E-GLASS FIBER</p> <p style="text-align: right;"><i>S.Prabhakaran¹, Ms.R.Parameswari²</i></p>	CE18
36	ICCE130	<p>PERFORMANCE EVALUATION OF ANADARA GRANOSA IN NO-FINES CONCRETE</p> <p style="text-align: right;"><i>Sanath V.P¹, Dr. Mercy²</i></p>	CE18
37	ICCE131	<p>EXPERIMENTAL STUDY ON PARTIALLY REPLACEMENT OF COARSE AGGREGATE BY CINDER IN CONCRETE</p> <p style="text-align: right;"><i>M. Kanmani¹, B.Muthumari²</i></p>	CE19
38	ICCE132	<p>AN EXPERIMENTAL AND COMPARATIVE STUDY OF PLASTONE FROM POLYETHYLENE WITH FLY ASH, M- SAND AND RICE HUSK ASH</p> <p style="text-align: right;"><i>C. Durga devi¹, E. Hiroshini², S. Ragavi³</i></p>	CE19
39	ICCE133	<p>STRENGTH AND DURABILITY OF LIGHT WEIGHT CONCRETE BY PARTIAL REPLACEMENT OF OVER BURNT BRICK AS COARSE AGGREGATE</p> <p style="text-align: right;"><i>K.Thangapandiraja¹, M.Petchiyammal²</i></p>	CE20
40	ICCE134	<p>EXPERIMENTAL INVESTIGATION ON HYBRID FIBER REINFORCED CONCRETE</p> <p style="text-align: right;"><i>S.Ramesh¹, Dr.K.Ramesh²</i></p>	CE20
41	ICCE135	<p>COMPARATIVE STUDY ON EFFECT OF GROUND WATER AND EFFLUENT OF DAIRY INDUSTRY IN THE YIELD OF SHORT DURATION CROP</p> <p style="text-align: right;"><i>Kavi Priya Devi P¹</i></p>	CE21
42	ICCEI01	<p>HEAVY METALS REMOVAL FROM INDUSTRIAL WASTE WATER BY USING AGRO-INDUSTRIAL WASTES</p> <p style="text-align: right;"><i>N.Abdul kaja navas¹,D.Selvaganesh²</i></p>	CE21
43	ICCEI02	<p>REMOVAL OF TOXIC METALS FROM THE INDUSTRIAL WASTE WATER USING GROUNDNUT SHELL</p> <p style="text-align: right;"><i>N.Kowsika¹,O.Sharmila Begum²</i></p>	CE22

44	ICCEI03	<p>EXPERIMENTAL INVESTIGATION OF SOIL CONTAMINATION DUE TO GRANITE INDUSTRIAL WASTE</p> <p style="text-align: right;"><i>V.Mayakkannan¹, S.Mohammed Ali Jinnah²</i></p>	CE22
45	ICCEI04	<p>CO-APPLICATION OF BIOCHAR AND ORGANIC FERTILIZER PROMOTES THE YIELD AND QUALITY OF CROP AND TO DETERMINE THE PLANT GROWTH VARIATION</p> <p style="text-align: right;"><i>M.Priyanka¹, G.Ragha Dharini²</i></p>	CE23
46	ICCEI05	<p>APPLICATION OF COLLECTED WASTEWATER (TREATED) FROM VEHICLE MANUFACTURING INDUSTRY TO DETERMINE GROWTH RATE OF SHORT DURATION CROP</p> <p style="text-align: right;"><i>R. Hariharan¹, M.Appu Sriram²</i></p>	CE23
47	ICCEI06	<p>SUBSTITUTIONAL STUDY ON TANNERY SLUDGE ON BUILDING MATERIALS</p> <p style="text-align: right;"><i>B. Santhanabharathi¹, A. Sulthan²</i></p>	CE24
48	ICCEI07	<p>DESIGN OF UNIT SIZES OF A WATER TREATMENT PLANT FOR MADURAI CITY MUNICIPAL CORPORATION</p> <p style="text-align: right;"><i>J. Sudhahar¹, D. Selvaganesh²</i></p>	CE24
49	ICCEI08	<p>ENVIRONMENTAL IMPACT ASSESSMENT ON WATER SUPPLY PROJECT IN URBAN AREA</p> <p style="text-align: right;"><i>Tamilanban T¹, M.Appu Sri ram²</i></p>	CE25
50	ICCEI09	<p>LANDFILL LEACHATE MANAGEMENT CONTROL AND TREATMENT</p> <p style="text-align: right;"><i>S. Agniraja¹, M.Kasthuri²</i></p>	CE25
51	ICCEI10	<p>EXPERIMENT ON REMOVAL OF HEAVY METALS IONS AND DYEING COLOURS FROM TEXTILE INDUSTRIAL EFFLUENT USING PROSOPIS JULIFLORA</p> <p style="text-align: right;"><i>K.Janani¹, D.Selvag</i></p>	CE25
52	ICCEI11	<p>EVALUTION OF WASTE MANAGEMENT SYSTEMS FOR CHAMRAJ TEA FACTORY IN NILGIRIS TAMILNADU</p> <p style="text-align: right;"><i>S. Krishna Kumari¹, S.Mohammed Ali Jinnah²</i></p>	CE26

53	ICCEI12	TREATMENT OF KITCHEN GREY WATER USING NATURAL COAGULANTS <i>M. Ramya Kasthuri¹ G.Ragha Dharini²</i>	CE26
54	ICCEI13	TURBIDITY REMOVAL USING ACACIA NILOTICA AND EUCALYPTUS AS COAGULANT <i>P.Dinesh Kumar¹, M.Kasthuri²</i>	CE27
55	ICCEI14	ASSESSMENT OF GROUNDWATER QUALITY AND MAPPING BY GIS IN TAMIL NAGAR OF TIRUNELVELI CITY <i>K.Shalini¹, M.Kasthuri²</i>	CE27
56	ICCEI15	STABILISATION OF WASTE PLASTIC BY PYROLYZED OIL <i>G.Gowshikasen¹, S.Meenakshi Sudarvizhi²</i>	CE28
57	ICCEI16	CELLULAR LIGHT WEIGHT CONCRETE <i>A.Karthick¹, S.Mohammed Ali Jinnah²</i>	CE28
58	ICCEI17	PLANNING OF GREY WATER HARVESTING IN RESIDENTIAL AREAS <i>P. Selvin Kumaran¹, M.Appu Sriram²</i>	CE29
59	ICCEI18	EXPERIMENTAL INVESTIGATION ON CONCRETE BY USING BABOOL TREE LEAVES ASH <i>C.Santhakumar¹, S.Meenakshi Sudarvizhi²</i>	CE29
60	ICCEI19	EXPERIMENTAL INVESTIGATION ON BEHAVIOR OF FLY ASH BASED GEO-POLYMER MORTAR AT ELEVATED TEMPERATURE <i>Veena Gayathri G S¹, M.Appu Sriram²</i>	CE30
61	ICCEI20	EXPERIMENTAL STUDY ON USE OF WASTE PLASTIC MIX CONCRETE WITH SUPERPLASTICIZER <i>Dhanapriya¹, M.Appu Sriram²</i>	CE30
62	ICCEI21	IMPACT OF TITANIUM DIOXIDE NANOPARTICLES ON NUTRIENT AND CONTAMINANT REDUCTION IN WASTEWATER TREATMENT WETLANDS <i>K.Maheshwari¹, G.Ragha Dharini²</i>	CE31

63	ICCEI22	<p>EXPERIMENTAL ANALYSIS OF WASTE WATER CHARACTERISTICS ON RAMANAIKAN LAKE-HOSUR</p> <p style="text-align: center;"><i>K.R. Manju Yadav¹, O.Sharmila Begum²</i></p>	CE31
64	ICCEI23	<p>DESIGN AND FABRICATION OF EFFLUENT TREATMENT PLANT</p> <p style="text-align: center;"><i>M. Rishivandhana¹, O.Sharmila Begum²</i></p>	CE32
65	ICCEI24	<p>DESIGN OF AUDITORIUM HALL</p> <p style="text-align: center;"><i>A.Maharajan¹, S.Mohammed Ali Jinnah²</i></p>	CE32
66	ICCEI25	<p>OPTIMUM INVESTMENT OF RAINWATER HARVERSTING TECHNIQUES</p> <p style="text-align: center;"><i>S. Krishnaveni¹, S.Meenakshi Sudarvizhi²</i></p>	CE32
67	ICCEI26	<p>INVOLVEMENT OF CIVIL ENGINEERING STUDENTS IN WATER RESOURCES PROJECTS: A FIELD-BASED LABORATORY</p> <p style="text-align: center;"><i>J.shandhini¹, S.Meenakshi Sudarvizhi²</i></p>	CE33
68	ICCEI27	<p>EXPERIMENTAL STUDY ON STRUCTURE BEHAVIOR OR CASTELLATED REINFORCED CEMENT COCRETE BEAM</p> <p style="text-align: center;"><i>K.sowmiya¹, G.Ragha Dharini²</i></p>	CE34
69	ICCEI28	<p>FEASIBILITY STUDY ON AIR POLLUTION REMOVAL BY URBAN FORESTRY</p> <p style="text-align: center;"><i>G. Mohanasundaram¹, A. Sulthan²</i></p>	CE34
70	ICCEI29	<p>WATER QUALITY ANALYSIS OF ECOROOF RUNOFF IN PORTLAND</p> <p style="text-align: center;"><i>S. Rudhra¹, A.Sulthan²</i></p>	CE35

Table of Contents

DEPARTMENT: COMPUTER SCIENCE & ENGINEERING [CSE]

S.No.	Paper ID	Title of the Paper & Author(s) Name	Page No.
1.	ICCS101	FEATURE FUSION FOR FAKE INDIAN PAPER CURRENCY RECOGNITION IN VISUALLY IMPAIRED PEOPLE <i>R.Poonkodi¹, Mrs. L.Devi²</i>	CS1
2.	ICCS106	AI BASED CHATBOT APPLICATION IN FLUTTER WITH CHATGPT <i>Madhubala P¹, Prof.K.Petchiappan²</i>	CS1
3.	ICCS108	DEEP LEARNING OF MALWARE ANALYSIS AND DETECTION <i>S. Muthurathinam¹, I. Jayasheela²</i>	CS2
4.	ICCS109	WORKSUITE OFFICE WORKS WITH LEADS STATUS ON CRM PROJECT MANAGEMENT <i>S. Ishwarya¹, Mrs.L. Devi²</i>	CS2
5	ICCS111	CNN CLASSIFIER FOR KIDNEY STONE DETECTION <i>S.Saravanan¹, Dr.A.K.Ashfauk Ahamed²</i>	CS3
6	ICCS112	RISK ESTIMATION MECHANISM FOR IMAGES IN NETWORK DISTRIBUTION <i>Arunapriya.R¹, Dr.S.P. Valli²</i>	CS3
7	ICCS113	AUGURING THE HEREDITARY CHAOS IN THE WAY OF PARALLELISM <i>Ms. M. Sweetha¹</i>	CS4
8	ICCS117	SECURE AGRICULTURAL POTENTIAL THROUGH REMOTE SENSING IN THE GEOLOGICAL ERA OF SMART FARMING 6G TECHNOLOGY <i>K. Hemalatha¹, Dr. K.Somasundram²</i>	CS4
9	ICCS121	A SOFTWARE SYSTEM FOR INTEGRATED FOOD ORDER AND DELIVERY <i>Vigneshwaran M¹, Vishnu Chidambaram R², Balagi P³</i>	CS5
10	ICCS123	2D GAMING- WARZONE GATEWAY <i>Ashwath. R¹, Fargath Shahani.M², Dr. N. Mahalakshmi³, S.G. Ramapriyanga⁴</i>	CS5
11	ICCS124	DISASTER ZONE ALERTING APPLICATION <i>Asraf. I¹, Kabini.R², Selsiya.A³, Dr. N. Mahalakshmi⁴, S.G. Ramapriyanga⁵</i>	CS6

12	ICCS125	HEALTH CARE CHATBOT USING MACHINE LEARNING <i>S. Mukesh¹, T. Sowmithri², G.Sai Poojitha³, P.Bhavitha⁴, K.Vignesh⁵</i>	CS6
13	ICCS126	FLOWER INDENTIFICATION USING TENSORFLOW <i>K. Janahan¹, S. Harish Raja Selvan², M. Abhilashvisakan³, V. Harish⁴, K. Vignesh⁵</i>	CS7
14	ICCS127	ARDUINO OBSTACLE AVOIDING VOICE CONTROL ROBOT <i>G. Lydia¹, R. Priya², U. Lavanya sri³, G. Nagalakshmi⁴, M. Naasem bannu⁵</i>	CS7
15	ICCSST1	ACTIVE WIRELESS LAN ACCESS MANAGEMENT MODEL <i>D.Vanathi¹</i>	CS8
16	ICCS130	PERFORMANCE ANALYSIS OF VARIOUS MACHINE LEARNING-BASED APPROACHES FOR RISK ASSESSMENT AND CLASSIFICATION OF CORONARY HEART DISEASE <i>J Kowsalyadevi¹, P Geetha²</i>	CS8
17	ICCSST2	GENERALIZED EPILEPTIC SEIZURE ALERT SYSTEM USING MACHINE LEARNING <i>Dr Premlatha KR¹, R. Kaarthick²</i>	CS9
18	ICCSST3	OPTIMIZED FEATURE SELECTION BASED IDS USING MODIFIED WHALE OPTIMIZATION ALGORITHM IN IOT <i>Anusha Devi P¹</i>	CS9
19	ICCS131	A SURVEY: SIGN LANGUAGE TO TEXT/ SPEECH <i>Bala Vishwatharan .G¹, Poornima Priyanka .R²</i>	CS10
20	ICCS132	AN AI-BASED RESOURCE ALLOCATION MODEL FOR CLOUD COMPUTING ENVIRONMENTS <i>P. Ashwin kumar¹, R. Dhanush²</i>	CS10
21	ICCS134	Di-CVD TRI-LAYER CX CLASSIFIER BASED RISK PREDICTION MODEL <i>S.Thumilvannan¹, Dr.R.Balamanigandan²</i>	CS11
22	ICCSST4	OPTICAL CHARACTER RECOGNITION ON VIDEOS USING TESSERACT AND DEEP LEARNING <i>Dr Premlatha KR¹, R. Kaarthick²</i>	CS11
23	ICCSI01	INTELLIGENT TRAFFIC MONITORING SYSTEMS FOR VEHICLE CLASSIFICATION – A SURVEY <i>Abinaya.k</i>	CS12
24	ICCSI02	BLOCKCHAIN-BASED FEDERATED LEARNING FOR DEVICE FAILURE DETECTION IN INDUSTRIAL IOT <i>Mutheeswari.K¹, T.Jeeva Bharathi²</i>	CS12

25	ICCSI03	AN IMPROVED LSTM BASED FRAME WORK FOR CARDIOVASCULAR DISEASES RISK PREDICTION IN IMBALANCED BIG DATA <i>Balameenakshi. R¹, Karthikeyan S²</i>	CS13
26	ICCSI04	TWO TIER ARCHITECTURE FOR QUESTION PAPER PROTECTION USING WATER MARKING AND ENCRYPTION TECHNIQUE <i>Rathika R¹, Ms.P.Anusha Devi²</i>	CS13
27	ICCSI05	EMOTION DETECTION IN ONLINE SOCIAL NETWORK: A MULTI LABEL LEARNING APPROACH <i>Kaviya. B</i>	CS13
28	ICCSI06	DATA-DRIVEN APPROACH IN FOOT CARE: DETECTING DIABETIC FOOT ULCERS USING TRANSFER LEARNING ALGORITHMS <i>Harish Kumar</i>	CS14
29	ICCSI07	PET CARE BASED MOBILE APPLICATION <i>S.M.Madhumathi</i>	CS14
30	ICCSI08	IOT ENABLED CROP RECOMMENDATION AND AGRICULTURE FIELD MONITORING SYSTEM <i>M.Yogalakshmi¹, Ms. I. Gayathri Devi²</i>	CS14
31	ICCSI09	DIGITALISATION IN HEALTHCARE: AN ANALYSIS OF PROJECTS PROPOSED BY PRACTITIONERS <i>B.Pandimeena¹, Ms.D.Vanathi²</i>	CS15
32	ICCSI10	RELATIONSHIP BOND - AS – REBOND <i>V. Yogeshwaran</i>	CS15
33	ICCSST5	MAN-MACHINE INTERFACES IN CONTROL ROOMS CREATED AND ERGONOMICALLY DESIGNED USING AN ARTIFICIAL INTELLIGENCE APPROACH <i>A.Saranyapriya¹</i>	CS16
34	ICCSI128	PRODUCT BASED REVIEW ANALYSIS SYSTEM USING MACHINE LEARNING <i>Athithiyan S¹, Subiksha S², Swetha S³, Vignesh K⁴, Selvasheela K²</i>	CS16
35	ICCSI11	VIRTUAL EVENTS USING METAVERSE <i>K.Sugapriya¹</i>	CS17
36	ICCSI135	VIDEOBASED UNKNOWN PERSON DETECTION WITH HALERT SYSTEM FOR SMART HOME MONITORING <i>Mrs.S.Ummugulthum Natchiar¹, Mr.S.Thiyagarajan², Mr.J.Paul Santhosh Kumar³, Mr.T.Thirunavukkarasar⁴</i>	CS17

37	ICCS136	<p>STAND ALONE DISPLAY WITH VIRTUAL ASSISTANT</p> <p><i>A. Seeni Ameenullah¹, M. Dinesh², D. Sharukhan³, Mrs C. Indradevi⁴</i></p>	CS18
38	ICCS137	<p>VIRTUAL HEALTH ASSISTANT – FOR PREDICTING DISEASES</p> <p><i>Gowsika.G¹, Subiksha.R², Yogeshwari.M³, Mr.B.John samuel⁴</i></p>	CS18
39	ICCS120	<p>PYVOICE: DEVELOPMENT OF AN INTEGRATED SMART VOICE ASSISTANT SYSTEM</p> <p><i>Arun Manicka Raja M¹, Rejin Paul N R², Sumitha T³, Lohith⁴, Prajwal⁵, Jayanth⁶, Jaswanth⁷</i></p>	CS19
40	ICCS114	<p>PHISHING WEBSITE DETECTION USING MACHINE LEARNING RULES WITH CRYPTOGRAPHY TECHNIQUE</p> <p><i>Hari haran R¹, Mahendiran R², Santhosh kumar K³, Vikram D⁴, D. Vijayakumar⁵</i></p>	CS19

Table of Contents

**DEPARTMENT: ELECTRONICS AND COMMUNICATION ENGINEERING
[ECE]**

S.No.	Paper ID	Title of the Paper & Author(s) Name	Page No.
1.	ICEC102	ECO FRIENDLY SMART CLASSROOM <i>Susma.B¹, VasanthaKumar.M², Mrs.K.Isabella Rani³</i>	EC1
2.	ICEC103	REAL TIME IMPLEMENTATION OF SMART FAN CONTROL USING VOICE RECOGNITION <i>10Arunadevi.A¹, Subasowkiya.P², Gayathri.S³, Mrs.V.Gowsalya⁴</i>	EC1
3.	ICEC104	IOT BASED SMART LIGHT SYSTEM <i>Pandi Arasi.T¹, Dharani.C², Nithiya. VR³, Mrs.V.Gowsalya⁴</i>	EC2
4.	ICEC105	DETECTION OF BRAIN TUMOURS USING PRINCIPLE COMPONENT ANALYSIS COMBINED DEEP LEARNING NETWORK <i>M.Senbagam¹, Dr.A.C. Shagar²</i>	EC2
5.	ICEC108	AUTOMATED SMART SERICULTURE BASED IMAGE PROCESSING <i>K. Ajay Kumar¹, D. Vijitha²</i>	EC3
6.	ICEC109	PERFORMANCE ANALYSIS OF EFFICIENT SCHEDULING ALGORITHM FOR MAXIMIZING FAIR THROUGHPUT IN WIMAX NETWORKS <i>Mr.S. Sudhakar¹, Mr.J.G.Sabarish², Mr.S.Allwyn Anand³</i>	EC3
7	ICEC110	POLARIMETRIC SAR IMAGE CLASSIFICATION BASED ON ENSEMBLE DUAL BRANCH CNN AND SUPER PIXEL <i>P.Harish kumar¹, Dr.N.Mahalakshmi², S.G.Ramapriyanga³</i>	EC4
8	ICEC111	SMART DUSTBIN USING ESP32 <i>R. Jeevitha¹, Dr. N. Mahalakshmi², J. Adline vidhya³</i>	EC4
9	ICEC113	TIME EFFICIENT & COLLISIONS DETECTION NEIGHBOR DISCOVERY PROTOCOL FOR WIRELESS NETWORK <i>Mr.R.M.Senthilkumar¹, Dr. P.Rengaprabhu², Mr.B.Sundara Pandiyan³</i>	EC5

10	ICEC115	SMART ALERT SYSTEM FOR DROWSY DEIVER DETECTION <i>B.Santhiya¹, D. Meenu Sri², P. Praveena³, N. Rathimalar⁴, D. Nirmal Pradeep⁵</i>	EC5
11	ICECST1	ANALYSIS OF DIFFERENT METAMATERIAL STRUCTURES EMPLOYED WITH PATCH ANTENNA <i>Dr.S.Regina¹</i>	EC6
12	ICEC116	MAXIMIZING ENERGY EFFICIENCY IN GREEN HETNETS USING HPSOGA <i>Anu Disney D¹</i>	EC6
13	ICEC117	SMART POLE SYSTEM FOR HILL STATION ROAD MONITORING <i>Devakrishna .K¹, Dr. Parameswari S²</i>	EC7
14	ICEC118	SMART BUILDING INDOOR TEMPERATURE MONITORING USING IoT BASED ON MACHINE LEARNING <i>Rishivel. A¹, Dr. Parameswari S²</i>	EC7
15	ICECI01	DESIGN OF FAULT TOLERANT ADDER USING QCA <i>A.Bhavadharani¹, Mrs.M.Nilobhar²</i>	EC8
16	ICECI02	DESIGN OF HYBRID MULTIPLIER FOR LOW-COST CONVOLUTIONAL NEURAL NETWORK (CNN) ACCELERATORS <i>R. Evanjlin Nirmala¹, Mrs.K.Thilaga Meena²</i>	EC8
17	ICECI03	MINIATURIZED HIGH GAINARRAYANTENA FOR 5G SMART PHONE APPLICATION <i>K. Karthika¹, Ms.M.Dhivya bharathi²</i>	EC9
18	ICECI04	AN EFFICIENT TECHNIQUE FOR DETECTING CURRENCY COUNTERFEIT USING IMAGE PROCESSING <i>P.Kurshidha Begam¹, Dr.S. Regina²</i>	EC9
19	ICECI05	DETECTION OF DENTAL CARIES USING NIR IMAGES <i>R.Maheswari¹, Dr. S. Regina²</i>	EC10
20	ICECI07	PARTICLE SWARM OPTIMIZATION BASED TAMPER DETECTION <i>M.Malini¹, Mrs.M.Nilobhar²</i>	EC10
21	ICECI08	HYBRID HONEY BATCHER OPTIMIZATION BASED EEG SIGNAL PROCESSING FOR ALZHIEMER DETECTION <i>P.Premavathi¹, Mrs.K.Thilaga Meena²</i>	EC11

22	ICECI09	THE CHEETAH OPTIMIZER BASED SENSOR NODE LOCALIZATION WITH MINIMAL ERROR RATES <i>C.Soundarya¹, Ms M.Dhivya bharathi²</i>	EC11
23	ICECST2	SILICON CARBIDE BASED CARBON NANOTUBE COMPOSITE FOR MEMS HARSH ENVIRONMENT <i>Thilaga Meena K¹</i>	EC12
34	ICECST3	METROLOGY FOR THE NEXT GENERATION OF SEMICONDUCTOR DEVICES <i>M.Dhivya Bharathi¹</i>	EC12
35	ICECST4	A IMAGECHAIN-BASED IMAGE COPYRIGHT PROTECTION WITH DIGITAL WATERMARKING <i>Mrs.P.Padmasri¹</i>	EC13
36	ICECST5	PEAK LOAD MANAGEMENT FOR IMPLEMENTING TARIFF TIME OF USE (TOU) <i>M.Nilobhar¹</i>	EC13
37	ICEC119	AN AUTOMATIC MOBILE RECHARGE STATION <i>AE. Dhevanath¹, Dr.M.Shanthi²</i>	EC14
38	ICEC120	HIGHLY PRECISIONED AGRICULTURAL DRONE <i>Praveen kumar M¹, Dr.M.Shanthi²</i>	EC14
39	ICEC121	ALCOHOL DETECTION AND ACCIDENT PREVENTION USING IOT AND MACHINE LEARNING <i>Dr.N.Janakiraman¹, K.K.Prasath², S.Sivaganapathy³, G.Shandosh balaji⁴</i>	EC15
40	ICEC122	SMART POULTRY FARM <i>Mrs.S.indumathi¹, K.pranava kumar², T.M Uma maheshwaran³, K.Sasi kumar⁴</i>	EC15
41	ICEC114	CARDIOVASCULAR DISEASE RISK PREDICTION USING DEEP LEARNING <i>M. Sakthivel¹, G. Sowmiya Devi², B. Jose Ezhilarasi³, G. Lakshmi Priya⁴</i>	EC16
42	ICECSP1	AUTOMATIC BRAKE FAILURE INDICATOR AND TYRE PRESSURE MONITORING SYSTEM <i>M.Arthika¹, S.Ulaganathan²</i>	EC16
43	ICEC123	OBJECT DETECTION AND RECOGNITION FOR VISUALLY IMPAIRED PEOPLE <i>Vishnunathan R¹, M.S. Santhoshkumar², A.R.L. Santhoshkumar³, G.J. Sabari Kumar⁴, Mr.B.Balan⁵</i>	EC17

44	ICEC124	STAMPEDE AVOIDANCE USING MICROCONTROLLER BASED SYSTEM <i>G. Blessy Jebamani¹, S.Devi Sri², V.Muthu Ranjani³, N.Uma Nanthini⁴, Dr.M.Iyyapan⁵</i>	EC17
45	ICEC125	LoRa ENABLED FAULT DETECTION IN POWER DISTRIBUTION SYSTEM USING IOT DEVICES <i>¹N. RenugaDevi ²P. Jeyalakshmi</i>	EC18

Table of Contents

DEPARTMENT: ELECTRICAL & ELECTRONICS ENGINEERING [EEE]

S.No.	Paper ID	Title of the Paper & Author(s) Name	Page No.
1	ICEE101	DESIGN AND EXPERIMENTAL EVALUATION OF SOLAR POWERED DISPENSER LINKED WITH ARDUINO CONTROL SYSTEM <i>Akthar Farvesh¹, Karthikeyan.S², Karmel Christopher.A³, Jegathesh.K. P⁴, Solaiappan.K. T⁵</i>	EE1
2	ICEE102	REAL TIME ANIMAL INTRUSION DETECTION AND MONITORING OF CROP FIELDS USING ARDUINO AND GSM <i>K.Manoj Pandiyan¹, B.Krishnan², G.Sukrev³, R.Aravindaraj⁴</i>	EE1
3	ICEE103	DESIGN AND IMPLEMENTATION OF A HYBRID CHARGING STATION FOR SUSTAINABLE AND RELIABLE EV CHARGING <i>Babu.P¹, Mariya Bapison.A², Sankara Narayanan.K³, Solaiappan.K.T⁴, Sonia.C⁵</i>	EE2
4	ICEE104	OPTIMAL SCHEDULING OF INDUSTRIAL TASK-CONTINUOUS LOAD MANAGEMENT FOR SMART POWER UTILIZATION <i>Atchaya.M¹, Deepamaheswari.S², Nivetha.M</i>	EE2
5	ICEE106	HOME APPLIANCE CONTROL AND ENERGY MANAGEMENT SYSTEM USING IOT <i>Agashkumar.R¹, Mohamed Afrullah.K², Kannan.K³, Thiyagaraj.A⁴, Kalaiselvi.K⁵</i>	EE3
6	ICEE107	DEVELOPMENT OF A IOT BASED SEWAGE MONITORING AND CLOGGING PREDICTION SYSTEM <i>S. Krishna Prabha¹, K. Subalakshmi², M. Visaka³</i>	EE3
7	ICEE108	DESIGN OF LOW COST AND ENERGY EFFICIENT SOLID-STATE CONVERTER FOR EV APPLICATION <i>K.Buvaneshwari¹, K.Kowsalya², B.PriyaDharshini³</i>	EE4
8	ICEE109	DEVELOPMENT OF A LOW COST, HIGH ACCURACY OVERHEATED CELL DETECTOR FOR EV BATTERY THERMAL MANAGEMENT SYSTEM <i>S. Ajay¹, D. Dhanaraj², K. Mathavan³, A. Wesley Jeevadason⁴</i>	EE4
9	ICEE110	SOLAR BASED GRASS CUTTER <i>Abarna.R¹, Kayathri.R², Sumithra.V³, Susmitha.P⁴, Saranya.V⁵</i>	EE5

10	ICEE111	DEVELOPMENT OF LOW COST, LOW WEIGHT PHOTOVOLTAIC THERMAL COLLECTOR SYSTEM <i>S.Karthikeyan¹, R.Ananth², B.Ashok³, A. Wesley Jeevadason⁴</i>	EE5
11	ICEE114	INTELLIGENT BMS DATA ANALYTICS SYSTEM FOR HYBRID EV USING IOT <i>K.Sivakumar¹, S.Suryanarayanan², R.Ganesh³, PL. Suresh kumar⁴, N.Sundara perumal⁵</i>	EE6
12	ICEE115	MONITORING OF RADIATION IN INDUSTRIES WITH HIGHLY EFFICIENT LoRa TECHNOLOGY <i>Giftlin Princia Joy S¹, Dr.J. Rajalakshmi²</i>	EE7
13	ICEE116	AN INTELLIGENT ECG DEVICE FOR AUTOMATIC CRITICAL BEAT IDENTIFICATION FOR SMART HEALTHCARE USING RECURRENT NEURAL NETWORK <i>J. Janani¹, Mrs.Jothilakshmi²</i>	EE7
14	ICEE117	INTERNET OF THINGS-BASED BABY MONITORING SYSTEM FOR SMART CRADLE <i>A.Jeevitha¹, Mrs.M. Aishwarya²</i>	EE8
15	ICEE118	POLYVINYL ALCOHOL (PVA)/AZADIRACHTA INDICA (NEEM) GUM NANOCOMPOSITES AS HIGH-PERFORMANCE DIELECTRIC MATERIAL FOR FLEXIBLE ELECTRONICS <i>P. Kiruthika¹, Venkat subramaniam²</i>	EE8
16	ICEE119	SIMULATION OF MULTIPURPOSE CONTROL FOR SOLAR PV SYSTEM INTERFACED TO GRID WITH MMPT-CPG <i>Dr. R. Tamilselvan¹</i>	EE9
17	ICEE120	HEALTH CARE MONITORING SYSTEM FOR PREGNANT WOMEN USING IoT <i>G.Meena¹, M.Muthumari², S.Santhiya³, R.Sribharathi⁴, Dr Vijayakumar.N.M⁵</i>	EE9
18	ICEE121	SMART IRRIGATION PLANT MONITORING (IOT) <i>A. Arunpandi¹, J. Christopher², R. Rajalakshmi³</i>	EE10
19	ICEE122	DEMAND SIDE MANAGEMENT FOR RESIDENTIAL USERS IN A SMART MICRO- GRID <i>C.Anantharaj¹, M. Sowmiya², R.Pandi Prabakaran³</i>	EE10
20	ICEE123	UNDER GROUND CABLE FAULT DETECTION USING IOT <i>R.Packiyalakshmi¹, M.Sneka², M.Daliorani³</i>	EE11

21	ICEE124	<p>MITIGATION OF HARMONICS USING PI AND FUZZYLOGIC CONTROLLER BASED SHUNT ACTIVE POWER FILTER</p> <p style="text-align: center;"><i>Gnana prabha K¹, M V Suganyadevi², C pearline kamalini³</i></p>	EE11
22	ICEE125	<p>FALL DETECTION AND PREVENTION ANALYSIS OF LIVING AND NON-LIVING THINGS USING IOT</p> <p style="text-align: center;"><i>Kabil Santh. T¹, Mr. K.Balamurugan²</i></p>	EE12
23	ICEEI01	<p>CURRENT REFERENCE CONTROL BASED MPPT AND INVESTIGATION OF POWER MANAGEMENT ALGORITHM FOR GRID-TIED SOLAR PV-BATTERY SYSTEM.</p> <p style="text-align: center;"><i>S. Abirami¹, Dr.N. Ezhilmathi²</i></p>	EE13
24	ICEEI02	<p>MULTI-FUNCTIONAL PV INVERTER WITH LOW VOLTAGE RIDE-THROUGH AND CONSTANT POWER OUTPUT</p> <p style="text-align: center;"><i>S. Krishnaveni¹, K. Jeyapriya²</i></p>	EE13
25	ICEEI03	<p>PLANNING AND OPTIMIZING ELECTRIC-VEHICLE CHARGING INFRASTRUCTURE THROUGH SYSTEM DYNAMICS</p> <p style="text-align: center;"><i>A. Sam Steve¹, S.SenthilKumar²</i></p>	EE14
26	ICEEI04	<p>ENERGY ECONOMY OF HOUSEHOLDS WITH PHOTOVOLTAIC SYSTEM AND BATTERY STORAGE UNDER TIME OF USE TARIFF WITH DEMAND CHARGE</p> <p style="text-align: center;"><i>K.Saranya¹, R.Saravanan²</i></p>	EE14
27	ICEEI05	<p>A TOTAL-CROSS-TIED-BASED DYNAMIC PHOTOVOLTAIC ARRAY RECONFIGURATION FOR WATER PUMPING SYSTEM</p> <p style="text-align: center;"><i>R.Sivaranjana¹, S.Pandimeena²</i></p>	EE15
28	ICEEI06	<p>VOLTAGE ORIENTED CONTROLLER BASED VIENNA RECTIFIER FOR ELECTRIC VEHICLE CHARGING STATIONS</p> <p style="text-align: center;"><i>V.Karthikraja¹, V.Suganya²</i></p>	EE15
29	ICEEI07	<p>OPTIMIZING A DIGITAL TWIN FOR FAULT DIAGNOSIS IN GRID CONNECTED INVERTERS</p> <p style="text-align: center;"><i>S.Manikandan¹, S.Pandimeena²</i></p>	EE16

30	ICEEI08	<p>STEP-UP DC-DC SWITCHING CONVERTER WITH SINGLE SWITCH AND MULTI-OUTPUTS BASED ON LUO TOPOLOGY</p> <p style="text-align: right;"><i>A.Muthuraja¹, C.Kalarani²</i></p>	EE16
31	ICEEI09	<p>A NOVEL HIGH GAIN DUAL INPUT SINGLE OUTPUT Z-QUASI RESONANT (ZQR) DC/DC CONVERTER FOR OFF-BOARD EV CHARGING</p> <p style="text-align: right;"><i>S.Nathiya¹, J.GrishGowtham²</i></p>	EE17
32	ICEEI10	<p>MULTIPLE-POWER-SAMPLE BASED P&O MPPT FOR FAST-CHANGING IRRADIANCE CONDITIONS FOR A SIMPLE IMPLEMENTATION</p> <p style="text-align: right;"><i>A.Ranjithkumar¹, S.Senthilkumar²</i></p>	EE17
33	ICEEI11	<p>NEW SUBMODULE IMPROVING FAULT-TOLERANT CAPABILITY OF MODULAR MULTILEVEL CONVERTERS</p> <p style="text-align: right;"><i>C.Vidhya¹, Dr.N. Ezhilmathi²</i></p>	EE18
34	ICEEI12	<p>IOT-BASED DC/DC DEEP LEARNING POWER CONVERTER CONTROL: REAL-TIME IMPLEMENTATION</p> <p style="text-align: right;"><i>R.Vinoth¹, V.Suganya²</i></p>	EE18
35	ICEEI13	<p>CLOUD BASED WATER LEVEL CONTROLLER USING ULTRASONIC SENSOR IN ARDUINO</p> <p style="text-align: right;"><i>Fayaj Mohamed.P¹, Mannavan.K², Susil Kanth.K³, Dr Vijayakumar.N.M⁴</i></p>	EE19
36	ICEEI26	<p>DUAL AXIS SOLAR TRACKER</p> <p style="text-align: right;"><i>Renu Dharshini K¹, Dr K Baskaran²</i></p>	EE19
37	ICEEI27	<p>USING IOT BATTERY MANAGEMENT SYSTEMS FOR ELECTRIC VEHICLE APPLICATIONS</p> <p style="text-align: right;"><i>S. AjayRam¹, S.Pasupon Pandi², M.Prabhakaran³, Mr.T.Robert Nobili Britto⁴</i></p>	EE20

Table of Contents

DEPARTMENT: MECHANICAL ENGINEERING [ME]

S.No.	Paper ID	Title of the Paper & Author(s) Name	Page No.
1	ICME101	A REVIEW ON NANOFUIDS <i>Dr.M. Muruganandam¹, P.Thavarajan²</i>	ME1
2	ICME102	ACCIDENT IDENTIFICATION SYSTEM WITH AUTOMATIC SMS INFORMER <i>G.Kesavan¹, S.Bharathikumar², P. Murugesan³, V.Senthilpandian⁴</i>	ME1
3	ICME103	EXPERIMENTAL INVESTIGATION OF MECHANICAL PROPERTIES OF GLASS AND SISAL FIBER HYBRID COMPOSITE ADDITION OF CaCO₃ AND CHARCOAL <i>Vijay Prabu A S¹, Anantha Manikandan S²</i>	ME2
4	ICME104	AUTOMATIC VALVE OPEN DURING LPG CYLINDER FILLING OPERATION <i>M. Guruprakash¹, M. Kaviyaran²</i>	ME2
5	ICME105	EXPERIMENTAL ANALYSIS OF RIGID POLYURETHANE FOAM COMPOSITES WITH GRAPE POMACE (NATURAL FIBER) <i>Haresh Durai Karuppaiah¹, Mr.M. Kamaraj²</i>	ME2
6	ICME106	EXPERIMENTAL INVESTIGATION OF BIDIRECTIONAL HYBRID FIBRE (JUTE AND CARBON) POLYMER COMPOSITES WITH FISH SCALE POWDER AS NATURAL FILLER <i>Saravanaumar Subbu¹, Dr.M. Kamaraj²</i>	ME3
	ICMEST1	MECHANICAL BEHAVIORS OF CLAW PARTICLES FILLED COIR POLYESTER COMPOSITES <i>S. Rajamuneeswaran¹</i>	ME3
7	ICME107	AUTOMATIC POWER GENERATION BY OUR DAY TO DAY TRANSPORTATION (POWER CITY) <i>M.S Bharanidharan¹, Mr R. Ramkumar²</i>	ME4
8	ICME108	COMPARISION BETWEEN AlCrN & DLC TO EVALUATE TRIBOLOGICAL BEHAVIOR IN Ti-6Al-4V <i>K Amuthaprakash¹, Mr C Senthil², Dr.R.Prasanna venkatesh³</i>	ME4

10th INTERNATIONAL CONFERENCE ON
EMERGING TRENDS IN ENGINEERING & TECHNOLOGY'23 [ICETET'23]

9	ICME109	<p>ANALYSIS OF TURNING PROCESS PARAMETERS FOR HOLLOW SHAFT</p> <p style="text-align: center;"><i>S Manoranjan¹, Mr K.Senthil², Dr.R.Prasanna venkatesh³</i></p>	ME5
10	ICME110	<p>TQM METHODOLOGY USED ON MANUFACTURING PLANT TO ELIMINATE REJECTION ON MODULAR TRUCKS - AVTR M/C FOR GEAR END & FLYWHEEL END SIDE UNCLEAN</p> <p style="text-align: center;"><i>T Gopal¹, Mr K.Senthil², Dr.R.Prasanna venkatesh³</i></p>	ME5
11	ICME111	<p>IMPLEMENTATION OF VALUE STREAM MAPPING APPLICATION INTO LAMP MANUFACTURING ORGANIZATION</p> <p style="text-align: center;"><i>K Mahendran¹, Mr.K.Senthilkumar², Dr.R.Prasanna venkatesh³</i></p>	ME6
12	ICME112	<p>REDUCTION OF V BELT REJECTION BY VARYING WIRE BAND LENGTH IN VRC</p> <p style="text-align: center;"><i>A. Periyapalichi¹, V.S. Sriviknesh², A.Albin sophiya³</i></p>	ME6
13	ICME113	<p>EFFECT OF LOCKED IN STRESS ON THE MECHANICAL BEHAVIOR OF SS 304</p> <p style="text-align: center;"><i>V.Yesuraja¹, Mr.M.Rajkumar², Dr.R.Prasanna venkatesh³</i></p>	ME7
14	ICME114	<p>CFD ANALYSIS OF A CAR BODY</p> <p style="text-align: center;"><i>V.Saruhasan¹, N. Muthulakshmi², M. Kannan³</i></p>	ME7
15	ICME115	<p>DESING AND FABRICATION OF ULTRASONIC NAVIGATION FOR THE BLIND</p> <p style="text-align: center;"><i>M. Manikandan¹, Dr N. Nagaprasad²</i></p>	ME8
16	ICME116	<p>EXPERIMENTAL ANALYSIS OF ALUMINUM7075 WITH SIC REINFORCED METAL MATRIX COMPOSITE</p> <p style="text-align: center;"><i>G.Akshaya¹, Dr.K.Senthil kumar²</i></p>	ME9
17	ICME117	<p>CUTTING TOOL PARAMETER ANALYSIS USING ANSYS</p> <p style="text-align: center;"><i>Mr.C.Rajesh¹, Mr.G.Sabari Narayanan²</i></p>	ME9
18	ICME118	<p>DESIGN AND STRUCTURAL ANALYSIS OF FLYWHEEL FOR DIFFERENT MATERIALS USING ANSYS</p> <p style="text-align: center;"><i>M.Nachiyappan¹, Mr.D.Mathavan²</i></p>	ME10
19	ICME119	<p>DESIGN AND STRUCTURAL ANALYSIS OF FLYWHEEL FOR DIFFERENT MATERIALS USING ANSYS</p> <p style="text-align: center;"><i>M.Selvaganesh¹, Mr.V.Ilanthiraiyan²</i></p>	ME10

10th INTERNATIONAL CONFERENCE ON
EMERGING TRENDS IN ENGINEERING & TECHNOLOGY'23 [ICETET'23]

20	ICME120	<p>EFFECT OF MACHINING SPECIFICATIONS ON THE GRADUAL FAILURE OF CUTTING TOOL & HOLE QUALITY OF MARINE GRADE STAINLESS STEEL IN BORING OPERATION</p> <p style="text-align: right;"><i>G. Abhinav shankar¹, Prof.Mr.S. Narayanan², Dr. R. Prasanna Venkatesh³</i></p>	ME11
21	ICME121	<p>NUMERICAL STUDY OF MACHINING PARAMETERS IN DRILLING WITH AL 356 ALLOY USING BACTERIAL FORAGING OPTIMIZATION</p> <p style="text-align: right;"><i>A. Muthiah¹, S. Velladurai²</i></p>	ME11
22	ICME122	<p>MECHANICAL AND TRIBOLOGICAL BEHAVIOUR OF Mg METAL MATRIX COMPOSITE IN AEROSPACE APPLICATIONS</p> <p style="text-align: right;"><i>¹Arunkumar.K, ²Karuppasamy.M, ³Mareeswaran.A, ⁴Muthusamy K Muthiah A⁵</i></p>	ME12
23	ICME123	<p>PERFORMANCE ANALYSIS OF AN I.C. ENGINE BLOCK BY VARYING COOLING FLUIDS</p> <p style="text-align: right;"><i>A.Muthiah¹, C. Sivaprakash²</i></p>	ME12
24	ICME124	<p>DESIGN AND CONSTRUCTION OF SOLAR DRYER FOR MORINGA LEAVES</p> <p style="text-align: right;"><i>Gokul Prasath M¹, Prabakaran M²</i></p>	ME13
25	ICMEST2	<p>DESIGN AND ANALYSIS OF MODERN DISC BRAKE BY USING ANSYS SOFTWARE</p> <p style="text-align: right;"><i>R.Pandi Thurai¹</i></p>	ME13
26	ICMEST3	<p>PRODUCTION OF BIODIESEL FROM WASTE COOKING OIL BY INTENSIFICATION TECHNIQUES</p> <p style="text-align: right;"><i>S.Pounraj¹</i></p>	ME14
27	ICMEST4	<p>EXTENSIVE REVIEW OF EXPERIMENTAL INVESTIGATIONS TO STUDY THE INFLUENCE OF TWISTED TAPE INSERT ON HEAT TRANSFER ENHANCEMENT</p> <p style="text-align: right;"><i>K. D. Jaganathan¹</i></p>	ME14
28	ICMEI01	<p>HYBRID ARTIFICIAL TREE FOR SOLAR/WIND POWER GENERATION</p> <p style="text-align: right;"><i>S. Rasathi¹, Dr.K.D.Jaganthan Ph.D²</i></p>	ME15
29	ICMEI02	<p>FABRICATION OF HYBRID POWER GENERATION MODEL USING RAIN WATER, SOLAR AND WIND RESOURCES</p> <p style="text-align: right;"><i>S. Vigneswaran¹, Mr. T.Ponvelmurugan, M.E, (Ph.D.)²</i></p>	ME15

10th INTERNATIONAL CONFERENCE ON
EMERGING TRENDS IN ENGINEERING & TECHNOLOGY'23 [ICETET'23]

30	ICMEI03	SOLAR POWERED MULTIPURPOSE AGRIBOT USING ANDROID PHONE <i>M. Lingaraj¹, Mr.M. Radhakrishnan M.E.²</i>	ME16
31	ICMEI04	PRODUCTION OF BIODIESEL FROM WASTE COOKING OIL BY INTENSIFICATION TECHNIQUES <i>K. Komala Devi¹, Mr.R. Pandithurai, M.E.²</i>	ME16
32	ICMEI05	PRODUCTION OF BIOETHANOL FROM AGRICULTURAL WASTE <i>P. Priyadarshini¹, Mr.S. Pounraj M. E²</i>	ME16
33	ICMEI06	FABRICATION OF SUNLIGHT TRACKING SYSTEM <i>Karanthamalai murugan¹, Mr.S. Pounraj M.E²</i>	ME17
34	ICMEI07	COMPARATIVE NUMERICAL SIMULATION ON TWISTED TAPE AND FLAT PLATE IN TRANSVERSE DIRECTION WITH THE PLAIN RECTANGULAR TUBE <i>P. Thamil Vasagam¹, Dr.K.D. Jaganthan Ph.D²</i>	ME17
35	ICMEI08	TRIBOLOGICAL BEHAVIOUR OF COPPER HYBRID NANO COMPOSITES MATERIAL PREPARED THROUGH P/M METHOD <i>R. Nagaraj¹, Mrs.S. Yogeswari M.E²</i>	ME18
36	ICMEI09	FLAT PLATE COLLECTOR THERMAL ANALYSIS <i>Paraniraja¹ & Mr.R. Pandithurai, M.E.²</i>	ME18
37	ICMEST5	ANALYSIS OF COMPLEX MACHINING PROFILES ON CERAMIC COMPOSITES USING ELECTRICAL DISCHARGE MACHINING PROCESS <i>Dr.C.Murugan¹</i>	ME19
38	ICME127	ANALYSIS OF MECHANICAL PROPERTIES OF POLY ETHYLENE VINYL ACETATE (PEVA) MATRIX WITH POLYTETRAFLUROETHELENE (PTFE) PARTICLE REINFORCED COMPOSITE <i>Abhilash Amal¹, Dr.R.Prasannalakshmi²</i>	ME19
39	ICME128	PASSIVE COOLING ON ELECTRONIC EQUIPMENTS USING COMPOSITE PHASE CHANGE MATERIAL <i>Durgeshwaran S¹, Dr.R.Mahesh Kumar²</i>	ME19
40	ICME129	EXTRACTION OF SOLAR ENERGYBY USING SOLAR POND TECHNIQUE <i>Karthick J¹, Dr.R.Mahesh Kumar²</i>	ME20

41	ICME130	IMPLEMENTATION OF LEAN IDEOLOGY IN SME USING VALUE STREAM MAPPING AND 5S <i>E.Ernest Amulraj¹, B.Anbuselvam², V.Muthuraja³, V.Permal⁴, Mrs. Pandikumari⁴</i>	ME20
42	ICME131	DESIGN AND FABRICATION OF REMOTE-CONTROLLED FORKLIFT <i>Mounish Krishnan. AS¹, Arun kumar K², Mr. Chandramohan. S³</i>	ME21

Table of Contents

DEPARTMENT: SCIENCE AND HUMANITIES [S & H]

S.No.	Paper ID	Title of the Paper & Author(s) Name	Page No.
1	ICSHST1	DEVELOPMENT OF NANOSTRUCTURED Zn-Co-Ni ALLOY ANODE FOR LITHIUM ION BATTERIES <i>B. Vahini¹, Jegathalaprathaban Rajesh²</i>	SH1
2	ICSH102	FACILE SYNTHESIS OF NICKEL BASED METAL ORGANIC FRAMEWORK (Ni - MOF) NANOSTRUCTURE FOR ENERGY STORAGE APPLICATION <i>Mr.Manikandan¹, G.Anandha babu²</i>	SH2
3	ICSHI03	SATISFACTORY ROOMMATE PROBLEM ON FUZZY ENVIRONMENT <i>T. Ramachandran¹, N. Logapriya²</i>	SH2
4	ICSHST2	APPLICATIONS OF FUZZY IN MEDICAL FIELD <i>Ms. V.Jeyalakshmi¹</i>	SH2
5	ICSHST3	NEUTROSOPHIC GENERALIZED B* CLOSED SETS IN NEUTROSOPHIC TOPOLOGICAL SPACES <i>Ms. S.Muthulakshmi¹</i>	SH3
6	ICSH104	SYNCHRONIZATION OF COMPLEX NETWORKS WITH PROPORTIONAL DELAYS USING EVENT TRIGGERED IMPULSIVE CONTROL <i>K.Sivaranjani¹</i>	SH3
7	ICSH105	PYTHON - AI FACE RECOGNITION <i>R. Rajasubramaniam¹, M. Prabu²</i>	SH3
8	ICSH106	BIPOLAR INTERVAL VALUED MULTI FUZZY NORMAL SUBGROUPS OF A GROUP <i>G.Shyamala¹, K.Anbarasi²</i>	SH4
9	ICSHST4	A STUDY ON CONNECTED AND CYCLE DOMINATION <i>Ms. P. Jerlin belsiya¹</i>	SH4
10	ICSHST5	READING STRATEGIES AND ITS SIGNIFICANCE IN THE ENGLISH MIXED ABILITY CLASSROOM <i>Dr. J. Indra Mercy¹</i>	SH4
11	ICSH107	IMPROVING STUDENTS' CREATIVE WRITING SKILLS <i>G. K. Sanjana¹, Dr. J. Indra Mercy²</i>	SH5

12	ICSH108	TECHNIQUES FOR AN EFFECTIVE PRESENTATION <i>Bhavadharani. J¹, Dr. J. Indra Mercy²</i>	SH5
13	ICSHST6	EFFECTIVENESS OF AUDIO-VISUAL AIDS IN TEACHING AND ENHANCING ENGLISH LANGUAGE <i>Prescilla Margrette. F¹</i>	SH6
14	ICSHST7	λ-EDGE SPAN OF SOME ALMOST REGULAR GRAPHS <i>Dr.M. Murugan</i>	SH6
15	ICSHS01	NANO TECHNOLOGY <i>A.Nithya sri¹, B.Vahini²</i>	SH7
16	ICSHSP1	GAMIFICATION AND MULTIMEDIA PRESENTATION IN THE ROLL OF EDUCATIONAL PROCESS <i>S.Magdalene Glorina Rajathi¹, Dr. J. Indra Mercy²</i>	SH7

Table of Contents

DEPARTMENT: COMMERCE & ENGLISH

S.No.	Paper ID	Title of the Paper & Author(s) Name	Page No.
1	ICCM101	A STUDY ON CUSTOMER PERCEPTION TOWARDS E-BANKING SERVICES WITH SPECIAL REFERENCE TO PUBLIC SECTOR BANKS IN MADURAI CITY <i>Dr.C.Thiruvalar selvi¹, Sathya S²</i>	AS1
2	ICCM102	EMERGING TRENDS IN WOMEN ENTREPRENEUR <i>Dr.C.Thiruvalar selvi¹, B.I.Gayathiri²</i>	AS1
3	ICCM103	FACTORS AFFECTING FEMALE ENTREPRENEURIAL INTENTIONS IN SMALL AND MEDIUM ENTERPRISES IN MADURAI <i>V.Krishnaveni¹, S.P.C.Kanmanipriya²</i>	AS2
4	ICCM104	A STUDY ON EMERGING TRENDS IN E-BANKING WITH SPECIAL REFERANCE TO PLASTIC MONEY <i>Rupansankar A¹</i>	AS2
5	ICCM105	ENTREPRENEURSHIP CHALLENGES AND OPPORTUNITIES IN INDIA <i>Sebastyan A¹, Shalini. K², Dr. C. Thiruvalarselvi³</i>	AS3
6	ICCM106	RURAL WOMEN ENTREPRENEURSHIP <i>Jeya Geetha E¹, Indra S², Sathya S³</i>	AS3
7	ICCM107	ENTREPRENEURIAL CULTURE IN INDIA <i>S.Maheswari¹, Dr. C. Thiruvalarselvi²</i>	AS4
8	ICASST1	A STUDY ON ECOLOGICAL WISDOM IN THE SELECT STORIES OF RUSKIN BOND <i>Ms. S. Kanchana¹</i>	AS4
9	ICASST2	OPPORTUNITIES AND CHALLENGES OF DIGITAL TRANSFORMATION IN SMALL BUSINESS <i>Mr. A. Ayyanar¹</i>	AS5
10	ICASST3	ENTREPRENEURIAL ATTITUDE AMONG COLLEGE STUDENTS WITH SPECIAL REFERENCE SIVAGANGAI AND RAMANATHAPURAM DISTRICTS <i>Mr. M.Thangapandy¹</i>	AS5

11	ICASST4	CLOUD COMPUTING <i>G.Jacob Britto¹</i>	AS6
12	ICASST5	ARTIFICIAL INTELLIGENCE USING FACE RECOGNITION BASED ATTENDANCE MANAGEMENT SYSTEM <i>Mr. B. Prasanna¹</i>	AS6

DEPARTMENT
OF
CIVIL ENGINEERING

**ICCE101: WASTEWATER TREATMENT BY PHYTOREMEDIATION USING WATER
HYACINTH AND DUCKWEEDS**

V.Vasanthasena¹, Dr.P.Ganeshprabhu², S.Brintha³

¹UG Scholar, Dept. of Civil Engineering, Kamaraj College of Engineering and Technology,

^{2,3}Assistant Professor, Dept. of Civil Engineering, Kamaraj College of Engineering and
Technology

Abstract- Phytoremediation basically refers to the use of plants to reduce the concentrations or toxic effects of contaminants in the environment. Phytoremediation is widely accepted as a cost-effective environmental restoration technology. Aquatic phytoremediation is a nature-based solution that has the potential to provide efficient, spatially adaptable and multi-targeted treatment of polluted waters using the ability of macrophytes to take-up, sequester and degrade pollutants. The novelty of the present study is to use water hyacinth and Duckweed for treating wastewater. The experiment was carried out using three different setup, one is using water hyacinth, another one is using Duckweed and the third one is using Water hyacinth & Duckweed. From the experimental results it was observed that the COD and Ammonia nitrogen removal efficiency increased from third day to eighth day for all the three system of experiments and remains same after ten days for all. The COD removal was 83.75%, 75%, and 91.25%, the ammonia nitrogen removal efficiency was 75%, 50% and 75% respectively for water hyacinth, Duckweed and combined of both plants. The COD removal was higher for combined plants and ammonia nitrogen removal was same for water hyacinth and combined of water hyacinth and Duckweed.

**ICCE102: REPLACEMENT OF COARSE AGGREGATE AND FINE AGGREGATE
WITH COCONUT SHELL AND QUARRY DUST**

S.Bhuvaneshwari¹, A.Anitha²

¹PG Scholar, Dept. of Civil Engineering, Mount Zion College of Engineering and Technology,

²Assistant Professor, Dept. of Civil Engineering, Mount Zion College of Engineering and
Technology

Abstract- In fast growing today's world development of new building materials and processing & utilization of waste is being given the apriority in the program of building research at very high rate. Many attempt shaves been made to incorporate waste into the production of concrete. In this paper we describe their cycling of waste products like coconut shell by incorporating them into concrete. The composite concrete is comparatively stronger than conventional concrete. The objective of this project is to represent the information regarding coconut shell and their use in most concise, compact and to the point manner. And also, in this project various laboratory experiments were carried out on composite concrete. Some of the mare compressive strength, tensile strength, flexural strength etc. Among all disposal options, the use of coconut shell in producing construction elements is considered to be the most economical and environmentally sound option.

**ICCE103: FLEXURAL BEHAVIOUR OF REINFORCED CONCRETE WITH
POLYPROPYLENE AND CRIMPED STEEL FIBER**

S.Chithradevi¹, I.ReginaMary²

¹PG Scholar, Dept. of Civil Engineering, Mount Zion College of Engineering and Technology,

²Assistant Professor, Dept. of Civil Engineering, Mount Zion College of Engineering and
Technology

Abstract- In this study, crimped steel and polypropylene fibers are used to improve flexural and shear performance of reinforced concrete. The purpose of this work is to present the results of a study carried out to characterize the structural behavior of FRC beams under shear loading, considering fibers of different materials (steel and polymeric). Further, the study aims to evaluate the ability of predicting the ultimate shear capacity of concrete beams. In order to improve its flexural strength and brittleness, a technique of mixing short fibers (similar to that used in conventional concrete) will be introduced to the concrete. This study is also aims to improve the strength of reinforced concrete by providing combination of polypropylene and crimped steel fiber with zig-zag stirrups.

ICCE104: GREEN CONCRETE USING FOUNDRY SAND AND FLYASH

C.K.Abinaya¹

¹Assistant Professor, Dept. of Civil Engineering,
Sri raaja raajan college of engineering and technology

Abstract- In order to reduce the disposal problems and environmental pollution due to the foundry sand in outskirts of the Coimbatore city, to produce the concrete using this foundry sand as a replacement of fine aggregate in which the concrete made is eco-friendly in nature and to compensate the strength of concrete at certain percentage of replacement of foundry sand incorporate the fly ash as a replacement of cement. This paper investigates the properties of concrete having the mix proportion 1:1.82:3.17 in which cement is partially replaced by the fly ash as 25% by weight of cement and fine aggregate is partially replaced by two types of foundry sand (CO₂ processed sand & shell moulding processed sand) at various percentages as 10%, 20%, 30% & 40% by weight of fine aggregate. In this study we were using nine set of mix proportions viz., Nominal mix with fly ash(M1), mix contained 25% fly ash & 10%,20%,30%,40% of CO₂ processed & shell moulding processed sand respectively (M2, M3, M4, M5 & M6, M7, M8, M9). The compressive strength test of each cube is carried out at 7days and 28 days. The split tensile strength of each cylinder is carried out at 28 days period. The water absorption test of each cube is carried out at 28 days.

**ICCE105: UTILIZATION OF RECYCLED PLASTIC WASTE AS REPLACEMENT OF
COARSE AGGREGATE IN PERVIOUS PAVER BLOCK**

J. Miruthunch Ram¹, A. Vijayendran², Mr. K. Hariharan³

^{1,2}UG Scholar, *Dept. of Civil Engineering, Kamaraj college of engineering and technology*

³Assistant Professor, *Dept. of Civil Engineering, Kamaraj college of engineering and technology*

Abstract- This study aimed to determine the effects of using plastic waste as a natural coarse aggregate replacement in pervious paver block with different percentage of coarse aggregate. The plastic waste used in this experiment was Polyethylene Terephthalate (PET) type obtained from the mineral water bottles. The plastic waste was formed to be similar to the natural coarse aggregate sizes 10–20 mm, replacing 15%, 20%, 25%, 30%, 35 % of the coarse aggregate in pervious paver block. The aggregate: cement ratio of 4:1 was then evaluated by including the addition of the recycled PET plastic aggregate. Designed for M20 grade concrete with 25% of porosity for the various replacement of plastic waste, in the compressive strength, void ratio and permeability tests.

**ICCE106: FLEXURAL BEHAVIOR OF CONCRETE BEAM WITH PARTIAL
REPLACEMENT OF QUARRY DUST AS FINE AGGREGATE**

Dr. S.Thilagavathi¹, G. Gayathri²

¹Principal, *Dept. of Civil Engineering,*

Sri Bharathi Engineering College for Women, Pudukkottai

²Assistant professor, *Dept. of Civil Engineering, Sri Bharathi Engineering College for Women,
Pudukkottai*

Abstract- Common river sand is expensive due to excessive cost of transportation from natural sources. Also, large-scale depletion of these sources creates environmental problems. As environmental transportation and other constraints make the availability and use of river sand less attractive a substitute or replacement product for concrete industry needs to be found. River sand is most commonly used fine aggregate in the production of concrete poses the problem of acute shortage in many areas. Whose continued use has started posing serious problems with respect to its availability, cost and environmental impact. This paper is part of a study investigating the structural characteristics of concrete using various combinations of quarry rock dust as complete replacement for conventional river sand fine aggregate. The quantity of quarry dust used as a replacement percentage of 0% to 60%. Concrete samples were prepared (cube, cylinder, and beam) and cured for 7, 28 days and tested in the laboratory to destruction in order to determine their compressive, flexural properties. The optimum result has been obtained at the 40% replacement of quarry chips as fine aggregate. These results compare favorably with those of conventional concrete. Design mix of M35 grade is used.

**ICCE107: EXPERIMENTAL STUDY ON PARTIALLY REPLACEMENT OF
CEMENT BY USING RICE STRAW ASH**

C. Aruljenifar¹, S. Praveena², J. Lilly john³, G. Gayathri⁴

^{1,2,3} UG Scholar(s), Dept. of Civil Engineering,

Sri Bharathi Engineering College for Women, Pudukkottai

*²Assistant professor, Dept. of Civil Engineering, Sri Bharathi Engineering College for Women,
Pudukkottai*

Abstract- In this project, we will study about the partial replacement of cement by using rice straw ash. The production of cement is increased nowadays worldwide due to the expansion of population also the infrastructure is expanding day by day. So for the purpose of reduce the manufacturing of cement, we can use the natural fly ash as the partial replacement for cement. It increases the workability and strength of the concrete as compared to the ordinary Portland cement. The mix ratio was chosen by the trial and error method. In this project we can adopt a M25 concrete, in this experiment we will prepare a concrete cube of size 150 x 150x150 mm in which adding a rice straw ash of 5%,10%,15% in a concrete. After that, the compressive strength will be determined at 7 and 28 days. It gives good result when testing various test like water absorption test, workability test, compression test.

**ICCE108: USANCE OF GROUNDNUT SHELL ASH AND WASTE
CARDBOARD PULP IN CONCRETE**

S. Muthulakshmi¹, K. Priyadharshini², S. Bhuvani³, Mrs.P.Dennis Flora⁴

^{1,2,3} UG Scholar(s), Dept. of Civil Engineering,

Sri Bharathi Engineering College for Women, Pudukkottai

*²Assistant professor, Dept. of Civil Engineering, Sri Bharathi Engineering College for Women,
Pudukkottai*

Abstract- This project will examine the partial replacement of cement with groundnut shell ash and coarse aggregate with waste cardboard pulp for the manufacturing of light weight concrete through experimentation. Normally, the concrete mould occupies 80% of coarse aggregate, so we alternate by using waste cardboard in addition to cement, fine aggregate, coarse aggregate and some percentage of groundnut shell ash. Addition of these waste in a concrete help to increases the compressive strength and also reduces the impact of environment due to chemicals. In this experiment we will prepare a concrete cube of size 150x150x150mm in M25 grade by adding a groundnut shell ash in a percentage of 2.5%,5%,7.5% and also adding a cardboard waste of 15%,20%,25% after the compressive strength will determined at 7,14 and 28 days.

**ICCE109: UTILIZATION OF SOFT DRINK BOTTLE CAPS AND PALM FIBRE IN
CONCRETE**

V.Ragavi¹, T.Ajitha², V.Divya³, G.Mangaiyarkarasi⁴

^{1,2,3}UG Scholar(s), Dept. of Civil Engineering,

Sri Bharathi Engineering College for Women, Pudukkottai

*²Assistant professor, Dept. of Civil Engineering, Sri Bharathi Engineering College for Women,
Pudukkottai*

Abstract- This project mainly concerned with the utilization of soft drink bottle caps and palm fiber in concrete. Over the recent decades, scientists have to search for more sustainable and environmentally friendly materials. The scientists have proposed manufacturing fibers such as polyvinyl alcohol and polypropylene fibers to replace the use of steel fibers because it is more economical. But, in this project we have to add a natural fiber instead of chemical fiber. It increases a tensile strength and the water absorption is less and the CO₂ emission is also high. The mix proportion was chosen on trial-and-error method. The palm fiber was added to the total volume by (0.5%,1%,1.5%) and the soda bottle cap as (0.2%,0.25%,0.3%) in the total volume. The concrete cube of size (150 mm x150 mm) is produced by mixing palm fiber and soft drink bottle cap with ordinary concrete. And it is compacted and form a cube and curing for 7,14,28 days and conducting various test such as compressive strength test, water absorption test with comparison with the conventional concrete.

**ICCE110: ANALYSIS AND DESIGN OF STEEL TRUSS TOWER CONFIGURATION
AND BRACINGS BY USING STAAD PRO**

K.Subabalaji¹, K.Kathiravan²

¹PG Scholar, Dept. of Civil Engineering, Mother Teresa Collage of Engg &Technology

²Assistant professor, Dept. of Civil Engineering, Mother Teresa Collage of Engg &Technology

Abstract- Transmission line towers carry heavy electrical transmission conductors at a sufficient and safe height from ground. In addition to their self-weight they have to withstand all forces of nature like strong wind, earthquake and snow load. Therefore, transmission line towers should be designed considering both structural and electrical requirements for a safe and economical design. This paper deals with the effectiveness of various bracing systems used in lattice towers. Different types of bracings used in 4-legged square based self-supporting power transmission towers are analyzed. The investigated bracing system is single diagonal. This study has focused on identifying the economical bracing system for a given range of tower heights. The height of transmission towers has been analyzed under critical loads such as wind and earthquake loads. The load case include diagonal wind has been found to be most critical cases for towers. The transmission line tower is analyzed by using STAAD PRO. The performance of various bracing system has been identified and reported. The choice of an optimal form, as well as the appropriate sort of bracing system, goes a long way toward producing a cost-effective transmission line tower design. Least weight of the tower implies greatest economy in the transmission line cost. The wind force normal to cables was found to the worst of all. The design given by STAAD.pro has been found to be complying with IS-800: 1984 and all the members were safe. XBX – bracing system is found to be optimum and economical in design of electrical

transmission line towers in both strength and cost of material required in comparison to XX – bracing system.

ICCE111: BUILDING EFFECTIVENESS COMMUNICATION RATIOS FOR IMPROVED BUILDING LIFE CYCLE

S.Harikrishnan¹, S.Muthumari²

¹*Assistant professor, Dept. of Civil Engineering, sree sowdambika college of engineering*

²*Assistant professor, Dept. of Civil Engineering, Fatima Micheal College of Engineering and
Technology*

Abstract - Many existing building energy performance assessment frameworks, quantifying and categorizing buildings post occupancy, offer limited feedback on design decisions. An environment providing decision makers with pertinent information to assess the consequences of each design decision in a timely, cost effective and practical manner is required to promote viable low-energy solutions from the outset. This paper outlines a performance-based strategy utilizing building effectiveness communication ratios stored in Building Information Models (BIM). Decision makers will be capable of rating the buildings energy performance throughout its natural life cycle without imposing adverse penalties on facilities located in dissimilar climatic zones subjected to stringent building codes and regulations. With this advancement in building energy assessment in place, a progressive improvement in energy efficiency for the building stock is a feasible and realistic target.

ICCE112: EXPERIMENTAL PROCESS OF GROUND WATER POLLUTION AT SIVAGANGAI DISTRICT

G. Vignesh¹, S.Yasin², P.Kavi Priya Devi²

^{1,2}*UG Scholar, Dept. of Civil Engineering,*

Sri Raaja Raajan College of Engineering and Technology

³*Assistant professor, Dept. of Civil Engineering, Sri Raaja Raajan College of Engineering and
Technology*

Abstract - The quality of ground water is of great importance in determining the suitability of particular ground water for a certain use (public water supply, irrigation, industrial applications, power generation etc.). This depends on a large number of individual hydrological, physical, chemical and biological factors. That have acted on the water from the moment it condensed in the atmosphere to the time it is discharged by a well. The quality of ground water varies with location, depth of water table, season and by the extent and composition of dissolved solids. Generally, higher proportions of dissolved constituents are found in ground water than in surface water because of greater interaction of ground water with various materials in geologic strata. Adverse effects on ground water quality are a result of anthropogenic activity at ground surface such as unintentionally by agriculture, uncontrolled release of domestic and industrial effluents, by sub-surface or surface disposal of sewage and industrial wastes. It is important to know the geochemistry of the chemical-soil groundwater interactions in order to assess the fate and impact of pollutant discharged on to the ground ^{4,5,6,7}. Ground water pollution is intrinsically difficult to detect, since the problem may well be concealed below the surface and monitoring is costly, time consuming and hard to resolve. Pollutants move through several different hydrologic zones as

they migrate through the soil to the water table. The contamination of ground water by heavy metals and pesticides has assumed much significance during recent years due to their toxicity and accumulative behaviour. Industrial disposal of chemicals by surface and sub surface runoff, direct release into natural water bodies or waste, dumped near the factories can be subjected to reaction with percolating rain water and reach the ground water level. Solid wastes are dumped into the ravines of river, as fill in for village ponds and as spread over the grazing or waste lands. The percolating water picks up a large number of dissolved constituents and reaches the aquifer system and contaminates the ground water.

ICCE113: CONSTRUCTION CHEMICALS IN INDIA – A MARKET SURVEY

P. Kishore¹, M. Azhaguraj², Sakthivel Ramanathan³

^{1,2}UG Scholar, Dept. of Civil Engineering,

Fatima Michael College of Engineering and Technology

³Assistant professor, Dept. of Civil Engineering, Fatima Michael College of Engineering and Technology

Abstract - In these days, we cannot imagine construction without the use of chemicals. We need chemicals for various purposes such as waterproofing, Concrete repair, concrete manufacturing and others. For repair work we have crack fillers, corrosion prevention, and so on. Concrete manufacturing involves use of superplasticisers, retarders and corrosion Inhibitors etc. There are several waterproofing agents such as integral and external application. Curing compounds, viscosity modifying admixtures, and air entrainment agents for special use in concretes. The special concretes, such as self-compacting, high performance, and high strength cannot be made without chemical admixtures. These chemicals are supplied by many companies throughout India. To name a few, they are Fosroc, Dr. Fixit, Sika and Master builder. Out of these Dr. Fixit is an Indian company, others have global market. These companies produce wide variety of products to suit a particular need. There are hundreds of chemicals with variety of properties and applications. In selecting a chemical an engineer has to study lots of things such as compatibility, past history, ease of application, cost and brand reputation. So, an engineer is often confused in selecting a chemical. In this study, we compare the products produced by these companies that will help an engineer to select a chemical with confidence.

ICCE114: EXPERIMENTAL STUDY OF BIO-COAGULANT AND CHEMICAL COAGULANT FOR WASTEWATER TREATMENT

M. Rohini Shanmugapriya¹, Nagamani.S²

^{1,2}Assistant professor, Dept. of Civil Engineering, Vaigai College of Engineering

Abstract - Wastewater from oil industries without pre-treatment when let out has the possibility of causing serious environmental problems. Extensive treatment methods are available but for small scale industries efficient and cost-effective methods are needed to be implemented. Chemical coagulant is expensive for treatment, so natural coagulant is developed to overcome the drawbacks of conventional chemical coagulants. Natural coagulation has an advantage over the chemical treatment, because they are safe and eco-friendly. In this project the efficiency of moringa olifera, banana stem juice and alum in treating oil industry wastewater has been studied.

The important parameter those are responsible for the treatment have been optimized. The important parameters considered in the study are the pH, Hardness, Total Solids, alkalinity, chemical oxygen demand.

ICCE115: EXPERIMENTAL INVESTIGATION OF LITRACON USING WASTE OPTICAL FIBRES

Jeyasurya.P¹, Pradeep Raj.N², Theerankumar.M³, Vinoth.S⁴, R.Sigappu⁵

^{1,2,3,4}UG Scholar, Dept. of Civil Engineering, Karaikudi Institute of Technology, Karaikudi

⁵Assistant professor, Dept. of Civil Engineering, Karaikudi Institute of Technology, Karaikudi

Abstract - This composition deals with the operation of translucent concrete and also the advantages it brings in the field of smart construction, that it can reduce the power consumption of illumination and use the optical fibre can be made to sense the stress of structures and this concrete as an architectural purpose for good aesthetical view of the structure. Translucent concrete is a concrete predicated material with light- trans missive parcels, attained by coverlet optical fibres in it. Light is conducted through the fibre from one end to the other. This results into a certain light pattern on the other face, depending on the fibre structure. optical fibres transmit light so effectively that there is nearly no loss of light conducted through the fibres. This type of concrete can be installed at average cost of construction and adding the visual appearance of the structure. The work presented in this design reports an exploration on the behavior of concrete and mortar with optical fibre. Concrete and mortar cell are casted with fibres to study the parcels and to compare the compressive strength between normal mix concrete with optical fibre and normal mortar with optical fibre after 7 days, 14 days and 28 days singly. The compressive strength of concrete samples made with different fibre amount varies from 2 to 4 were studied. The compressive strength of translucent concrete is seen to increase with the increase in fibre content. The samples with fibres of 4 showed better results in comparison with the others.

ICCE116: PERFORMANCE OF COLUMN WITH DIFFERENT MATERIALS IN CLAY SOIL

Ms. Raci. Mahizhini¹

¹Assistant professor, Dept. of Civil Engineering,

Sri Bharathi Engineering college for women Kaikkurichi, Pudukkottai

Abstract - Foundation alternatives available in soft soils are very limited, owing to the accompanying environmental concerns and high cost. Among the various alternatives that are available, for low-rise buildings and structures that can tolerate some settlement, stone columns provide a satisfactory method of support in soft soils. In developing countries like India due to the rapid urbanization large amount of waste materials are produced every year. These waste materials can be utilized in the improvement of problematic soils. In geotechnical engineering, the bearing capacity and settlement are two main criteria that control the design and performance of footings. In soft soils, the construction of structures such as a building, storage tanks, warehouse, etc, on weak soils usually involves excessive settlement or stability problems. To solve or reduce bearing capacity and settlement problems, soil improvement may be considered by using stone-columns. In addition, because of high permeability of stone column material, consolidation rate in soft clay increases. In this study, load test was conducted to ensure the

suitability of waste as column materials. The variable parameters studied are materials, number of columns, slenderness ratio and encasement. The materials used for the study are stone aggregate, tyre chips, silica- manganese slag for three columns. Further, the load carrying capacity is improved by providing geocomposite encasement which consists of geogrid.

ICCE117: WATERPROOF WEATHERING TILES

S.A.Varsha¹, K.Jana Priya², V.Aishwarya³, S.Venkada Priya⁴

^{1,2,3}UG Scholar, Dept. of Civil Engineering,

*⁴Assistant professor, Dept. of Civil Engineering,
Velammal College of Engineering and Technology*

Abstract - Weathering roof tiles are external layer applied on the roof of the building. Like most things, weathering roof also have disadvantages. Due to harsh weathering condition they are not water resistant. Due to water penetration it affects the concrete roof slab of the building which leads to peeling of paint, dampness on the wall, cracking of plaster and severe damage to the building. Thus, this project deals with manufacturing of waterproof weathering tiles by impregnating process. As part of a study to assess the efficacy of impregnation for masonry substrates, the impregnation of weathering roof tile with soluble sodium silicate followed by zinc stearate with acetone was investigated. The treatment was found to be successful in achieving water repellent and consolidation effects for the weathering roof. The durability of the treated weathering roof was examined through water absorption, depth of impregnation, resistance to water penetration, wetting and drying cycling, and UV/condensation weathering tests. The mechanism of water repellent and consolidation effects for the waterproof weathering tile is discussed.

ICCE118: ANALYSIS AND DESIGN OF STEEL FOOTOVER BRIDGE BY USING STAAD PRO

C. Meena¹, Ms. R. Parameshwari²

¹PG Scholar, Dept. of Civil Engineering,

²Assistant professor, Dept. of Civil Engineering, Mother Teresa College of Engg & Tech

Abstract - Civil engineering deals with the design, construction and maintenance of physical and naturally built environment, including works like bridges, roads, canals, dams and buildings. Construction of bridge has always been one of the most fascinating challenges to civil engineers. Materials like timber, iron, steel and concrete has been used to construct the bridge. In India mostly, reinforced concrete bridges are existed. A Foot over bridge is a structure built to span physical obstacles such as roads and railway tracks A Foot over bridge or a pedestrian bridge is a bridge that helps pedestrians to cross a water body, valley or vehicular traffic. This project deals with the detailed study of a foot over bridge, its use, its importance in our day to day life and most importantly about the safety it offers. The Foot over bridge is designed as an overhead bridge at an area where hourly traffic is more than 2500 vehicles. It is Simple Truss type Bridge and Hot rolled steel Section. The foot over bridge that is analyzed and designed spans over a Six lane highway with an overall Span of 25m, 4m width and 4m height of bridge truss and involves incorporating Pratt and Warren truss. Therefore, the provision of this foot over bridge will

eliminate the congestion of traffic and any kind of delays in the highway. Also, interaction between pedestrians and motor vehicles could be prevented thereby avoiding any kind accidents. In this project, Steel foot over bridge with Pratt and Warren truss are modelled and analyzed with Staad.pro with standard design details as mentioned in Indian codes and their performance in terms of axial force, shear force, bending moment and displacement is compared. Structural design is to be done using Limit state method. The designed bridge is capable of maintaining its strength and stability against any kind of loads like dead loads, live loads, Wind loads, Load combinations, etc. And also, to identify suitable economic and efficient steel sections for the foot over bridge and final compare the performance and cost of steel foot over bridge incorporated with Pratt and warren trusses.

ICCE119: EXPERIMENTAL INVESTIGATION ON USAGE OF WASTE BRICK AND KADAPPA STONE AS PARTIAL REPLACEMENT OF COARSE AGGREGATE

G. Vijayaprasanth¹, Mr.B. Muthumari²

Dept. of Civil Engineering,

¹UG Scholar, ²Assistant professor, Dept. of Civil Engineering,

Sree Sowdambika College of Engineering

Abstract - The increasing cost of conventional aggregates affects the economy of our country. Due to this, excessive exploitation of aggregates occurs. Kadappa stone wastes is an industrial waste produced from cutting of Kadappa stone for usage in various construction applications in india. The use of waste Kadappa stone and Waste Brick as coarse aggregate in concrete reduces the amount of natural aggregate required. This work is concerned with studying the feasibility of partial replacement of coarse aggregates with Brick waste and Kadappa stones. The waste brick and Kadappa stone was used to replace the coarse aggregates using replacement ratios of 10%, 20%, and 30% by weight. The concrete specimens were tested for compressive strength and split tensile strength. In this project, coarse aggregate is replaced by 10%,20%,and 30% . Design mix used is M20 grade and the testing of specimens was conducted after 7,14 and 28 days of curing. Its usage is cost effective.

ICCE120: EXPERIMENTAL INVESTIGATION ON PARTIAL REPLACEMENT OF CEMENT BY RICE HUSK ASH AND FINE AGGREGATE BY PLASTIC WASTE ON CEMENT BLOCK

Vickram.R.R¹, Ms.G. Anitha²

Dept. of Civil Engineering,

¹UG Scholar, ²Assistant professor, Dept. of Civil Engineering,

Sree Sowdambika College of Engineering

Abstract - The replacement of rice husk and waste plastic in the manufacture of cement block comparatively higher compressive strength than the normal cement block. Hence the addition of rice husks up to 30% is recommended in the manufacture of blocks. The addition of plastic waste to the blocks produced comparatively higher compressive strength than the normal cement block when admixture is limited to 20% while there was no major difference in the weight of the two types of blocks. The aim of the experiment is to evaluate the effect of addition of shredded waste plastics on the compressive strength and water absorption of block. The experimental program

included testing a total number of 36 specimens, the specimens were tested either at age of 7,14 and 28 days. The combination of plastic waste by 5%,7.5%,10% and rice husk ash were replaced by 10%,20%,30% replacement of fine aggregate and cement. A total of 36 blocks were preparing for the test. The size of block was 150*125*300 mm. After 24 hours of casting the specimens were immersed in curing tank containing fresh water. Curing period was 7,14 and 28 days for blocks.

**ICCE121: AN EXPERIMENTAL INVESTIGATION ON STRENGTH OF CONCRETE
BY PARTIAL REPLACING M-SAND WITH STEEL SLAG AS FINE
AGGREGATE**

K. Ponvannan¹, S. Harikrishnan²

Dept. of Civil Engineering,

¹UG Scholar, Sree Sowdambika College of Engineering

²Assistant professor, Sree Sowdambika College of Engineering

Abstract - The steel making industry has generated substantial solid waste. Industrial waste slag is one of the burning issues concerning the environmentalists today. Steel slag is an industrial by product obtained from the steel manufacturing industry and hundreds of tons of it are produced every year all over the world in the process of refining metals and making alloys. As a construction material, concrete is the largest production of all other materials. Aggregates are the important constituents in concrete. They give body to the concrete, reduce shrinkage and effect economy. Steel slag can be used in the construction industry as aggregates in concrete by replacing natural aggregates. Steel slag is currently used as aggregate in hot mix asphalt surface applications, but there is a need for some additional work to determine the feasibility of utilizing this industrial by-product more wisely as a replacement for both fine and coarse aggregates in a conventional concrete mixture. Replacing all or some portion of m-sand with steel slag would lead to considerable environmental benefits. In this study the properties involve of compressive strength, split tensile strength and flexural strengths of M25 conventional concrete by replacing the 0%, 10%, 20% and 30% of steel slag fine aggregate was added, tests were conducted on concrete cubes, cylinders to study compressive strength and split tensile strength test.

**ICCE122: EXPERIMENTAL INVESTIGATION ON USAGE OF AGRO WASTE AND
GLASSWASTE AS PARTIAL REPLACEMENT OF COARSE AGGREGATE**

M.Hariharan¹, Mr.P. Vinoth Kumar²

¹UG Scholar, Dept. of Civil Engineering,

²Assistant professor, Dept. of Civil Engineering,

Sree Sowdambika College of Engineering

Abstract - Concrete industry is one of the largest consumers of natural resources due to its consumption of huge volumes of natural aggregates, which represents around 70% - 80% of the concrete volume. The increasing cost of conventional aggregates affects the economy of our country. Due to this, excessive exploitation of aggregates occurs. The environmental and economic concern are the biggest challenge that concrete industry is facing. In this research, the issues of environmental and economic concern are addressed by using waste glass and Agro waste (coconut shell) as partial replacement of coarse aggregates in concrete. The waste glass

and coconut shell were used to replace the coarse aggregates separately using replacement ratios of 5%, 10%, and 15% by weight. The concrete specimens were tested for compressive strength and split tensile strength. In this project, coarse aggregate is replaced by 10%, 20%, and 30%. Design mix used is M20 grade and the testing of specimens was conducted after 7, 14 and 28 days of curing. Its usage is cost effective. This help to reduce the cost of the project.

ICCE123: EXPERIMENTAL STUDY ON PARTIAL REPLACEMENT OF COARSE AGGREGATE IN CONCRETE BY USING PEBBLE STONES AND MARBLE WASTE

K.Syed Ali Ibrahim¹, Ms.G.Anitha²

Dept. of Civil Engineering,

¹UG Scholar, ²Assistant professor

Sree Sowdambika College of Engineering

Abstract - Marble wastes are an industrial waste produced from cutting of marble stone for usage in various construction applications in India. Pebble stones is an river, stream and rock waste produced from in various sizes. Also, a large amount of marble is accumulating in the environment due to demolition of old structures having marble and 30 percentages of pebble stones gets come from river sand for sieve analysis. This causes environmental pollution and increase the volume of solid waste. Also, the process of manufacturing of natural aggregates uses a lot of energy and causes pollution. The use of waste marble and pebble stones as coarse aggregate in concrete reduces the amount of natural aggregate required. This work is concerned with studying the feasibility of partial replacement of coarse aggregates with marble waste and pebble stones. The river pebble stones has got high potential for being a natural aggregate, it is been rarely used as a concrete material. The present investigation envisages the potential utilization of pebble stone and marble waste as a coarse aggregate in replacement of river pebble stones and industries marble waste in concrete. The percentages of replacement were 20% 40% and 60% by weight of coarse aggregate. Studies on compressive strength and split tensile strength would be made the optimum percentage of marble waste and pebble stone replacement. Key Words: Pebble stones and marble wastes, compressive strength and split tensile strength, 20%, 40% and 60%.

ICCEST1: A REVIEW PAPER ON SEWAGE WASTE WATER TREATMENT IN DISARRAY OF MADURAI

Ms.M.Kasthuri¹

*¹Assistant Professor, Department of Civil Engineering,
Pandian Saraswathi Yadav Engineering College, Sivagangai*

Abstract – Waste water treatment is a process used to remove contaminants from waste water or sewage and convert it to an effluent that can be returned to the water cycle with acceptable impact on the environment, or reused for various purposes. The treatment process takes place in a waste water treatment plant (WWTP) also referred to as a Water Resource Recovery Facility (WRRF) or a sewage treatment plant (STP) in the case of domestic waste water. Pollutants in waste water are removed. Converted or broken down during the treatment process.

**ICCEST2: DEVELOPING SUSTAINABLE RAILWAY INFRASTRUCTURE WITH
LUMINOUS CONCRETE SLEEPERS**

Ms. G.Ragha Dharini¹

¹*Assistant Professor, Department of Civil Engineering,
Pandian Saraswathi Yadav Engineering College, Sivagangai*

Abstract – Luminous concrete railway sleepers are a new type of railway sleepers that have been designed to provide a safer and more sustainable alternative to traditional railway sleepers. These sleepers are made from concrete, which is infused with luminous particles to create a glowing effect. This makes the sleepers highly visible, even in low-light conditions. The luminous effect is achieved through the use of photo luminescent materials that store light energy during the day and release it at night. This means that the sleepers do not require any additional power source and are completely self-sustaining. The use of concrete as a material also makes the sleepers highly durable and resistant to wear and tear, which is essential for railway infrastructure. The luminous concrete railway sleepers offer a sustainable and cost-effective solution for improving railway safety and reducing the impact of rail transport on the environment.

**ICCE124: FLEXURAL BEHAVIOUR OF CONCRETE REINFORCED WITH
POLYPROPYLENE AND CRIMPED STEEL FIBRE**

Mrs.I.Regina Mary¹, Dr.T.Bhagavathi Pushpa²

^{1,2}*Assistant Professor, Department of Civil Engineering,*

¹*Mount Zion College of Engineering and Technology, Pudukkottai*

²*University College of Engineering, Ramanathapuram*

Abstract – In this study, crimped steel and polypropylene fibres are used to improve flexural and shear performance of reinforced concrete. The purpose of this work is to present the results of the structural behaviour of FRC beams under shear loading, considering fibers of different materials. Further, the study aims to evaluate the ability of predicting the ultimate shear capacity of concrete beams. This study also aims to improve the strength of reinforced concrete by providing combination of polypropylene fibre (5%,10%,15% and 20%) and crimped steel fibre (0.4%.0.6%,0.8% and 1%).It has been observed that the incorporation of polypropylene fibre of 15% and 1% of crimped steel fibre to the concrete mix M20 increases the material toughness both in tension and compression, The deflection and the load carrying capacity increases with the addition of fibres. This concrete helps in arresting cracks and increases the strength of concrete.

**ICCEST3: EXPERIMENTAL RELATIONSHIP BETWEEN MECHANICAL
STRENGTH OF PARTIAL REPLACEMENT OF GRANITE AS COARSE
AGGREGATE**

Dr.S.Meenakshi Sudarvizhi¹, Jeeva Prasath²

¹Assistant Professor, Department of Civil Engineering,

Pandian Saraswathi Yadav Engineering College, Sivagangai

²Master of Structural Engineering, Thiagarajar College of Engineering, Madurai

Abstract – Disposal of solid waste materials is a great concern in cities all around the world. Some of these waste materials are not biodegradable, which often leads to disposal crisis and environmental pollution. Many efforts are being made for the recycling of different types of solid wastes with a view to utilize them in the production of various construction materials. This paper describes the recycled concrete experiment as well as the materials used and their proportions for concrete mixing. This paper addressed the research that was performed and the results that were obtained during the test. The results of the experiment were thoroughly studied, and a comparison was made, revealing very reasonable regression values.

**ICCE125: EXPERIMENTAL STUDY ON CONVENTIONAL BRICK AS PARTIAL
REPLACEMENT OF SUGARCANE BAGASSE ASH AND COCONUT FIBRE**

M.Parvesh Musaraf¹, C.Ravikumar²

¹UG Scholar, Department of Civil Engineering,

²Assistant Professor, Department of Civil Engineering

Sree Sowdambika College of Engineering

Abstract – The need for locally manufactured building materials has been emphasized in many countries of the world because of their easy availability and low cost. Bricks also have been regarded as one of the longest lasting and strongest building materials used throughout history. Ordinary building bricks are made of a mixture of clay, which is subjected to various processes, differing according to the nature of material, the method of manufacture and the character of the finished product. After being properly prepared the clay is formed in moulds to the desired shape, then dried and burnt. On seeing the present clay demand for bricks, an attempt was made to study the behaviour of bricks manufactured using, different waste materials like sugarcane bagasse ash and coconut fibre was used to manufacture bricks. The main of this project was to compare the compression strength of the bricks, so for this purpose different percentage of materials were separately added 2.5%, 5% & 7.5% by weight and then the compressive strength of the bricks was established and then with the help of graph a comparison between compressive strength of bricks, made out sugarcane bagasse ash, coconut fibre and normal brick was determined. Before manufacturing the bricks, different properties of the materials was also verified. After that the bricks were made & sun dried and bricks were burnt and then with the help of Universal Testing Machine (U.T.M) finely their compressive strength was calculated. From this test in this project work it was concluded that the sugarcane bagasse ash and coconut fibre were that waste material, which have the acceptable compressive strength.

**ICCE126: AN EXPERIMENTAL INVESTIGATION ON GGPS PARTIALLY
REPLACEMENT WITH CEMENT**

M.Sudarsini¹, P. Vinothkumar²

¹UG Scholar, Department of Civil Engineering,

*²Assistant Professor, Department of Civil Engineering
Sree Sowdambika College of Engineering*

Abstract – The concept of partial replacement of cement which is capable for sustainable development is characterized by application of industrial wastes to reduce consumption of natural resources and energy and pollution of the environment. A presently large amount of ground granulated blast furnace slag is a by-product of manufacturing of pig iron with an important impact on environment and humans. This research work describes the feasibility of using the GGBS in self compacting concrete production as partial replacement of cement. GGBS can be used as filler and helps to reduce the total voids content in self compacting concrete. Constant level of Fly ash is also used in all set of mix proportion to increase the powder content for achieve the Workability. The cement has been replaced by GGBS accordingly in the range of 0%, 25%, 30%, 35%, and 40% by weight of cement for M-30mix. After iterative trial mixes the water/cement ratio (w/c) was selected as 0.40. Self-compacting Concrete mixtures produced, tested and compared in terms of compressive split tensile strength and flexural strength with the conventional concrete for 7.14.28 days. It is found that, 25% of GGBS can be replaced and strength obtained is comparable to the conventional concrete.

**ICCE127: EXPERIMENTAL INVESTIGATION OF PAPER PULP AND CLOTH
WASTE PARTIALLY REPLACED IN CONCRETE**

M.Veerachandran¹, S.Harikrishnan²

¹UG Scholar, Department of Civil Engineering,

*²Assistant Professor, Department of Civil Engineering
Sree Sowdambika College of Engineering*

Abstract – Two Types of Bio concretes are formulated Using bio waste materials such as paper mass and waste cloths for various percentages mixed with concrete to study the characteristic properties such as Cube compressive strength, Cylinder compressive strength, water absorption, and establishing relationship with the strength parameters. The mix ratio of paper pulp is varies between 2.5% to 30 % and cloth waste is varying from 1% to 5%. The specimens are also cast to study the impact resistance behaviour. All these tests are compared with the control concrete to explore the potential use of these materials in the field. The bio-concrete gives equal strength compares with control OC. The BC gives 90% of result from control concrete. And weight of the concrete is very low compare with normal concrete.

**ICCEST4: EXPERIMENTAL INVESTIGATION ABOUT THE BEHAVIOURS OF
ACCELERATING ADMIXTURES ON PROPERTIES OF CONCRETE**

Mr. D.Selvaganesh¹

*¹Assistant Professor, Department of Civil Engineering,
Pandian Saraswathi Yadav Engineering College, Sivagangai*

Abstract – Accelerating admixtures affect the rates of reactions between cement and water to give an overall increase in the hydration rate. Thus, the use of accelerators in concrete provides a shortening of setting time and/or an increase in early strength development. In this paper the issue of slow down setting and hardening of concrete or addressed by the use of accelerating admixture are (sodium nitrite and calcium nitrite) in concrete. Sodium nitrite and Calcium nitrite was added in four samples having the quantity of 1%, 1.5 %, 2%, 2.5% and 3% by weight of cement was taken as mix -1 and mix -2. The concrete samples were tested 7, 14 and 28 days of Compressive strength, Split tensile strength and Flexural strength. The concrete specimens were laid for M25 grade of concrete.

**ICCEST5: EXPERIMENTAL INVESTIGATION ABOUT THE PYROLYSIS PROCESS
BY USING WOOD SAW DUST AND SHREDDED PLASTIC WASTE**

Mr. D.Selvaganesh¹

*¹Assistant Professor, Department of Civil Engineering,
Pandian Saraswathi Yadav Engineering College, Sivagangai*

Abstract – This project examines the experimental study of the pyrolysis process by using wood and plastic waste. The wastes are taken in different ratios and it will be thermally decomposed to obtain the yields of biomass such as Biochar, Biogas, and Bio-fuel which may be used as an alternate for fossil fuels to reduce the oil demand. The Pyrolysis process includes the following steps such as combustion, production of carbon products, and conversion to liquid and gaseous fuels. Despite the fuel from the pyrolysis of wood waste being environment-friendly, the fuel characteristic of it remains lower than fossil fuel, especially with regard to combustion efficiency. In this case, the high composition of oxygenated compounds in pyrolysis fuel is responsible for this problem. Co-pyrolysis using plastics have been found to be a promising option for a biomass conversion technique to produce pyrolysis fuel as plastics have abundant hydrogen source. The final temperature range for this study is taken as 350°C to 500°C and the highest liquid product yield is obtained at optimum temperature. Bio-fuel can be used as a substitute for fossil fuels to generate heat, power, and chemicals. The calorific value of bio-fuel will be determined for the different mix proportions and also optimum temperature range will be found. Comparison of the calorific values of different mix proportions will be held and discover the best mix proportion which having the greater calorific value than others mix - ratios respectively. Further, the characterization of bio-oil can be done by using the FTIR (FOURIER TRANSFORM INFRARED) Spectrometer and by using Origin Pro Software analysis.

**ICCEST6: EXPERIMENTAL INVESTIGATION ABOUT THE REMOVAL OF
CHROMIUM IN WASTEWATER BY USING LOW – COST ADSORBENT**

Mr. A . Suthan M.E¹

*¹Assistant Professor, Department of Civil Engineering,
Pandian Saraswathi Yadav Engineering College, Sivagangai*

Abstract – In this investigation, locally available and inexpensive Mustard and Seemai Karuvelam were used as adsorbents, on that the mustard is used as biosorbent are used to remove chromium from synthetic wastewater. The removal of this metal ion from water in the batch method of adsorption have been studied and discussed. Adsorption kinetics study was also carried out and the material exhibits good adsorption capacity. Scanning Electronic Microscopic image was also used to understand the surface characteristics of adsorbent before and after adsorption studies. Effects of various factors such as pH, adsorbent dose, adsorbate initial concentration and time were analyzed. The initial concentrations of chromium were considered 10-30mgL⁻¹ in batch method. The maximum chromium adsorbed was 100% in mustard and 97.64% in seemaikaruvelam at Batch method. Batch method of adsorption studies indicated that the biosorbent and the adsorbent could be reused for removing heavy metals. Results of the laboratory experiments show that the performance of mustard and seemaikaruvelam prove that they can effectively be used as low-cost adsorbents for the removal of chromium from wastewater.

**ICCE128: INVESTIGATION ON THE FLEXURAL BEHAVIOR OF GEOPOLYMER
FERROCEMENT SLABS WITH NANO-SILICA**

M.Nanthini¹, Dr. R. Ganesan²

¹Research Scholar, Department of Civil Engineering,

²Professor, Department of Civil Engineering

SIMATS school of Engineering, Saveetha Nagar, Thandalam, Chennai

Abstract – The main objective of this research is to study the geopolymer based ferrocement slab element's flexural property and analysing the optimized combination, as well as to find the suitability of Geopolymer mortar instead of cement mortar in the structural elements and the enhancement of property. In this experimental investigation the compressive strength, flexural behaviour and durability properties of Nano silica based geopolymer incorporated ferrocement slab element using Carbon Fibre Reinforced Polymer (CFRP) wounded wire mesh have been analysed experimentally in detail at both room temperature curing and hot curing at 60°C. Here geopolymer is prepared based on Fly ash. Fly ash is a waste material emerged from coal based thermal power plant which is available abundantly creating disposal problem. So that there is a need to use this fly ash in alternative way. One among the best way of its utilization is in construction sector. By adding fly ash in mortar as a replacement of cement, valuable land required for the disposal can be saved. In addition to fly ash for the improvement of strength GGBS is added. GGBS is Ground Granulated Blast-furnace Slag obtained from steel industries. By adding GGBS the setting property is also improved.

**ICCE129: A STUDY ON BEHAVIOUR OF AXIALLY LOADED STEEL CONCRETE
COMPOSITE LONG COLUMNS WITH BASALT, ARAMID, CARBON AND E-GLASS
FIBER**

S.Prabhakaran¹, Ms.R.Parameswari²

¹PG Scholar, Department of Civil Engineering,

*²Project Guide, Department of Civil Engineering
Mother Terasa College of Engn & Tech*

Abstract – The slender columns are widely used in modern high rise buildings. The bearing capacity of such columns is, obviously, dependent on the effective length or, we can say, slenderness ratio. In this project, the effect of slenderness ratio on reinforced concrete columns has been investigated by both theoretical and numerical methods of analyses. The theoretical critical load that a column can withstand for a defined slenderness ratio for the design is being determined by the Euler's theory and Rankine's theory of columns. The considered column being square in cross-section is pinned at both of its ends as a support conditions. A vertical axial load was applied to the column top, and the corresponding strain was to be calculated for the column in numerical analysis. The computational evaluations were performed with the general purpose finite element analysis software ANSYS 12.0, which can effectively depict the behavior of the columns.

**ICCE130: PERFORMANCE EVALUATION OF ANADARA GRANOSA IN NO-FINES
CONCRETE**

Sanath V.P¹, Dr. Mercy²

¹UG Scholar, Department of Civil Engineering, Anna University, Madurai.

²Associate Professor, Dept. of English, Pandian Saraswathi Yadav Engg. College

Abstract – Nowadays, we face a huge issue in the availability and manufacturing of a construction material. Simultaneously the cost of the materials is also playing a vital role behind it. So we planned to add another material for partial replacement in cement and aggregate with some percentage of it. According to this research this material may improve the strength and reduce the chemical effects on building or wall surface by adding municipal waste materials. This helps us to provide sustainable environment and healthy atmosphere inside of building. According to this research the material may improve the strength and reduce the chemical effects on building or wall surface by adding municipal waste materials. Sea shell is one of the major municipal wastes found over the sea shore areas. Disposal of this waste may not be economical. Applying these materials in construction helps to improve the sustainability and healthy atmosphere.

**ICCE131: EXPERIMENTAL STUDY ON PARTIALLY REPLACEMENT OF COARSE
AGGREGATE BY CINDER IN CONCRETE**

M. Kanmani¹, B.Muthumari²

¹*UG Scholar, Department of Civil Engineering, Sree Sowdambika college of Engineering*

²*Project Guide, Dept. of Civil Engineering, Sree Sowdambika college of Engineering*

Abstract – Lightweight concrete has become more popular in recent years owing to the tremendous advantages it offers over the conventional concrete. The main specialties of lightweight concrete are its low density and thermal conductivity. Its advantages are that there is a reduction of dead load, faster building rates in construction and lower haulage and handling costs. We are replacing the cinder instead of coarse aggregate; it is obtained from steel industries. The surface of the cinder is usually rough and high porous due to mineral structures. Low specific gravity of cinder in compression with natural aggregates resulted in the concrete made with cinder to be lighter than normal concrete. Based on the literature, the main function for usage cinder material is to minimize the cost and it is reduced to disposal of waste material and it helps in reduction of dead load. An experimentally study has been conducted on concrete with partial replacement of conventional coarse aggregate by another light weight aggregate. The M30 concrete mix is designed using ISI method. We make concrete by replacing coarse aggregate with cinder of different percentages like 0%, 20%, 40%, 60%, 80% and 100% with curing of 7 and 28 days. Among all the percentages the better compressive strength obtained percentage is selected

**ICCE132: AN EXPERIMENTAL AND COMPARATIVE STUDY OF PLASTONE
FROM POLYETHYLENE WITH FLY ASH, M- SAND AND RICE HUSK ASH**

C. Durga devi¹, E. Hiroshini², S. Ragavi³

^{1,2,3}*UG Scholar, Department of Civil Engineering,*

²*Assistant Professor, Dept. of Civil Engineering,*

Latha Mathavan Engineering College, Madurai

Abstract –This report outlines the utilization of polyethylene in construction industries. Polyethylene component of urban solid waste is quite problematic. As it is non-biodegradable, it can stay in the environment for the longer period of time causing severe environmental degradation. Unless it is properly disposal of environmental degradation is unavoidable. The environmental degradation would potentially harm the human and biological wealth. The aim of this project is to manufacturing of plastone bricks with polyethylene, fly ash, rice husk ash and M-sand. At present nearly 275 million tones of polyethylene waste is generated each year around the world. The degradation rate of polyethylene is also a very slow process. Hence the project is helpful in reducing polyethylene waste in a useful way. This project is a comparative study of various materials like fly ash, rice husk ash and M-sand with polyethylene waste to make plastone bricks in various ratios. The plastone bricks were prepared, tested and results were discussed. ‘PLASTICS Not to Ban, But to Plan’.

ICCE133: STRENGTH AND DURABILITY OF LIGHT WEIGHT CONCRETE BY PARTIAL REPLACEMENT OF OVER BURNT BRICK AS COARSE AGGREGATE

K.Thangapandiraja¹, M.Petchiyammal²

¹UG Scholar, Department of Civil Engineering,

*²Assistant Professor, Dept. of Civil Engineering,
Sree Sowdambika College of Engineering*

Abstract – Regional conditions enforced engineers to generate a study on concrete which incorporate Over Burnt Brick Coarse Aggregate partially due to their abundance. A concrete cube, cylinder & prism is prepared by using sand, cement, water, coarse aggregate & over burnt brick. The over burnt brick is used as a coarse aggregate replacement by 5%, 10%, 15%, 20%. Mix design is done for M25 grade of concrete. Analysis of incorporated concrete was done in fresh state as well in hardened state to evaluate different properties of concrete i.e. slump, compaction factor test, unit weight, and compressive strength are evaluated. From all the results and experimental approach it is concluded that Concrete formed with over burnt brick coarse aggregate showed beneficial performance as compared with the concrete made up of natural aggregate obtained from local resources. It was seen that 0.76 kg reduction of weight in cube. It was seen that 1.62 kg reduction of weight in cylinder. It was seen that 1.47 kg reduction of weight in prism.

ICCE134: EXPERIMENTAL INVESTIGATION ON HYBRID FIBER REINFORCED CONCRETE

S.Ramesh¹, Dr.K.Ramesh²

¹PG Scholar, Department of Civil Engineering,

*²Professor, Dept. of Civil Engineering,
PSNA College of Engineering & Technology*

Abstract – Fiber reinforced concrete is a composite material consisting of mixtures of cement, mortar or concrete and discontinuous, discrete, uniformly dispersed suitable fibers. Addition of small closely spaced and uniformly distributed fibers in reinforced concrete will act as crack arresters. The experimental investigation is carried out the behavior of concrete beams reinforced with conventional steel bars and steel fibers and subjected to flexural loading. Materials testing was carried out for cement, fine aggregate and coarse aggregate. Based on the test results M20 mix design was carried out. For this experimental investigation, it is planning to incorporate hybrid fiber reinforced concrete (combination of hooked end steel fiber, crimped steel fiber, polypropylene fiber) upto a total fiber volume fraction of 0.5%, 0.5%, 0.12%. which is prepared using normal mixing, compaction and curing conditions. Mix designation was identified. The workability and the compressive strength on cubes, split tensile strength and flexural strength of concrete will be studied for concrete with mono and hybrid fiber combinations. From the tests results, optimum fiber content percentage is fixed. Beams of steel fiber reinforced concrete (SFRC) with conventional reinforced concrete (RC) will be casted for getting the optimum fiber percentage. The various parameters, such as, first crack load, service load, ultimate load and stiffness characteristics of beam with and without steel fibers will be carried out and a quantitative comparison was made on significant stages.

**ICCE135: COMPARATIVE STUDY ON EFFECT OF GROUND WATER AND
EFFLUENT OF DAIRY INDUSTRY IN THE YIELD OF SHORT DURATION CROP**

Kavi Priya Devi P¹

*¹Assistant Professor, Dept. of Civil Engineering,
Sri Raaja Raajan College of Engineering and Technology*

Abstract – The use of wastewater for irrigation is increasingly being considered as a technical solution to minimize soil degradation and to restore nutrient content of soils. The aims of this study were to test if wastewater irrigation could improve yield of plants. A field experiment going to conduct investigate the effects of irrigation with ground and preliminary and primary treated wastewater of dairy industry on macro- and micronutrient distribution within the soil profile, yield and mineral content of Okra or Okro (*Abelmoschus esculentus*, Lady's fingers) plants grown on an Omnibus group of Soil (Red Soil). Application of wastewater may be increase soil salinity, organic matter, exchangeable Na, K, Ca, Mg, plant available phosphorus and micro elements, and decreased soil pH when it is not a treated effluent. The study is being highest yield, macro- and micronutrient uptake of Okra or Okro (*Abelmoschus esculentus*, Lady's fingers) comparing with the ground and preliminary and primary treated wastewater of dairy industry. Treated municipal wastewater is the most readily available source of water to meet the increasing demand for crop irrigation. Indeed, in recent years, wastewater recycling in agriculture has gained importance as component of agricultural water supply in several water-scarce countries. Wastewater plays an important role in suburban agriculture irrigation in different parts of the world, especially in countries that are short of water, since it contains nutrients that can be used by crops. Here the project is about analysing treated wastewater of dairy industry can be able to use confidently, in the short term, in agricultural land by yield of crop by analysing and comparing the groundwater and treated effluent.

**ICCEI01: HEAVY METALS REMOVAL FROM INDUSTRIAL WASTE WATER BY
USING AGRO-INDUSTRIAL WASTES**

N.Abdul kaja navas¹,D.Selvaganesh²

¹PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,

*²Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering
College*

Abstract- Waste water contamination is ever increasing problem which the whole world is now facing. Industrialization and globalization has led to production and disposal of large amount of heavy metals in the environment. The tremendous increase in use of heavy metals over the past decades has inevitably resulted in an increase flux of metallic substances in the aquatic environment. Heavy metals are major pollutants in marine, ground, industrial and even treated wastewaters. Effluents from large number of industries viz., electroplating, leather, tannery, textile, pigment & dyes, paint, wood processing, petroleum refining, photographic film production etc., contains significant amount of heavy metals in their wastewater. the adsorption has been investigated as a cost effective method of removal of heavy metals from wastewater. In the present study various low cost adsorbent has been reviewed as an abatement of heavy metal pollution from wastewater. The main objectives of this project are to determine the effectiveness

and feasibility of some low cost agricultural and industrial waste material (Brewed Tea waste and coconut husk) in the process of heavy metals removal from waste water.

**ICCEI02: REMOVAL OF TOXIC METALS FROM THE INDUSTRIAL WASTE
WATER USING GROUNDNUT SHELL**

N.Kowsika¹, O.Sharmila Begum²

¹*PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,*

²*Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering
College*

Abstract- Toxic heavy metal contamination of industrial wastewater is an important Environmental problem. Many industries such as Steel manufacturing industry, electroplating, pigments, metallurgical processes, and mining and leather industries release various concentrations of heavy metals. Metal ions such as cadmium, nickel, chromium, copper, lead, zinc, manganese and iron are commonly detected in both natural and industrial effluents. Heavy metal pollution has become one of the most serious environmental problems today. By using methods like chemical precipitation, chemical coagulation for removing metal ions from effluents. These processes may be effective or inexpensive; the heavy metal ions are present in high concentrations. Adsorption process is one of the efficient methods for the removal of heavy metals due to its simplicity, easiness in handling, availability of various adsorbents and more efficiently removes the heavy metals at lower concentration levels. This necessitates the use of groundnut shell for adsorption of heavy metals. At initial stage, both zinc and chrome water having high concentration of toxic metals after the treatments the concentration level is reduced and it is recharged into ground water.

**ICCEI03: EXPERIMENTAL INVESTIGATION OF SOIL CONTAMINATION DUE TO
GRANITE INDUSTRIAL WASTE**

V.Mayakkannan¹, S.Mohammed Ali Jinnah²

¹*PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,*

²*Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering
College*

Abstract- The aim of the project is to find the pollution that made in the granite factory. Granite factory is the one of the major pollutant in the soil pollution due to chemicals and kerosene are added in the cutting process. So, I decided to find the major cause of this pollution and find how they are doing the process and how the soil is polluted and how the soil characteristics are changing. The scope of the project is to prevent or make safety precautionary on how to control pollution. The site of the project has been choosing in the varichiyur near Madurai far from 20kms. The site has been chosen due to the granite factory is located in the surrounding agricultural area and residential buildings. So, that we can get the enough data that will useful for our project.

**ICCEI04: CO-APPLICATION OF BIOCHAR AND ORGANIC FERTILIZER
PROMOTES THE YIELD AND QUALITY OF CROP AND TO DETERMINE THE
PLANT GROWTH VARIATION**

M.Priyanka¹, G.Ragha Dharini²

¹*PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,*

²*Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering
College*

Abstract- This study evaluated the combined impact of Biochar and organic fertilizer on the soil properties, yield and quality of crops of Daikon (White Radish) -Raphanus Sativus. This experiment consisted of two factors: Biochar type (From Prosopis Juliflora – Karuvelam Tree Wood) and fertilizing source (Biodegradable Waste at home). It is potentially valuable and sustainable tool to improve soil quality and it could be used as an absorbent for the removal of pollutants in the soil. This combined process helps to resolve environmental problems faced by rapidly developing society and increasing population worldwide. In this process P.Juliflora Wood Biochar and combined with Organic fertilizer add to the plants in different ratios and showing the plant growth variations. The following trails will be carried out and compare the results of plant growth variations (i.e.) T1 : 100% soil (control), T2 : 100% (Organic Fertilizer), T3 : 70% + 15% + 15% (Soil + Biochar + OF), T4 : 50% + 25% + 25% (Soil + Biochar + OF), T5 : 25% + 50% + 25% (Soil + Biochar + OF), T6 : 25% + 25% + 50% (Soil + Biochar + OF).

**ICCEI05: APPLICATION OF COLLECTED WASTEWATER (TREATED) FROM
VEHICLE MANUFACTURING INDUSTRY TO DETERMINE GROWTH RATE OF
SHORT DURATION CROP**

R. Hariharan¹, M.Appu Sriram²

¹*PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,*

²*Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering
College*

Abstract- The use of wastewater for irrigation is increasingly being considered as a technical solution to minimize soil degradation and to restore nutrient content of soils. The aim of this study was to test if wastewater irrigation could improve yield of plants. A field experiment going to conduct investigate the effects of irrigation with ground and preliminary and primary treated wastewater of Vehicle Manufacturing industry on macro and micronutrient distribution within the soil profile, yield and mineral content of Okra or Okro (Abelmoschus esculentus, Lady's fingers) plants grown on an Omnibus group of Soil (Red Soil). Application of wastewater may be increasing soil salinity, organic matter, exchangeable Na, K, Ca, Mg, plant available phosphorus and microelement, and decreased soil pH when it is not treated effluent. The study being highest yield, macro and micronutrient uptake of Okra or Okro (Abelmoschus esculentus, Lady's fingers) comparing with the ground and preliminary and primary treated wastewater of Vehicle Manufacturing Industry. Indeed, in recent years, wastewater recycling in agriculture has gained importance as component of agriculture plays an important role in suburban world agriculture irrigation in different parts of the world, especially in countries that are short of water, since it contains nutrients that can be used by crops. This field experiment will be helps in

water scarcity area where the demand water is more for drinking purpose. This study analyzed the physical and chemical parameters of Vehicle Manufacturing industry effluent and groundwater. Also, the experimental study was conducted to test the soil quality and observed variation of nutrients contents like N, P, K, Fe, Mn, Zn, Cu, Calcium Carbonate, EC and pH during the duration of crop growth. Here the project is aimed to analyze treated wastewater of Vehicle Manufacturing industry is able to use in the agricultural land by comparing the yield of crop and with the groundwater. It can be concluded that untreated wastewater can be used confidently, in the short term, in agricultural land, while primary treated wastewater can be used in sustainable agriculture in the long term.

ICCEI06: SUBSTITUTIONAL STUDY ON TANNERY SLUDGE ON BUILDING MATERIALS

B. Santhanabharathi¹, A. Sulthan²

¹PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,

²Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College

Abstract- In the present study, solid waste from tannery industry has been collected treated in common effluent treatment plant and characterized. This study is to examine the potential reuse tannery effluent treatment plant sludge in the building material. Here the sludge has been collected from CETP Dindigul. Cubes of various sizes have been prepared with partial replacement of cement with tannery sludge, fly ash & bottom ash, with the proportion varies from 5% to 30%. The Cubes are then tested for its compressive strength & the result obtained was highly correlative with the previous studies. The test result are conforming to requirements.

ICCEI07: DESIGN OF UNIT SIZES OF A WATER TREATMENT PLANT FOR MADURAI CITY MUNICIPAL CORPORATION

J. Sudhakar¹, D. Selvaganesh²

¹PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,

²Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College

Abstract- Now a day's water scarcity is burning issue. As it is quite obvious that there is day to day increase in population, the demand for water also increases to satisfy the needs of the community there comes a necessity to redesign the existing treatment plants, or design the new treatment plants. Design includes hydraulic design and process of treatment of water in the plant. For hydraulic design of the plant, we need to forecast the population. We forecasted the population by incremental increase method. To design the treatment process of water we need to know the properties of raw water. The physical, chemical and biological properties of water have been determined. The method of treatment of raw water is based on these properties. We are designing the water treatment plant for Madurai city. The source of raw water is Vaigai River. The properties of water changes are based on its surface source. This project aims to meet out the demand gap of 125 MLD the Madurai City has analyzed the possibilities of withdrawal of water from the nearest source of Vaigai Dam.

**ICCEI08: ENVIRONMENTAL IMPACT ASSESSMENT ON WATER SUPPLY
PROJECT IN URBAN AREA**

Tamilanban T¹, M.Appu Sriram²

¹PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,

*²Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering
College*

Abstract- The Environmental impact assessment of Subproject components are located in Madurai City was expanded from 72 wards to 100 wards covering area 147.997 Sq.Km, dividing into four regions-Zone I, II, III, IV. Subproject components include Construction of Service Reservoir/ OHT, Sump & Pump Room, Laying, Jointing & Testing of MS Pipes & Ductile Iron Pipes for Clear Water Transmission main & Feeder main, Laying, Jointing, testing of Distribution main, House Service Connection, SCADA Arrangements, Road Restoration. Feeder Main, Distribution main, House Service connection will be laid in the public roads, within the road carriage way, and Service Reservoir will be constructed on identified government owned vacant lands which are located in residential areas.

ICCEI09: LANDFILL LEACHATE MANAGEMENT CONTROL AND TREATMENT

S. Agniraja¹, M.Kasthuri²

¹PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,

*²Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering
College*

Abstract - Sanitary landfills have been the most popular methods of municipal solid waste disposal for the last decades, all over the world, but waste management policy has been greatly turned toward waste minimizing and reuse. Incineration and energy recovery play an important role in waste reduction and energy conversion. Sanitary landfills, however, still exist and will continue to be used for solid waste and residue disposal in many countries. The designs of landfill leachate treatment and landfill closure requirement are one of the major engineering challenges for environmental compliance.

**ICCEI10: EXPERIMENT ON REMOVAL OF HEAVY METALS IONS AND DYEING
COLOURS FROM TEXTILE INDUSTRIAL EFFLUENT USING PROSOPIS
JULIFLORA**

K.Janani¹, D.Selvaganesh²

¹PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,

*²Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering
College*

Abstract- The present study focus on the removal of heavy metal ions and dyeing color from textile industrial effluent by using prosopis juliflora by adsorption method .in this project prosopis juliflora is used as adsorbent which removes the color and heavy metals by uv visible spectrophotometer. Now a day the textile effluents are discharged in lakes and rivers and the water gets polluted in order to avoid pollution proper treatment should be done and necessary steps should be taken for treating the waste effluents. Major issues nowadays are the textile

effluent are discharged which has heavy metals and dyeing colors which cannot be properly disposed. If it must be treated the treated water must be used for car washing, gardening purposes and other domestic uses.

ICCEI11: EVALUTION OF WASTE MANAGEMENT SYSTEMS FOR CHAMRAJ TEA FACTORY IN NILGIRIS TAMILNADU

S. Krishna Kumari¹, S.Mohammed Ali Jinnah²

¹PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,

²Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College

Abstract- Waste management is a great challenge in most processing industries in nilgiris. This study was specifically carried out to assess the effectiveness of the waste management system in tea processing factories in nilgiris with a case study of chamraj tea factory. The study identified the types of waste generated during tea production mainly through observations, the identified wastes at every stage of tea production were then sampled and weighed and their weights recorded and boiler data was also collected and analyzed to determine the efficiency of the boiler. The calorific value of the wood fuel used at the factory was determined using a bomb calorific meter and the data was used in calculating the efficiency of the boiler. The boiler efficiency was found to be 85.1% which could be improved by harnessing the energy that is lost through the fuel gas and the piping system. It was found that dry fuel gas generated the highest amount of heat loss at 7.5 % and the least amount of heat loss was 0.18 % due to moisture in the fuel. The factory waste management system was found to be partially compliant with the available national standards for waste management.

ICCEI12: TREATMENT OF KITCHEN GREY WATER USING NATURAL COAGULANTS

M. Ramya Kasthuri¹ G.Ragha Dharini²

¹PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,

²Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College

Abstract- Water is the most necessary resource, and it is a vital nutrient for all living organisms. Due to rapid industrialization and other harmful activities, the water quality from freshwater sources has been deteriorating. The parameters like turbidity, color, odor, pH, BOD, COD, and total solids determine the quality of water resources. Usage of coagulants such as alum for removing the turbidity leads to several effects on human and environmental health. The WT efficiency of natural coagulants ranges from 50–500 Nephelometric turbidity units (NTUs), which is similar to chemicals. Natural coagulants are one of the safest and alternative methods in minimizing the usage of chemical coagulants in wastewater treatment. By using natural coagulants, considerable saving in chemical and sludge handling cost may be achieved along with production readily biodegradable and less voluminous sludge that amount only 20% to 30% that of coagulant treat counterpart. The usage of natural coagulants such as Citrus Limon peel, Moringa olifera, and orange peel powder is used. Using of natural coagulants was found out it results giving 96% of turbidity removal efficiency. Locally available natural coagulants were

found to be suitable, easier, cost-effective and environmentally friendly for wastewater treatment. These natural coagulants were used as coagulants in the grey water that was let out from sinks. The purpose is to remove turbidity, BOD, COD and the color as the grey water from the kitchen is characterized by high COD, BOD etc

**ICCEI13: TURBIDITY REMOVAL USING ACACIA NILOTICA AND
EUCALYPTUS AS COAGULANT**

P.Dinesh Kumar¹, M.Kasthuri²

¹PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,

*²Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering
College*

Abstract- The use of coagulants that are derived from natural material has significantly increase over the last decades due to the safety and cost – effectiveness use of such coagulants. Therefore, the current study aims to use a plant-based coagulant remove the water turbidity. During the experimental work, sample of water of 250 nephelometric turbidity. During the experimental work, sample of water of 250nephelometric turbidity units (NTU) was mixed with various amounts of a laboratory at room temperature (20 +- 1°C) for 90 minutes. Every 10 minutes, 5.0ml samples were collected using a plastic container and filled to be checked using all spectrophotometer for the removal of turbidity. Besides, the import of mixing time, and pH on the removal of the turbidity was investigated. The outcome showed that the turbidity of the treated water decreases with the increase in the dosage of kaolin clay and the mixing time. However, it was noticed that the removal efficiency of the turbidity decreases when the pH value is more than 7. The removal of the water turbidity of 92% was achieved using kaolin clay for a minute.

**ICCEI14: ASSESSMENT OF GROUNDWATER QUALITY AND MAPPING BY GIS IN
TAMIL NAGAR OF TIRUNELVELI CITY**

K.Shalini¹, M.Kasthuri²

¹PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,

*²Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering
College*

Abstract- Groundwater is the main source of water in the urban environment, which is used for drinking, industrial, domestic and irrigation purposes. The advantages of groundwater includes no loss of water through evaporation, low pumping cost, etc. Groundwater not only supports all type of life forms to exist in the earth but also helps in the growth of human civilization. Due to urbanization for which agricultural lands were used, it was necessary to assess the groundwater quality. The study area has been Tamilnagar, located in Tirunelveli. It was planned to collect groundwater samples from 10 different locations. Samples were collected during a particular period in each month. The collection period spans from January 2023 to March 2023. The collected samples were analysed in the laboratory for physio-chemical characteristics such as pH, TDS, Conductivity, Turbidity, Total Hardness, Total Alkalinity, Chloride and Sulphate using Standard procedure as per IS 3025-1984. Water Quality Index has also been calculated for these parameters. The results obtained from samples are compared with the standards recommended by the BIS. Groundwater Quality Mapping in the form of visually communicating contour map

was developed using GIS. This study help us to understand the quality of the water as well as to provide guidelines for the suitability of groundwater for domestic purposes. This study also helps to show the change of water quality due to seasonal variation.

ICCEI15: STABILISATION OF WASTE PLASTIC BY PYROLYZED OIL

G.Gowshikasen¹, S.Meenakshi Sudarvizhi²

¹PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,

²Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College

Abstract- Use of waste materials in stabilization has been a vogue nowadays. This is particularly necessitated by the problems of disposal associated with it. Otherwise these materials would cause problems to the environment. Polypropylene fiber is a waste by product from plastic industries. This project deals with the stabilization of soil using their polypropylene fiber. So, it is proposes a partial solution to the disposal problem. But the primary objective of this project is to examine the potential capability of stabilizing poor soil. Various test such as Standard proctor, unconfined compression, CBR test and direct shear test were carried out on soil with fiber mixes from 0.1% to 0.5% in the increments of 0.1% and their strength properties were studied. The major advantages of this project are economy and waste management mixing of plastic waste with expansive soil helps to control the volume change behaviors of poor clay soil. Thus the material which was considered as a curse to the environment has turned out to be a boon to the civil engineering community.

ICCEI16: CELLULAR LIGHT WEIGHT CONCRETE

A.Karthick¹, S.Mohammed Ali Jinnah²

¹PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,

²Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College

Abstract- Cellular Light Weight Concrete (CLWC) is relatively a new material having cementitious properties, incorporated with mechanically entrained foam in the cement-based slurry or mortar which can manufacture in a varying density ranging from 300kg/m³ to 1850 kg/m³. With the increase in future requirement of the construction material, the CLWC is presently believed to have a promising future. CLWC is a versatile material, which is generally used in non-load bearing structural elements, having lower strength than conventional concrete. It is quite renowned for some application for the reason that it's self-weight (which is light in weight) such as reduction of dead load of the structure, thermal insulating materials, acoustic insulating materials and non-structural partitions walls. Since it has low strength, some material is used in order to increase the strength of the CLWC. The applications of CLWC are very limited due least knowledge about its properties and stability. CLWC, fairly a new material as compare to conventional concrete, has become more popular material in construction industry. Fly ash and Silica fume are getting more attention nowadays since their uses usually improve the properties of mixed cement concrete, economical and reduction of harmful environmental effects. The properties of CLWC vary according to a different type of mixture and its

composition. This study investigates the mechanical and physical properties of CLWC specifically dry density, water absorption and compressive strength. In this study, the cubes are casted for different target densities 800 to 1000 kg/m³, Silica fume is incorporated in the mix 0% to 15% at the interval of 5% by the weight of cement and tested for same mechanical and physical properties.

ICCEI17: PLANNING OF GREY WATER HARVESTING IN RESIDENTIAL AREAS

P. Selvin Kumaran¹, M.Appu Sriram²

¹PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,

²Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College

Abstract- Recycling greywater (wastewater from showers, basins, laundry, and possibly kitchen) whether it be from centralized ('third pipe' systems) or individual reuse treatment systems can be effectively and efficiently recycled for non-potable reuse applications such as industrial, irrigation, toilet flushing and laundry washing depending on the technologies utilized in the treatment process. Greywater reuse offers indirect benefits to public infrastructure in the form of reduced sewerage flows, reduced treatment plant size, shorter distribution systems, reduced potable water demand and can help prolong the need for additional potable water sources. For individual domestic greywater systems, the most efficient and effective technologies involve simple diversion and in-line surge tanks with coarse filtration for sub-surface garden watering and irrigation purposes only. More sophisticated systems that involve storage, UV disinfection, fine filtration and pump treatment processes offer greater economic value when utilized for toilet flushing, laundry washing and garden irrigation applications.

ICCEI18: EXPERIMENTAL INVESTIGATION ON CONCRETE BY USING BABOOL TREE LEAVES ASH

C.Santhakumar¹, S.Meenakshi Sudarvizhi²

¹PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,

²Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College

Abstract- Cement is the most widely used binding material in all Construction works. Due to its high cost and heat liberation Property, attempts have been made to replace cement in concrete using ashes. In the Present study compressive strength was conducted on hardened concrete by replacing cement with 0%, 10%, and 20% of Babool Tree Leaves Ashes and compared the results with control mix (0% babool). The grade of concrete adopted was M₃₀ grade. It has been observed that concrete with 5% Replacement of Babool tree ashes gave the nominal strength of the Concrete.

**ICCEI19: EXPERIMENTAL INVESTIGATION ON BEHAVIOR OF FLY ASH BASED
GEO-POLYMER MORTAR AT ELEVATED TEMPERATURE**

Veena Gayathri G S¹, M.Appu Sriram²

¹*PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,*

²*Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering
College*

Abstract - The major problem the world is facing today is the environmental pollution. In the construction industry mainly the production of Portland cement will causes the emission of pollutants results in environmental pollution. We can reduce the pollution effect on environment, by increasing the usage of industrial by-products in our construction industry. Geopolymer mortar is such a one and in the present study, to produce the geo-polymer mortar the Portland cement is fully replaced with fly ash and the river sand is used as fine aggregate is and alkaline liquids are used for the binding of materials. The alkaline liquids used in this study for the polymerization are the solutions of Potassium hydroxide (KOH) and sodium silicate (Na₂SiO₃). Different molarities of sodium hydroxide solution i.e. 10M, 12M and 14M are taken to prepare different mixes. And the compressive strength is calculated for each of the mix. The cube specimens are taken of size 70.6mm x 70.6mm x 70.6mm. The Geopolymer mortar cube specimens are tested for their compressive strength at the age of 7days, mixes of varying potassium hydroxide molarities i.e.10M, 12M and 14M are prepared and they are cured by oven curing at 70o c and strengths are calculated for 7 days. The result shows that the strength of Geopolymer mortar is increasing with the increase of the molarity of potassium hydroxide at elevated temperature.

**ICCEI20: EXPERIMENTAL STUDY ON USE OF WASTE PLASTIC MIX CONCRETE
WITH SUPERPLASTICIZER**

Dhanapriya¹, M.Appu Sriram²

¹*PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,*

²*Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering
College*

Abstract - Concrete is the most widely used construction material in the world. Basically it consists of cement and water. An important problem we are facing is dumping of plastic materials it causes a lot of problems. In order to reduce the plastic waste, it can be used in construction field. Plastic due to its properties such as durability, light weight and its ability to turned into any desired shape has enhanced its usage and popularity. The objective of this project is to investigate the effectiveness of using waste plastics in percentage by volume. Waste plastic mix concrete with and without super plasticizer was tested. Workability and compressive strength is minimal and can be enhanced by the addition of super plasticizer.

ICCEI21: IMPACT OF TITANIUM DIOXIDE NANOPARTICLES ON NUTRIENT AND CONTAMINANT REDUCTION IN WASTEWATER TREATMENT WETLANDS

K.Maheshwari¹, G.Ragha Dharini²

¹*PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,*

²*Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College*

Abstract- Metallic nanoparticles are found in a variety of commercial products and industrial processes, and have become more common in the last few decades. Wetlands are the most vulnerable to nanoparticle contamination. Wetlands receiving and treating wastewater effluent have an even higher risk, both due to the increased loading of nanoparticles from wastewater, as well as the increased organic matter entering the system. A simple numerical model was designed to quantify the impact of nanoparticles on nutrient and contaminant reduction in wastewater treatment wetlands, with titanium dioxide (TiO₂) nanoparticles. Introduction of titanium dioxide nanoparticles at concentrations observed in wastewater effluent resulted in slower rates of nitrification, but otherwise had negligible impacts. Higher levels of nanoparticles saw slight variations in nitrogen, phytoplankton and dissolved oxygen dynamics with no change to steady state concentrations.

ICCEI22: EXPERIMENTAL ANALYSIS OF WASTE WATER CHARACTERISTICS ON RAMANAIKAN LAKE-HOSUR

K.R. Manju Yadav¹, O.Sharmila Begum²

¹*PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,*

²*Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College*

Abstract-A lake may be defined as enclosed body of water totally surrounded by land with no access to the sea. Lakes are sometimes subjected to waste water discharges originating from different source. Water quality determines the goodness of water for particular purposes. Human activities create pollution in and around the water body, due to which natural status of lakes and other water bodies gets disturbed and polluted. The quality of water is usually determined by its physical, chemical and biological characteristics. The main aim of this study is to analyse and characterize the water quality and parameters of Ramanaikan lake in Hosur. The water sample from the lake is collected and tested to determine various parameters in the water. Heavy metals are the most important contaminant in the environment. Several methods already used to clean up the environment from these types of contaminants, but most of them are costly and difficult to get optimum results. Currently phytoremediation is an effective and affordable technological solution used to extract or remove inactive metals and metal pollutants from contaminated water. This technology is environmentally friendly and potentially cost effective. The quality of the water is controlled by the bamboo cultivation and using bamboo charcoal which minimizes the harmful content in the water and purifies the water and prevents the environmental effects.

ICCEI23: DESIGN AND FABRICATION OF EFFLUENT TREATMENT PLANT

M. Rishivandhana¹, O.Sharmila Begum²

¹PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,

²Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College

Abstract-Most of the river basins are closing or closed to severe water shortages, brought on by the simultaneous effects of agricultural growth, industrialization, urbanization. Unplanned urbanization has led to these water bodies receiving untreated sewage. The waste water treatment process is been carried out to control the pollution in various aspects. The methodology first sets targets for effluent flow rates through the treatment process. The main aim of this study is to characterize and treat the effluents that are being discharged in to the lake.

ICCEI24: DESIGN OF AUDITORIUM HALL

A.Maharajan¹, S.Mohammed Ali Jinnah²

¹PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,

²Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College

Abstract- The aim of the project is to plan, analysis and the design various structural components of an auditorium that could house 2000 people. The proposed auditorium hall is to have a plinth area of 2432 m² with the accommodating capability of 2000 people. The site for constructing an auditorium hall is chosen after a survey is made over the entire college campus and finally it is proposed next to the indoor stadium. The planning is going to be done by considering all the general requirements and specification of an auditorium hall as per National Building Code of India 1983. The auditorium hall is a trapezoidal shaped auditorium hall and it expands trapezoid ally over its entire span from 22.5m to 32.8 m and it is a R.C.C. framed structure with steel trusses placed over the reinforced cement concrete columns.

ICCEI25: OPTIMUM INVESTMENT OF RAINWATER HARVERSTING TECHNIQUES

S. Krishnaveni¹, S.Meenakshi Sudarvizhi²

¹PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,

²Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College

Abstract-Water is life. It is the main constituent of all living organisms and the key factor providing them with the suitable environment. All civilization found and developed around water resources. As a result of the continuous growth in population and increase in water consumption rate, the gap between demand in terms of quantity and quality, and water supply is getting larger. Rainwater harvesting, (RWH) is one of the old techniques practiced by man to obtain his water requirements especially in areas where there is no continuous water supply (Surface or ground). In such areas rainwater is collected and stored during the rainy season and then used when there is no rain in dry season. The growing awareness of the RWH potentials, as a new source of

technique very popular and wide spreading especially for domestic uses. Harvested rain water, will solve much of the country's water shortage problems. This paper briefly reviews the concept, types, components, potentials and techniques of water harvesting. It mainly concentrates on the optimum investment of one of the rainwater harvesting techniques, namely the Domestic rainwater harvesting (DRWH). The paper shows the need for water harvesting and concludes with some guidelines for the optimum investment of rainwater harvesting.

**ICCEI26: INVOLVEMENT OF CIVIL ENGINEERING STUDENTS IN WATER
RESOURCES PROJECTS: A FIELD-BASED LABORATORY**

J.shandhini¹, S.Meenakshi Sudarvizhi²

¹PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,

*²Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering
College*

Abstract-Water resources projects are implemented in a wide variety of physical environments that may provide appropriate field laboratories for water related courses such as geology, hydrology, fluid mechanics, hydraulics, water supply and sewerage, water quality, irrigation and water management. This paper discusses a water related courses field based laboratory and its impact on the student learning process for a civil engineering program through the involvement of students in water resources projects. The field-based laboratory has three objectives, namely: to strengthen laboratory as well as field experiences of civil engineering students in the area of water resources; to build and integrate scientific skills throughout their engineering education utilizing water resources projects as case studies; and to provide technical assistance to the implementer (local government units) of water resources projects. The students enrolled in water related courses were chosen for involvement in water resources projects in the areas of design, engineering surveys, watershed case studies, water quality analysis and monitoring, hydrologic analysis and computer based simulation-modelling. The working attitudes and values of the students were also assessed and these were included in the hands-on pre-test and post-test. Statistical tools such as means, standard deviations and t-test were used to analyze the impact of the involvement of the students. Based on the analysis, the students involved in the water resources field-based laboratory acquired more knowledge and enhanced their skills in the different water related courses, including the use of computer based tools/software for map generation and water related simulation models. Furthermore, the working attitudes and values of the students were improved after their involvement. Thus, it is strongly recommended that engineering schools should look for opportunities to establish field-based laboratories for student involvement in community projects.

**ICCEI27: EXPERIMENTAL STUDY ON STRUCTURE BEHAVIOR OR
CASTELLATED REINFORCED CEMENT COCRETE BEAM**

K.sowmiya¹, G.Ragha Dharini²

¹*PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,*

²*Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering
College*

Abstract- The most widely used material for engineering structures is reinforced concrete and it is one of the most important building materials also. The properties and behaviour of RCC elements should be known so that we can use it efficiently. To develop advanced design and analysis methods for modern structures, the need for experimental research continues. A firm basis for design equations is provided by preliminary design stage experiments. The basic information for finite element models is applied by experimental results. Reliable analytical model is developed to reduce the number of required test specimens that provide the solution to a given problem. Finite Element Analysis (FEA) have been performed using ABAQUS for the Castellated RCC Beam. The numerical results from the FEA for Castellated RCC Beam are compared with the Ordinary RCC Beam results and the experimental results which showed good agreement between the values.

**ICCEI28: FEASIBILITY STUDY ON AIR POLLUTION REMOVAL BY URBAN
FORESTRY**

G. Mohanasundaram¹, A. Sulthan²

¹*PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,*

²*Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering
College*

Abstract- In today`s world, Air pollution is increasing at a higher rate which could goes beyond safety limits. It is highly difficult to reduce the emission of these pollutants. To control the air pollution, an eco-friendly pollution control device is important for the present situation. The naturally available device to control the air pollution was plants and trees. Urban forestation is one of the best way to control air pollution by satisfying above requirements. The trees uptake the air pollutants and uses them for their living. These plants and trees absorb the air pollutants which are get emitted from a source to the atmosphere. These pollutants gets accumulated at the plant surface. Some pollutants goes into the leaf stomata and diffuses into the intercellular spaces and absorbed by water films to form acids or react with inner surface. Also by intercepting air borne particles. It is observed that there is considerable amount of traffic in the site which could lead to air pollution. There are many trees available to reduce air pollution by planting them. Based on Air Pollution Tolerance Index, tolerant species are Azadirachta indica > Pongamia pinnata > Albizzia lebbeck > Polyalthia longifolia > Sizygium cumini > Terminallia catappa. Highly recommended species for pollutant removal are Azadirachta indica, Pongamia pinnata and Albizzia lebbeck. Other species are Polyalthia Longifolia and Sizygium Cumini. It is also recommended to plant these species in low polluted urban areas to reduce other issues such as solar radiation, wind etc.

ICCEI29: WATER QUALITY ANALYSIS OF ECOROOF RUNOFF IN PORTLAND

S. Rudhra¹, A.Sulthan²

¹PG Scholar, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College,

²Assistant Professor, Department of Civil Engineering, Pandian Saraswathi Yadav Engineering College

Abstract- This study evaluates the trends in the long-term water quality data from ecoroofs and conventional roofs in the Portland area. Mann Kendall trend test was used to detect the trends in concentrations of parameters. Concentration levels of metals (copper, lead, zinc) and nutrients (nitrogen and phosphorous) in runoff from ecoroofs were compared with the runoff from conventional roofs using Mann Whitney U test. Results indicated elevated levels of copper and phosphorous in ecoroof runoff. Concentrations of lead and zinc were found to be lower in ecoroof runoff than conventional roof runoff. Monitoring of ecoroof for a longer period is recommended for future studies to quantify the effect of roof age, thickness and composition of soil media, and plant types on runoff.

DEPARTMENT

OF

COMPUTER SCIENCE AND ENGINEERING

**ICCS101: FEATURE FUSION FOR FAKE INDIAN PAPER CURRENCY
RECOGNITION IN VISUALLY IMPAIRED PEOPLE**

R.Poonkodi¹, Mrs. L.Devi²

¹*PG Scholar, St.Michael College of Engineering & Technology*

²*Assistant Professor, St.Michael College of Engineering & Technology*

Abstract – Bank note identification is most important approach based on an image processing method. Many techniques and methods are studies involved in the classification of bank notes from different countries conducted experiments on separated image data sets of each countries. Deep learning is machine learning technique that analyze & learns the features of original note. The most important aspect is to find more essential features by using neural networks. In the era of big data where for any real-world application, large amount of data has to be processed, deep learning is the superior techniques. In this work, we address the issue of detecting and recognizing a fake currency by using CNN. This system has several improvements that are evaluated on the detection of currencies using deep learning and it results in an improved overall performance with minimal error rate and the results are reported on highly challenging categories that have not yet been considered in previous works

ICCS106: AI BASED CHATBOT APPLICATION IN FLUTTER WITH CHATGPT

Madhubala P¹, Prof.K.Petchiappan²

¹*PG Scholar, St. Michael College of Engineering and Technology*

²*Professor, St. Michael College of Engineering and Technology*

Abstract – Today the users face a lot of problem regarding chatbot in any android / Ios application because in most of the cases the user gets result more than what he expected or he gets results which are not according to his convenience .This paper focuses on automating the process of communication by use of chat-bot and it also focuses on providing customized results to the user which makes the process of hotel booking convenient and user friendly for him. An extensive research done on existing systems gave us an insight into their shortcomings which this system attempts to overcome by creating a chat-bot using Artificial Intelligence Markup Language and using various algorithms such as Keyword Matching , String, Similarity , Spell Checker and Natural language parser. The implementation of this system has resulted in better resource utilisation and increased responsiveness of user behaviour. An AI-based chatbot application is a software program that uses artificial intelligence (AI) algorithms to simulate human conversation and provide automated assistance to users. These chatbots can be integrated into various platforms like websites, messaging apps, social media, and mobile applications to enhance customer service, provide support, or automate routine tasks.

ICCS108: DEEP LEARNING OF MALWARE ANALYSIS AND DETECTION

S. Muthurathinam¹, I. Jayasheela²

¹*PG Scholar, St, Michael College of Engineering & Technology*

²*Assistant Professor, St, Michael College of Engineering & Technology*

Abstract – Malware detection refers to the process of identifying and removing malicious software or code from a computer system or network. Malware, which includes viruses, Trojans, worms, and other types of malicious software, can cause a range of problems, including data theft, system crashes, and unauthorized access. Malware detection methods typically involve the use of antivirus software, which scans files and programs for known malware signatures or suspicious behavior. Other detection methods may include intrusion detection systems, firewalls, and behavioral analysis techniques. In recent years, machine learning and artificial intelligence have been applied to malware detection, allowing for more advanced and effective detection capabilities. However, malware developers also continue to evolve their tactics and strategies, making malware detection an ongoing challenge for cybersecurity professionals.

ICCS109: WORKSUITE OFFICE WORKS WITH LEADS STATUS ON CRM PROJECT MANAGEMENT

S. Ishwarya¹, Mrs. L. Devi²

¹*PG Scholar, St, Michael College of Engineering & Technology*

²*Assistant Professor, St, Michael College of Engineering & Technology*

Abstract – Now a days a company's focus has shifted from a product-centric view to a more customer-centric view. Customers play a major role for doing business with companies. That leads to the purpose of this research, which is to identify critical factors of CRM implementation and to gain a deeper understanding of how companies deal with those critical factors. This was done with the help of a qualitative method, where six case companies were taken under the research. These six case companies are operating in different industries (1) laundry system industry, (2) printing industry and (3) heavy industry. In addition, the aim of this thesis was to find out how CRM implementation is influenced by critical factors in terms of CRM process and CRM system, interaction of sales force, information / communication flow and organizational structure / culture. The main points which influence the critical factors of CRM implementation were (1) customer-focused, (2) create trust, (3) sharing information and knowledge and (4) decision- making. To overcome these points at first companies, need to be customer-focused their sales force need to be able to create trust with customers. Also, it is important that companies have a well implemented information / communication flow to optimize the decision-making process. Within the research more points for how an international organization can manage these critical factors are described. The collected data was analyzed with the help of the theoretical framework. The conclusion could be drawn that, a well implemented CRM would help companies to build a better customer relationship and to be able to know as much about customers as possible. Key words: CRM, CRM implementation, CRM process and CRM system, interaction of sales force, information / communication flow, organizational structure / culture

ICCS111: CNN CLASSIFIER FOR KIDNEY STONE DETECTION

S.Saravanan¹, Dr.A.K.Ashfauk Ahamed²

¹ *Research Scholar, Department of Computer Science and Engineering,
B.S.Abdur Rahman Crescent Institute of Science & Technology.*

² *Assistant Professor, Department of Computer Application,
B.S.Abdur Rahman Crescent Institute of Science & Technology.*

Abstract – Kidney stone detection is important particularly in its early stages to facilitate intervention or to receive proper medical treatment. The presence or the recurring presence of kidney stone decreases kidney functions and dilation of the kidney. This paper presents a technique for detection of kidney stones through different steps of image processing. The first step is the image pre-processing using filters in which image gets smoothed as well as the noise is removed from the image. Next, the image segmentation is performed on the pre-processed image using guided active contour method. Then using Back propagation neural network algorithm to identify the diseases in kidney images. The imaging modality used is CT because it has low noise compared to other modalities such as x-ray and ultrasound.

ICCS112: RISK ESTIMATION MECHANISM FOR IMAGES IN NETWORK DISTRIBUTION

Arunapriya.R¹, Dr.S.P. Valli²

¹ *Research Scholar, Department of Computer Science and Engineering,
B.S.Abdur Rahman Crescent Institute of Science & Technology.*

² *Assistant Professor, Department of Computer Application,
B.S.Abdur Rahman Crescent Institute of Science & Technology.*

Abstract – People constantly share their photos with others through various social media sites. With the aid of the privacy settings provided by social media sites, image owners can designate scope of sharing, e.g., close friends and acquaintances. However, even if the owner of a photo carefully sets the privacy setting to exclude a given individual who is not supposed to see the photo, the photo may still eventually reach a wider audience including those clearly undesired through unanticipated channels of disclosure, causing a privacy breach. Moreover, it is often the case that a given image involves multiple stakeholders who are also depicted in the photo. Due to various personalities, it is even more challenging to reach agreement on privacy settings for these multi-owner photos. The existing system have a main disadvantage for privacy the uploaded picture has to a save (or)screenshot for Stanger. That photo has used for unwanted thiks.so in this paper we proposed to a new technology for sharing image a social media. In this work we create an online social media like Instagram the social media have an all characteristics of Instagram. We used to an 3des algorithm for encrypt the photo. Then uploaded the photo a social media the friends can see the photo but the Stanger can't view the photo. The Stanger wants to view the photo they send some request of the photo owner the owner can accept the request the Stanger get the OTP then view the picture. But the Stanger has don't take a screen short and don't save the picture. We mainly used for machine learning algorithm for fetch the data and send OTP.

ICCS113: AUGURING THE HEREDITARY CHAOS IN THE WAY OF PARALLELISM

Ms. M. Sweetha¹

¹PG Scholar, Department of MCA, Mepco Schlenk Engineering College, Sivakasi

Abstract – In this study the strategy for forecasting biological anomalies is proposed. Biological parents contribute to half of the inherited feature in the upcoming generation, here the concentration is on estimating inherited abnormalities. Currently the generation possess a plethora of knowledge regarding genetic diseases and technological development is quickening. The proposed system employs a classification algorithm to efficiently evaluate chromosomal abnormalities. By identifying people who have specific mutation before symptoms occur, a hereditary simulation that gathers data for changes that because common illness could be used to identify people risk for chronic disease. Chromosome abnormalities can result from a number of things, such as mutations that alter the nucleotide sequence. A successful outcome requires a random forest algorithm to anticipate which autoimmune mutation are likely to emerge in the upcoming years.

ICCS117: SECURE AGRICULTURAL POTENTIAL THROUGH REMOTE SENSING IN THE GEOLOGICAL ERA OF SMART FARMING 6G TECHNOLOGY

K. Hemalatha¹, Dr. K.Somasundram²

¹Research Scholar, Department of Information Technology, Saveetha School of Engineering

²Professor, Department of Information Technology, Saveetha School of Engineering

Abstract – Seasonable and dependable information about plant life management, product, and production is considered of important utility by neutral (e.g., domestic and global authorities, farmers, commercial units, etc.) to ensure food safety and security. By 2050, according to Food and Agriculture Organization (FAO) estimates, around 70% more production of agricultural products will be needed to fulfil the demands of the world population. Likewise, to meet the Sustainable Development Goals (SDGs), especially the second goal of “zero hunger”, potential technologies like remote sensing (RS) need to be efficiently integrated into agriculture. The application of RS is indispensable today for a highly productive and sustainable agriculture. Therefore, the present study draws a general overview of RS technology with a special focus on the principal platforms of this technology, i.e., satellites and remotely piloted aircrafts (RPAs), and the sensors used, in relation to the 6th industrial revolution. Nevertheless, since 1957, RS technology has found applications, through the use of satellite imagery, in agriculture, which was later enriched by the incorporation of remotely piloted aircrafts (RPAs), which is further pushing the boundaries of proficiency through the upgrading of sensors capable of higher spectral, spatial, and temporal resolutions. More prominently, wireless sensor technologies (WST) have streamlined real time information acquisition and programming for respective measures. Improved algorithms and sensors can, not only add significant value to crop data acquisition, but can also devise simulations on yield, harvesting and irrigation periods, metrological data, etc., by making use of cloud computing. The RS technology generates huge sets of data that necessitate the incorporation of artificial intelligence (AI) and big data to extract useful products, thereby augmenting the adeptness and efficiency of agriculture to ensure its sustainability. These technologies have made the orientation of current research towards the estimation of plant physiological traits rather than the structural parameters possible. Futuristic approaches for

benefiting from these cutting-edge technologies are discussed in this study. This study can be helpful for researchers, academics, and young students aspiring to play a role in the achievement of sustainable agriculture.

ICCS121: A SOFTWARE SYSTEM FOR INTEGRATED FOOD ORDER AND DELIVERY

Vigneshwaran M¹, Vishnu Chidambaram R², Balagi P³

^{1,2,3}Department of CSE, K.L.N College of Information Technology

Abstract – As online food ordering and delivery continue to gain popularity; businesses require software systems that can seamlessly handle both processes. This study presents the design and development of a software system for integrated food ordering and delivery that aims to provide a user-friendly and efficient system. To achieve this, we conducted a thorough review of existing food ordering and delivery software systems and utilized modern web technologies such as HTML5, CSS3, JavaScript, and PHP to design and develop the Foodies website. The website's features include the train-food service feature, which allows users to order food during their train journey and the chef hiring feature, providing personalized culinary experiences, and the food blog feature that offers cooking tips and food-related topics. The website's design ensures a seamless experience while preventing web attacks and the admin is responsible for managing the website. Our findings show the effectiveness of the system's features in enhancing the user experience. Further research is necessary to evaluate and improve the system's effectiveness. Developing a user-friendly software system for integrated food ordering and delivery is essential for online food businesses, and our system is a step in that direction.

ICCS123: 2D GAMING- WARZONE GATEWAY

Ashwath. R¹, Fargath Shahani.M², Dr. N. Mahalakshmi³, S.G. Ramapriyanga⁴

^{1,2}UG Scholar, Vickram college of Engineering

³Professor, Vickram college of Engineering

⁴Assistant Professor, Vickram college of Engineering

Abstract – Warzone Gateway is a simple game which is a shooting game. Its main objective is to reach the exit with being attacked by the enemies, falling in the water or even falling off the map, ammo and grenade runout. Creating this game can be taken as a challenge while learning Python or Pygame. It is one of the best beginner-friendly projects that every novice programmer should take as a challenge. Learning to build a video game is a interesting and fun learning. We will be using Pygame to create this game. Pygame is an open-source library that is designed for making video games. It has inbuilt graphics and sound libraries. It is also beginner-friendly, and cross-platform. It is always great to build games with graphical interface. Videogame designers use tips and tricks and tools of the trade to design levels. Some of these tips are based on their gut feeling and others have been known in the game industry for the last 30 years. In this work, we discuss six of common level design patterns present in 2D videogames. The patterns under discussion are the product of an exploratory analysis of over thirty 2D games. We choose to focus on patterns that are both common and impactful for the overall player experience. We discuss in detail the rationale for and advantages of each pattern, showing examples of games that make use of such. We conclude with a discussion of the usage and understanding of these

patterns from the perspective of level design and how other technical approaches can benefit from them.

ICCS124: DISASTER ZONE ALERTING APPLICATION

Asraf. I¹, Kabini.R², Selsiya.A³, Dr. N. Mahalakshmi⁴, S.G. Ramapriyanga⁵

^{1,2,3}*UG Scholar, Vickram college of Engineering*

⁴*Professor, Vickram college of Engineering*

⁵*Assistant Professor, Vickram college of Engineering*

Abstract – This paper proposes a disaster information system using the geofencing technology to detect the movement of users and provide information of the risk for them. The system is composed of client server architecture; the server collects risk information from various information sources and the client watches the user to notify the information as the need arises. To detect the user's movement, the client creates a virtual fence called geofence at the dangerous area based on the risk information stored in the server, and monitors the user's entry and exit of the fence. Thus, the system can deliver warnings and advices timely to specific users in danger. We implemented a prototype system and evaluated the accuracy of the system. The location of the user was detected with high accuracy when entering the fence, but the accuracy was low when exiting the fence.

ICCS125: HEALTH CARE CHATBOT USING MACHINE LEARNING

S. Mukesh¹, T. Sowmithri², G.Sai Poojitha³, P.Bhavitha⁴, K.Vignesh⁵

^{1,2,3,4}*UG Scholar, Kalasalingam Academy of Research and Education, Krishnan Kovil*

⁴*Assistant Professor, Kalasalingam Academy of Research and Education, Krishnan Kovil*

Abstract – With India's growing population, increasing birth rate, and decreasing death rate due to medical advances, there are fewer and fewer physicians to meet the needs of the growing population. Sometimes, even doctors can do mistakes while providing correct treatment, which results in the death of the patient. To encounter such issues, there is a need for an intelligent chatbot that can advise the patients on what to do in such cases, which ultimately leads to saving the lives of people. The bot is designed using NLP to analyze and search the queries in database. Decision Tree classifier has been used to identify the problem of patient based on given input symptoms. The bot can recognize symptoms and make a diagnosis based on the symptom. It can also suggest a doctor based on the diagnosis, leading to a faster response.

ICCS126: FLOWER IDENTIFICATION USING TENSORFLOW

K. Janahan¹, S. Harish Raja Selvan², M. Abhilashvisakan³, V. Harish⁴, K. Vignesh⁵
^{1,2,3,4}UG Scholar, Kalasalingam Academy of Research and Education, Krishnan Kovil
⁵Assistant Professor, Kalasalingam Academy of Research and Education, Krishnan Kovil

Abstract – Sentiment analysis is one of the newest technologies within NLP (AI and ML applications). Sentiment analysis is used in many applications for recommendation and feedback analysis. In this article, from defining sentiment analysis to algorithms for sentiment analysis and from the first step of sentiment analysis to evaluating the predictions of sentiment classifiers, additional performance-enhancing features are discussed with practical results. A brief description of complex sequential neural network sentiment classifiers with reasonable analysis is given. The practical results declared in this paper come from the implantation of sentiment analysis on the IMDB movie review dataset. Evaluation metrics such as accuracy, precision, recall and f1-score are used. This research-based survey has been divided into various sections, each section covering the step-by-step process of sentiment analysis.

ICCS127: ARDUINO OBSTACLE AVOIDING VOICE CONTROL ROBOT

G. Lydia¹, R. Priya², U. Lavanya sri³, G. Nagalakshmi⁴, M. Naasem bannu⁵
^{1,2,3,4}UG Scholar, Ultra college of engineering and technology
⁵Assistant Professor, Ultra college of engineering and technology

Abstract – This paper proposes a design variant of obstacle avoidance and voice control for the automobile's car unit. The future advancement in this technology will help us in for the handicapped ones who cannot drive the vehicle on their own, transportation purposes, hazardous environment places where human interaction might be impossible and so on. Also, the use of sensors will provide greater safety from sudden hits. A Bluetooth module is used to create a communication link between the car and human voice commands via Android Application. The RF transmitter of the module can take human voice commands through the application which will then be converted into encoded digital data up to an adequate range of 100 meters from the robot. The receiver of the module decodes the input data before feeding it to the microcontroller to drive DC motors via motor driver L298D for necessary movements. An Arduino UNO which is the brain of our system is programmed to read voice commands and respond accordingly. Obstacle detection can be done by ultrasonic sensors interfaced with the Arduino UNO. Considering this feature, in the future it might prove a milestone in vehicle automation. Further the project can be developed using the Internet of Things, Artificial Intelligence technology where a user can control the car from any corner of the world.

ICCSST1: ACTIVE WIRELESS LAN ACCESS MANAGEMENT MODEL

D. Vanathi¹

*¹Assistant Professor, Department of Computer Science and Engineering,
Pandian Saraswathi Yadav Engineering College, Sivagangai*

Abstract – When the number of users of a wireless access point exceeds the limit that its own hardware can carry, it will cause new users to be unable to access, and even lead to the collapse of the entire wireless network. In response to this problem, this paper designs an active wireless network access management model. The model manages the clients in the wireless local area network through the Radius protocol, so as to realize the batch access to a large number of users. After the client completes the data transmission, the wireless access point actively disconnects its connection to release channel resources, and thereby effectively improving the carrying capacity of the wireless network. The test results show that this model can significantly reduce the load of wireless access points, and enable wireless access points with weaker performance to support the data transmission needs of a large number of users.

ICCS130: PERFORMANCE ANALYSIS OF VARIOUS MACHINE LEARNING-BASED APPROACHES FOR RISK ASSESSMENT AND CLASSIFICATION OF CORONARY HEART DISEASE

J Kowsalyadevi¹, P Geetha²

*1 Research Scholar, Department of Computer Science and Engineering, College of Engineering
Guindy, Chennai, Tamil Nadu, 600 025, India*

*2 Professor, Department of Computer Science and Engineering, College of Engineering Guindy,
Chennai, Tamil Nadu, 600 025, India*

Abstract – Coronary Heart Disease is one of the most common causes of death among all heart diseases. It is primarily diagnosed by performing a scan analysis of the patient's heart. This scan analysis could be of X-ray, CT scan, or MRI. Automated classification of heart disease is one of the difficult tasks, attributing to the varying mechanisms used for imaging patient's heart. Image processing and machine learning approaches have shown a great potential for detection and classification of heart disease. In this paper, we have demonstrated effective approach for detection and classification of heart related CT scan images into 13 different cardiovascular disorders. Proposed approach firstly processes these images using image processing techniques, and then further supervised learning algorithms are used for their classification. Here, we have extracted texture features along with statistical features and supplied various extracted features to classifiers. We have used seven different classifiers known as *k*-nearest neighbors' classifier, support vector machine classifier, decision tree classifier, multinomial naive Bayes classifier, stochastic gradient descent classifier, random forest classifier, and multi-layer perceptron (MLP) classifier. The proposed risk prediction model's performance is analyzed on the Framingham dataset. . In the obtained results, it is found that accuracy of MLP classifier is higher with value of 98.55% in comparison with the other classifiers.

**ICCSST2: GENERALIZED EPILEPTIC SEIZURE ALERT SYSTEM USING
MACHINE LEARNING**

Dr Premlatha KR¹, R. Kaarthick²

¹Head & Associate Professor,

*Department of Computer Science and Engineering,
Pandian Saraswathi Yadav Engineering College, Sivagangai.*

²Tech Lead, Jio Platforms Limited, Chennai

Abstract – Epilepsy is a long-lasting neurological disorder with different types of seizures, some of them characterized by involuntary recurrent convulsions, which have a great impact on the everyday life of the patients. It is a serious chronic neurological disorder, can be detected by analyzing the brain signals produced by brain neurons. Neurons are connected to each other in a complex way to communicate with human organs and generate signals. The monitoring of these brain signals is normally done by using Electroencephalogram (EEG) and Electrocardiography (ECG) media. These signals are complex, noisy, non-linear, non-stationary and produce a high volume of data. Therefore, the detection of seizures and discovery of the brain-related knowledge is a challenging task. This paper proposes a generalized epileptic seizure alert system that aims to monitor the occurrence of epileptic seizures and alert caregivers or medical practitioners in real-time. The system is based on a wearable device that detects various physiological signals such as electroencephalogram (EEG), electrocardiogram (ECG), and accelerometry. The collected data is processed using machine learning algorithms to identify the occurrence of seizures and to distinguish them from other activities. These algorithms can then be used to predict the likelihood of a seizure occurring in the near future based on real-time EEG data. The proposed system can be customized based on the specific requirements of individual patients, and can help reduce the risk of injury during seizures and provide timely medical intervention. The literature review evaluated the feasibility of the system through a prototype model, which showed that the system has good accuracy and can provide real-time alerts efficiently. Overall, the proposed generalized epileptic seizure alert system has the potential to improve the quality of life for people with epilepsy and their caregivers.

**ICCSST3: OPTIMIZED FEATURE SELECTION BASED IDS USING MODIFIED
WHALE OPTIMIZATION ALGORITHM IN IOT**

Anusha Devi P¹

¹Assistant Professor,

*Department of Computer Science and Engineering,
Pandian Saraswathi Yadav Engineering College, Sivagangai.*

Abstract – The intrusion detection system is a method to detect the system against attacks. For IDS to protect networks and information from various types of cyber-attacks, a variety of techniques have been proposed and developed. Traditional intrusion detection system has low detection rates and scalability, making it unsuitable for the complex and unpredictable IoT environment. The proposed technique for detecting intrusions uses the Whale Optimization Algorithm (WOA) to solve feature selection problems and hybridizing it with KNN to utilize the best value (best selected features). In order to increase WOA's search performance for feature

subsets, several methods are used. These include chaotic elite reverse individuals, probability selection of skew distribution, nonlinear adjustment of control parameters, and position correction strategy. Second, it is suggested that the sample similarity measurement criterion and weighted voting criterion be used to improve the KNN classifier and the evaluation performance of the method on feature subsets. These criteria are based on the simulated annealing algorithm to solve the weight matrix M. By using the selected feature of WOA the data are trained using XGBoost, Random Forest and Passive Aggressive Classifier. The Hyperparameter Optimization method is employed to optimize the ML models such as Random Search and Meta heuristic. After the ML models should be optimized to evaluate the models whether the detection of attack is normal or abnormal. The XGBoost algorithm has achieved the highest accuracy score of 98.28%.

ICCS131: A SURVEY: SIGN LANGUAGE TO TEXT/ SPEECH

Bala Vishwatharan .G¹, Poornima Priyanka .R²

¹*UG Scholar, Department of Computer Science and Engineering,*

²*Assistant Professor, Department of Computer Science and Engineering,
Vaigai College of Engineering*

Abstract – Sign language is used by people who are impaired for communication, normal people do not know sign language which creates a gap between them. We have made a gap analysis and found that today's advanced technologies can fill the gap. Technologies such as image processing with CNN and machine learning can be used to build a software or system that converts ASL into text/speech and vice versa. This system can effectively help the deaf and dumb people as they can easily communicate with each other and with the society without any obstacles. This paper provides a brief survey of various research works and journals carried out so far in this field to provide a better communicating software for the hearing impaired and speech impaired.

ICCS132: AN AI-BASED RESOURCE ALLOCATION MODEL FOR CLOUD COMPUTING ENVIRONMENTS

P. Ashwin kumar¹, R. Dhanush²

¹*UG Scholar, Department of Computer Science and Engineering,*

²*Assistant Professor, Department of Computer Science and Engineering,
Vaigai College of Engineering*

Abstract – Cloud computing environments are becoming increasingly complex, with a large number of heterogeneous resources that need to be efficiently allocated to meet the varying demands of users. Traditional manual allocation methods are time-consuming and error-prone, leading to underutilization or overprovisioning of resources. To overcome these challenges, this paper proposes an AI-based resource allocation model that uses historical data and real-time workload monitoring to predict future demands and allocate resources accordingly. The proposed model uses fuzzy logic-based decision-making systems and reinforcement learning algorithms to optimize resource allocation based on multiple criteria, such as cost, performance, and energy

consumption. The experimental results show that the proposed model can improve resource utilization and reduce costs compared to traditional manual allocation methods. The proposed AI-based resource allocation model is expected to have significant impacts on cloud computing environments, providing a more efficient and intelligent approach to resource management.

ICCS134: Di-CVD TRI-LAYER CX CLASSIFIER BASED RISK PREDICTION MODEL

S.Thumilvannan¹, Dr.R.Balamanigandan²

¹*Research scholar, Department of Computer Applications,*

²*Associate Professor, Department of spatial Informatics Institute of Computer science and Engineering, Saveetha University Chennai*

Abstract – The survival of patients, Deaths due to cardiovascular disease and diabetes are the major cause of global death, which contributed to thirty percent of the total deaths approximately. As per the survey conducted globally, ninety percent of these can be prevented if it is diagnosed early. Diagnosis of patients frequently and analyzing their risk factors for disease are necessary. The proposed model for classifying the disease in early stages The proposed model consists of three phases: secured data collection phase, data mining and feature ranking phase, and risk prediction phase. In the secured data collection phase, the data collected from IoT sensors were encrypted using the Enhanced BGV encryption algorithm, then hashed using (Dynamic Distributed Hashing) DDH algorithm. In second phase, the decrypted data from the first phase is pre-processed for eliminating duplicate patient records and filling the missing values, normalized, analyzed for information gain ratio, and then the feature is extracted. In the third phase, to give a risk prediction score, a Tri Step Cm-ro XG Boost (Tri-step CX) classifier will be built. In the first step, the relationship between input parameters is based on centroid mutation-rescue optimization feature selection results. As per the experimental outcomes the proposed model attained a higher accuracy of 96.3%.

ICCSST4: OPTICAL CHARACTER RECOGNITION ON VIDEOS USING TESSERACT AND DEEP LEARNING

Dr Premlatha KR¹, R. Kaarthick²

¹*Head & Associate Professor,*

*Department of Computer Science and Engineering,
Pandian Saraswathi Yadav Engineering College, Sivagangai.*

²*Tech Lead, Jio Platforms Limited, Chennai*

Abstract – OCR (Optical Character Recognition) is a technology that recognizes printed or handwritten text for digitalization and processing. OCR can be applied to a wide range of media including scanned documents, photographs, and even videos. LCD screens pose a unique challenge for OCR due to reflections, glare, and contrast limitations. The main focus of this research is to develop an effective OCR system for LCD images and videos which are prone to distortions caused by angle, contrast, light, and noise levels. There are generally two approaches to OCR - traditional OCR using tesseract and deep learning-based OCR. Tesseract is an open-source OCR engine that is capable of recognizing over 100 languages. It works by analysing the image and breaking it up into individual characters, which it then compares to a database of known character shapes. The accuracy of tesseract OCR can vary depending on image quality

and the complexity of the text being recognized. It works well on simple, structured text such as typed documents, but can struggle with handwritten text or poorly scanned documents. Deep learning-based OCR, on the other hand, uses neural networks to recognize the text. Deep learning-based OCR can recognize text that tesseract OCR cannot, such as handwritten text or text with complex layouts. It is more accurate than tesseract OCR for complex images but requires large amounts of data and computing power for training. Additionally, deep learning OCR may require specialized knowledge and expertise to tune the model and optimize performance. Overall, traditional OCR using tesseract is generally suitable for simple text recognition tasks, while deep learning-based OCR is better for complex image recognition tasks.

**ICCSI01: INTELLIGENT TRAFFIC MONITORING SYSTEMS FOR VEHICLE
CLASSIFICATION – A SURVEY**

Abinaya.k, PG scholar

Pandian Saraswathi Yadav Engineering College Sivagangai

Abstract- This paper presents a Review of State-of-the-art traffic monitoring systems focusing on the major functionality – Vehicle Classification. A traffic monitoring system is an effective alternative to mitigate traffic congestion. Identifying the vehicle types especially the number of multi- unit vehicles is of a great interest to the safety community. The vehicle classification schemes in each category is further classified into subcategories based on types of sensors used, methodology for utilizing the sensors, and mechanisms for classifying vehicles.

**ICCSI02: BLOCKCHAIN-BASED FEDERATED LEARNING FOR DEVICE
FAILURE DETECTION IN INDUSTRIAL IOT**

Mutheeswari.K¹, T.Jeeva Bharathi²

PG scholar, Pandian Saraswathi Yadav Engineering College Sivagangai

Abstract- This paper proposes a Home Appliance Control and Energy Management system using IoT (Internet of Things) to enable homeowners to manage their energy consumption and control their appliances remotely. The system employs smart plugs, smart thermostats, and smart switches connected to a home Wi-Fi network, and sensors to provide real-time data on energy consumption. The system can be programmed to automatically turn off appliances when not in use and adjust appliance settings. This system can help homeowners save money on energy bills by monitoring usage and adjusting. The system provides a convenient and cost-effective solution for homeowners to manage energy usage and control appliances remotely. The proposed system can be considered as a significant contribution in the field of energy management and IoT technology.

**ICCSI03: AN IMPROVED LSTM BASED FRAME WORK FOR CARDIOVASCULAR
DISEASES RISK PREDICTION IN IMBALANCED BIG DATA**

Balameenakshi. R¹, Karthikeyan S²

PG scholar, Pandian Saraswathi Yadav Engineering College Sivagangai

Abstract- The busy schedule of the modern era leads to an unhealthy life style which causes anxiety and depression. In order to overcome these conditions, there is a tendency to resort to excessive smoking, drinking and taking drugs. All these things are the root cause of many dangerous diseases including cardiovascular diseases, cancer etc. According to the World Health Organization (WHO), cardiovascular diseases (CVDs) have the highest number of death rates, globally. Over a period of time, they have become very common and are now overstressing the healthcare systems of countries. At this stage, fast, accurate and early clinical assessment of the disease severity is vital. To support decision making and logistical planning in healthcare systems, this work proposed an effective data prediction by using Deep learning-based approach. Apply our technique on the publicly available MIMIC-II database and show the effectiveness of the LSTM classifier. Experiments show that our proposed scheme improves the accuracy of prediction.

**ICCSI04: TWO TIER ARCHITECTURE FOR QUESTION PAPER PROTECTION
USING WATER MARKING AND ENCRYPTION TECHNIQUE**

Rathika R¹, Ms.P.Anusha Devi²

PG scholar, Pandian Saraswathi Yadav Engineering College Sivagangai

Abstract- Data security is a main concern in everyday data transmissions in the internet. Hiding piece of tractable information into the multimedia signal, i.e., watermarking. To ensure the security of information various security concepts has been introduced project proposes a group of two algorithms. Such as DCT and RSA algorithms. Our proposed method securely hides binary information in colour image media and securely extracts and authenticates it using a secret key. Experimental results prove that our proposed watermarking techniques is resilient to 90% of the well-known benchmark attacks.

**ICCSI05: EMOTION DETECTION IN ONLINE SOCIAL NETWORK: A MULTI
LABEL LEARNING APPROACH**

Kaviya. B, PG scholar

Pandian Saraswathi Yadav Engineering College Sivagangai

Abstract- Emotion detection in online social network can benefit kind of application such as personalized advertisement services, recommendation services etc. Lots of published contents OSNs provide good opportunity to study your emotions, therefore enabling the rapid development of Emotion aware application personalized recommendation system can recommend personalized product, movies or songs are according to individual current Emotion. It proposes a factor graph-based model by introducing Emotion correlation, social correlation and temporal correlation comprehensive for the multi-emotion detective problem. Finally, it performs comprehensive experiment based on human annotated dataset, and the results show that the proposed approach can achieve better performance comparing with the state-of-the-arts.

ICCSI06: Data-Driven Approach in Foot Care: Detecting Diabetic Foot Ulcers using Transfer Learning Algorithms

Harish Kumar. S, PG scholar

Pandian Saraswathi Yadav Engineering College Sivagangai

Abstract- Diabetic foot ulcers (DFUs) are a common and serious complication of diabetes that can lead to lower limb amputation if not detected and treated in a timely manner. The detection of DFUs is a critical component of foot care for diabetic patients, but it can be challenging due to the complex nature of the disease and the multitude of factors that can contribute to the development of ulcers. This paper proposes a data-driven approach for detecting DFUs using transfer learning algorithms, leveraging data from a publicly available dataset from Kaggle. The approach involves collecting and analyzing a large amount of medical image data from the Kaggle dataset, which includes images of DFUs as well as healthy foot images. Transfer learning algorithms are then used to train on this dataset, allowing the model to leverage knowledge learned from other related tasks to improve the accuracy and efficiency of DFU detection.

ICCSI07: PET CARE BASED MOBILE APPLICATION

S.M.Madhumathi, PG scholar

Pandian Saraswathi Yadav Engineering College Sivagangai

Abstract- There is an increasing number of issues regarding various animal health condition and movements. And in recent era, animals have become an integral part of a human life. And hence, an animal health monitoring and tracking system the using ZigBee module is developed. ZigBee Technology is more and more adopted in a wide range of applicative scenarios. To track the health of an animal, sensors such as the temperature sensor, heart rate sensor, pulse rate sensor and the respiratory sensor are used. The ZigBee module would be connected to a Graphical User Interface (GUI) to show the digital data. With the advancement in technology and existence of internet, we practically can connect any device to internet and implement the concept of IOT. That digital data could automatically send report to the Veterinary doctor. So we will make sure of our pets health condition and if the pet is affected by a disease give well balanced nutrient foods to pets it will keep our pets coat healthy and shiny, strengthen the immune system, keep the digestive system working properly. Animals like dog, cat, parrot even fish also be monitor by the system. This will also provide regular tips and advice for new pet owners.

ICCSI08: IOT ENABLED CROP RECOMMENDATION AND AGRICULTURE FIELD MONITORING SYSTEM

M.Yogalakshmi¹, Ms. I. Gayathri Devi²

PG scholar, Pandian Saraswathi Yadav Engineering College Sivagangai

Abstract- Data mining is the practice of examining and deriving purposeful information from the data. Data mining finds its application in various fields like finance, retail, medicine, agriculture etc. Data mining in agriculture is used for analyzing the various biotic and abiotic factors. Agriculture in India plays a predominant role in economy and employment. The common problem existing among the Indian farmers are they don't choose the right crop based on their soil requirements. Due to this they face a serious setback in productivity. This problem of the farmers has been addressed through precision agriculture. Precision agriculture is a modern farming

technique that uses research data of soil characteristics, soil types, crop yield data collection and suggests the farmers the right crop based on their site-specific parameters. This reduces the wrong choice on a crop and increase in productivity. In this work, this problem is solved by proposing a recommendation system through an deep learning model with neural network to recommend a crop for the site specific parameters with high accuracy and efficiency.

**ICCSI09: DIGILISATION IN HEALTHCARE:AN ANALYSIS OF PROJECTS
PROPOSED BY PRACTITIONERS**

B.Pandimeena¹, Ms.D.Vanathi²

PG scholar, Pandian Saraswathi Yadav Engineering College Sivagangai

Abstract- Healthcare Internet-of-things (IoT) has been proposed as a promising means to greatly improve the efficiency and quality of patient care. Medical devices in health-care IoT measure patients' vital signs and aggregate these data into medical files which are uploaded to the cloud for storage and accessed by healthcare workers. To protect patients' privacy, encryption is normally used to enforce access control of medical files by authorized parties while preventing unauthorized access. In healthcare, it is crucial to enable timely access of patient files in emergency situations. In this paper, we propose a lightweight break-glass access control (LiBAC) system that supports two ways for accessing encrypted medical files: attribute-based access and break-glass access. In normal situations, a medical worker with an attribute set satisfying the access policy of a medical file can decrypt and access the data. In emergent situations, the break-glass access mechanism bypasses the access policy of the medical file to allow timely access to the data by emergency medical care or rescue workers. LiBAC is lightweight since very few calculations are executed by devices in the healthcare IoT network, and the storage and transmission overheads are low. LiBAC is formally proved secure in the standard model and extensive experiments are conducted to demonstrate its efficiency.

ICCSI10: RELATIONSHIP BOND - AS - REBOND

V. Yogeshwaran, PG scholar

Pandian Saraswathi Yadav Engineering College Sivagangai

Abstract- All of our recognised relationships are unknown to our children and grandchildren. However, relationships can sometimes end, leaving you with grief, despair, and a sense of loss. In some cases, individuals may attempt to reconcile with their former partners, leading to a rebonding of the relationship. The purpose of this paper is to explore the various factors that influence relationship bonding, dissolution, and rebonding. Our goal is to deepen our understanding of the complex and dynamic nature of relationship bonding and dissolution, and to provide practical insights for those who are navigating these processes. The project's goal is to strengthen links within relationships. Obtain their details and use their Aadhaar number to confirm it.

**ICCSST5: MAN-MACHINE INTERFACES IN CONTROL ROOMS
CREATED AND ERGONOMICLY DESIGNED USING AN ARTIFICIAL
INTELLIGENCE APPROACH**

A.Saranyapriya¹

*¹Assistant Professor, Department of Computer Science and Engineering,
Pandian Saraswathi Yadav Engineering College, Sivagangai.*

Abstract – This paper offers our most recent findings about the investigation of a graphical user interface design methodology for continuous complicated processes. As a result, this paper outlines the architecture of an expert system made up of a series of interconnected modules, each of which carries out a precise function in the development of graphical user interfaces. In fact, each module makes use of a variety of knowledge representation and use approaches, including production rules, semantic networks, and frames. The three primary modules that make up the expert tool for creating man-machine graphical interfaces are briefly described in this study.

**ICCS128: PRODUCT BASED REVIEW ANALYSIS SYSTEM USING MACHINE
LEARNING**

Athithiyam S¹, Subiksha S², Swetha S³, Vignesh K⁴, Selvasheela K²

^{1,2,3,4}UG scholar, Department of Computer Science and Engineering,

*⁴Assistant Professor, Department of Computer Science and Engineering
Sree Sakthi Engineering Collage, Coimbatore*

Abstract – Sentiment analysis for product rating is a system, which rates any particular product based on hidden sentiments in the comments. The system uses sentiment analysis methodology in order to achieve desired functionality. This project is an E-Commerce web application, which allows the registered user to view the products and their features along with the option of commenting about the product. User can also view comment of other users. System will analyze the comments of various users and will rank product. Database of the system have various keywords denoted as negative and positive words, which helps the system to recognize the comments and rank them accordingly. The System takes comments of various users, based on the comment, system will specify whether the product is good, bad, or worst. The role of the admin is to add product to the system and to add keywords in database. This system helps the users to select the correct product for an individual. In addition, it provides the reviews about any particular product, so that an individual can make appropriate decision as per his/her requirement. This application also works as an advertisement, which makes many people aware about the product.

ICCSI11: VIRTUAL EVENTS USING METAVERSE

K.Sugapriya¹, PG scholar

Pandian Saraswathi Yadav Engineering College Sivagangai

Abstract- The Metaverse is the post-reality universe, a perpetual and persistent multiuser environment merging physical reality with digital virtuality. It is based on the convergence of technologies that enable multisensory interactions with virtual environments, digital objects and people such as virtual reality (VR) and augmented reality (AR). Hence, the Metaverse is an interconnected web of social, networked immersive environments in persistent multiuser platforms. It enables seamless embodied user communication in real-time and dynamic interactions with digital artifacts. Virtual events and Metaverse Events are both digitally organized events curated on specialized platforms that allow for the creation and hosting of events. In the past couple of years, the events industry has grown multifold and is no more restricted to physical venues and in-person attendees. With the advent of virtual, hybrid and now got options to choose the right type of event that goes along with their requirements and best suits their business model. Leaving the physical and hybrid models aside, the virtual and the metaverse events are connected to some extent, in fact, the metaverse events are technically more sophisticated, more immersive and an advanced form of virtual events, but they have some key differences.

**ICCSI135: VIDEO BASED UNKNOWN PERSON DETECTION WITH ALERT SYSTEM
FOR SMART HOME MONITORING**

Mrs. S. UmmugulthumNatchiar¹, Mr.S.Thiyagarajan², Mr.J.PaulSanthosh Kumar³,

Mr.T.Thirunavukkarasar⁴

*^{1,2,3,4}Assistant Professor, Department of Computer Science and Engineering
NPR College of Engineering and Technology, Natham*

Abstract – Facial recognition in surveillance video is done to be a base for decision making to produce automated, effective and efficient integrated system. This implies matching faces on both still images and video sequences. Automatic face recognition for still images with high quality can achieve satisfactory performance, but for video-based face recognition it is hard to attain similar levels of performance. Compared to still images face recognition, there are several disadvantages of video sequences. First, images captured by CCTV cameras are generally of poor quality. The noise level is higher, and images may be blurred due to movement or the subject being out of focus. Second, image resolution is normally lower for video sequences. If the subject is very far from the camera, the actual face image resolution can be as low as 64 by 64 pixels. Last, face image variations, such as illumination, expression, pose, occlusion, and motion, are more serious in video sequences. The approach can address the unbalanced distributions between still images and videos in a robust way by generating multiple “bridges” to connect the still images and video frames. So in this project, we can implement still to video matching approach to match the images with videos using Grassmann manifold learning approach to know unknown matches. Finally provide voice alert at the time unknown matching in real time environments. And implement neural networkclassificationalgorithmstoclassifythefaceimagesinrealtimerecapturedvideos.

ICCS136: STAND ALONE DISPLAY WITH VIRTUAL ASSISTANT

A. Seeni Ameenullah¹, M. Dinesh², D. Sharukhan³, Mrs C. Indradevi⁴

^{1,2,3}UG Scholar, Department of Computer Science and Engineering

*⁴Assistant Professor, Department of Computer Science and Engineering
Syed Ammal Engineering College*

Abstract – Intelligent personal assistant (IPA) is a software agent performing tasks on behalf of a human or individual I based on commands or questions which are similar to chat bots. They are also referred as Intelligent Virtual Assistant which interprets human speech and respond via synthesized voices. IPAs and IVAS finds their usage in various applications such as home automation, manage to-do tasks and media playback through voice. This paper aims to propose speech recognition systems and dealing with creating a virtual personal assistant. The existing system serves on the internet and is maintained by the third party. This application shall protect personal data from others and use the local database, speech recognition and synthesizer. The most famous speech recognition techniques which are existing in the real world called Cortana, Siri, and Google now. Technologies like speech recognition provide a wide variety of applications in their domain. These commands assist the user to simulate the computer without any physical activity. It also has some commands like "Open", "Switch to" are more like natural language control, although implementation of this approach solicits the help of artificial Intelligence. it's the main role of canteen, transport and library management system.

ICCS137: VIRTUAL HEALTH ASSISTANT – FOR PREDICTING DISEASES

Gowsika.G¹, Subiksha.R², Yogeshwari.M³, Mr.B.John samuel⁴

^{1,2,3}UG Scholar, Department of Computer Science and Engineering

⁴Assistant Professor, Department of Computer Science and Engineering

Abstract – The rapid proliferation of internet technology and handled devices has open up for few avenues for online health care center. These are the instance when online health care and medical help is easier and faster for real world to help people often reluctant to go hospital for minor symptoms. However, in many cases these minor symptoms may provide major health hazard as online health advice is easily reachable. It can provide great head start for user. This system analyzes the symptoms provided by the user as input and give the disease as output. This is implemented by Naive Bayes, Decision Tree and Random forest classifier.

**ICCS120: PYVOICE: DEVELOPMENT OF AN INTEGRATED SMART VOICE
ASSISTANT SYSTEM**

*Arun Manicka Raja M¹, Rejin Paul N R², Sumitha T³, Lohith⁴, Prajwal⁵, Jayanth⁶, Jaswanth⁷
Department of Computer Science and Engineering^{1,2,3,4,5,6,7}
R.M.K College of Engineering and Technology R.S.M Nagar, Chennai, TamilNadu*

Abstract – Abstract—Voice recognition systems or becoming an unavoidable source of communication elements helpful for various people. The prime Motto of the proposed system is to create a robot model that could help blind people access the basic facilities available online. The system considers input speech for communicating with the user. Emerging technology provides various integrated platforms for converting the speech signal into controls that the machine can do the task. Here a speech recognition system is implemented to get the speech commands into text. Using the Google integrator API platform text data is directly given to the Google voice driver platform to help the visually impaired the Peoples to utilize the basic online facilities. Google's online speech recognition system converted into text commands to do the task such as opening a Gmail playing a video from YouTube accessing the WhatsApp message etc. the opening and closing of all these applications are controlled through Google Cloud and father the relevant operation and its commands or locked for the enhancement.

**ICCS114: PHISHING WEBSITE DETECTION USING MACHINE LEARNING RULES
WITH CRYPTOGRAPHY TECHNIQUE**

*Hari haran R¹, Mahendiran R², Santhosh kumar K³, Vikram D⁴, D. Vijayakumar⁵
^{1,2,3,4}UG Scholar, Department of Computer Science and Engineering
⁵Assistant Professor, Department of Computer Science and Engineering
Dhanalakshmi Srinivasan Engineering College, Perambalur, Tamil Nadu*

Abstract – Phishing attack is a simplest way to obtain sensitive information from innocent users. Aim of the phishes is to acquire critical information like username, password and bank account details. Cyber security persons are now looking for trustworthy and steady detection techniques for phishing websites detection. This paper deals with machine learning technology for detection of phishing URLs by extracting and analyzing various features of legitimate and phishing URLs. Decision Tree, random forest and Support vector machine algorithms are used to detect phishing websites. Aim of the paper is to detect phishing URLs as well as narrow down to best machine learning algorithm by comparing accuracy rate, false positive and false negative rate of each algorithm. Proposed a model which encrypts the user's search data. These data are under the risk of being exposed to third parties. User's browsing data are used to extract valuable information about users interest. Prevents privacy of data from both outside analysts and the intermediate server. It also supports unsafe URL detection.

DEPARTMENT
OF
ELECTRONICS AND COMMUNICATION
ENGINEERING

ICEC102: ECO FRIENDLY SMART CLASSROOM

Susma.B¹, VasanthaKumar.M², Mrs.K.Isabella Rani³

^{1,2}U.G. Scholar, Sri Raaja Raajan College of Engineering and Technology, Karaikudi

³Asst. Professor, Sri Raaja Raajan College of Engineering and Technology, Karaikudi

Abstract – As we are growing in new era of advance technology with Petascale computing, high bandwidth of data transmission, big data storage and the next generation of digital world. It a high time to have smart and intelligent class rooms which will subside all the traditional way to teaching and learning easy and smart. Making students and teachers a witness of next generation of high computing and urbane digital devices. The Smart and intelligent classroom will make the teaching process easy, cost effective and eco-friendly. With the help of gesture recognition (voice, facial, lip movement and eye tracking) the intelligent system will able to take its own decision over the lectures. Enhanced speech technology would help the student in converting the text into speech vice versa. The teachers using the enhanced intelligent tools and technique can directly write on Smart /Media board using his or her gesture, speech or pointing devices. Smart and intelligent teaching environment, will make students and teachers to access quality of information more quickly, effortless and perfectly.

ICEC103: REAL TIME IMPLEMENTATION OF SMART FAN CONTROL USING VOICE RECOGNITION

Arunadevi.A¹, Subasowkiya.P², Gayathri.S³, Mrs.V.Gowsalya⁴

^{1,2,3}U.G. Scholar, Sri Raaja Raajan College of Engineering and Technology, Karaikudi

⁴Asst. Professor, Sri Raaja Raajan College of Engineering and Technology, Karaikudi

Abstract – Our project aims at designing an smart fan which could effective energy management. The power shortage in third world countries is managed by alternate energy sources including uninterrupted power supplies that charge batteries when line voltage is available. Inverters available in the market have output voltage waveform that do not give pure sine wave and these modified sine waves are non-linear and high frequency components that damage appliances connected to them, including fan dimmer. This paper presents a IOT enabled fan dimmer with a modified power electronics circuit that shows superior performance when connected with the UPS. We overall project was divided into two components. First was the development of electric which controls the speed of fan and has suppressed humming sound. The second part was the integration of micro controller and Wi-Fi modem to give the Internet of Things functionality to the project.

ICEC104: IOT BASED SMART LIGHT SYSTEM

Pandi Arasi.T¹, Mrs.V.Gowsalya²

¹U.G. Scholar, Sri Raaja Raajan College of Engineering and Technology, Karaikudi

²Asst. Professor, Sri Raaja Raajan College of Engineering and Technology, Karaikudi

Abstract – Our project aims at designing an smart light which could effective energy management. The power shortage in third world countries is managed by alternate energy sources including an interrupted power supplies that charge batteries when line voltage is available. Inverters available in the market have output voltage waveform that do not give pure sine wave and these modified sine waves are non-linear and high frequency components that damage appliances connected to them, including light dimmer. This paper presents a IOT enabled light dimmer with a modified power electronics circuits that shows superior performance when connected with the UPS. we overall project was divided into two components. The first development was electric which controls the speed light and has suppressed humming sound. The second part was the integration of micro controller and Wi-Fi modem to give internet of things functionality of the project.

ICEC105: DETECTION OF BRAIN TUMOURS USING PRINCIPLE COMPONENT ANALYSIS COMBINED DEEP LEARNING NETWORK

M.Senbagam¹, Dr.A.C. Shagar²

¹PG Scholar, St, Michael College of Engineering & Technology

²HOD/ECE, St, Michael College of Engineering & Technology

Abstract – A brain tumor is one of the Deadly diseases that occurred both in young and adults based on statistics. The detection of brain tumors and their types classification is considered a difficult task due to their structural similarity and size. Early detection and stage classification is very important for timely treatment and to save patient life. an automatic pneumonia detection system has been proposed by applying the extreme learning machine (ELM) on MRI image data set. Three models have been studied: classification using extreme learning machine (ELM), ELM with a hybrid convolutional neural network-principal component analysis (CNN-PCA) based feature extraction, and CNN-PCA-ELM with the MRI images which are contrast-enhanced by contrast limited adaptive histogram equalization (CLAHE). Among these three proposed methods, the final model provides an optimistic result.

ICEC108: AUTOMATED SMART SERICULTURE BASED IMAGE PROCESSING

K. Ajay Kumar¹, D. Vijitha²

¹*UG Scholar, Fatima Michael College of Engineering and Technology*

²*Assistant Professor, Fatima Michael College of Engineering and Technology*

Abstract –Sericulture is the process of raising silkworms for silk production. India is the second largest producer of silk in the world. Sericulture is the root of social, economic, cultural and political progress of India. Temperature and humidity play an important role in the development of healthy silkworms in every stage, especially during the development of larva. In our project, we use an Arduino MEGA controller to plot the real time, because to observe the silkworms. Image processing is help to recognize the infection or ill health and non-identical stages of the silkworms. The total structure is statistics and execute with help of Arduino MEGA controller. In identical stages of the silkworm the controller is check or control the atmospheric environment or surrounding inside the room of the silkworms rearing. Minimize the manual intervention of the farmer by automating the process of irrigation of mulberry plantation and also testing the temperature and controlling the silkworm rearing unit by using MEGA board. Image processing technique mainly used to find out the color change in the silkworms' body. It indicates the non-identical stages such as black worms and swallow worms indicates the diseased worms.

ICEC109: PERFORMANCE ANALYSIS OF EFFICIENT SCHEDULING ALGORITHM FOR MAXIMIZING FAIR THROUGHPUT IN WIMAX NETWORKS

Mr.S. Sudhakar¹, Mr.J.G.Sabarish², Mr.S.Allwyn Anand³

^{1,2,3}*Assistant Professor, NPR College of Engineering and Technology*

Abstract – The objective of WIMAX based mesh networks is determining a minimum schedule period that satisfies a given traffic demand and provide concurrent transmission. It will maximize spectral spatial reuse and decreases SINR. Hence our model is referred to as maximum spatial reuse model (MSR). We decompose a column generation (CG) approach. We present to formulations for modeling MSR namely, the link based (CG link) formulation and the path based (CG path) formulation. Our experimental results indicate CG path-based formulation needs much less computational time than CG link-based formulation.

**ICEC110: POLARIMETRIC SAR IMAGE CLASSIFICATION BASED ON ENSEMBLE
DUAL BRANCH CNN AND SUPER PIXEL**

P.Harish kumar¹, Dr.N.Mahalakshmi², S.G.Ramapriyanga³

¹PG Scholar, Vickram college of Engineering

²Professor, Vickram college of Engineering

³Assistant Professor, Vickram college of Engineering

Abstract – In this process, a SAR image registration method is proposed, which is based on the combination of SLIC, RANSAC, and CNN. In our proposed algorithm, the multi-scale representation of a SAR image is generated by nonlinear diffusion, then the SLIC super pixel region transmission is used to detect the changes in the pixel intensity and then the regions were spitted. To reduce the influence of multiplicative speckle noise, the ratio of exponential weighted average operator is used to compute the gradient information in the construction of nonlinear diffusion scale space. Then the features will be extracted by means of the RANSAC and CNN model. Moreover, phase congruency information is utilized to remove the erroneous key points within the initial key points. Experimental results on multi-polarization, multiband, and multi-temporal SAR images indicate that our algorithm can improve the match performance compared to the SIFT-based method, which leads to a sub-pixel accuracy for all the tested image pairs.

ICEC111: SMART DUSTBIN USING ESP32

R. Jeevitha¹, Dr. N. Mahalakshmi², J. Adline vidhya³

¹PG Scholar, Vickram college of Engineering

²Professor, Vickram college of Engineering

³Assistant Professor, Vickram college of Engineering

Abstract – Timely cleaning of the dustbin is a big challenge, and if left unaddressed, it may pose several health risks by making the place unhygienic. The current system for waste management in local areas of small and highly populated cities is sluggish, which leads to a lot of garbage strewn all over the city. The rate of waste generation is so high that if the garbage collector doesn't visit a place for a couple of days, it creates adverse conditions. In the COVID-19 pandemic situation, it was very important to monitor and decompose medical waste properly. The handling of normal home garbage was also challenging due to lockdown. In this situation, automatic monitoring and control of garbage by mobile phones using IoT can play a significant role in garbage management. This paper proposes a smart and fast approach for waste management by creating a network of smart dustbins equipped with sensors and microcontrollers in a city, which is monitored by a software application to speed up the process in an intelligent and smart way, thereby eliminating such hazardous conditions caused by the current sluggish system. A monitoring system based on Blynk 2.0 has been interfaced with ESP32. This ESP32 microcontroller is a popular choice for IoT projects because it has built-in Wi-Fi and Bluetooth capabilities, which allow it to easily connect to the internet and communicate with other devices. This makes it a great choice for smart trash cans, which require connectivity in order to send data about their status and activity. And Blynk 2.0 is an IoT app platform that allows developers to easily create mobile apps to interact with their IoT devices. Using Blynk 2.0 with an ESP32-powered smart dustbin, users can monitor the dustbin's fill level, receive notifications when it's time to empty the bin, and even remotely control the dustbin's lid. which measures the garbage based on the level of the garbage at regular intervals. Overall, the combination of ESP32 and

Blynk 2.0 provides a powerful and flexible smart dustbin system, allowing for real-time monitoring and management of waste disposal.

**ICEC113: TIME EFFICIENT & COLLISIONS DETECTION NEIGHBOR DISCOVERY
PROTOCOL FOR WIRELESS NETWORK**

Mr.R.M.Senthilkumar¹, Dr. P.Rengaprabhu², Mr.B.Sundara Pandiyan³

^{1,3}*Associate Professor, Fatima Michael College of Engineering and Technology*

²*Professor, Fatima Michael College of Engineering and Technology*

Abstract – Spin-Transfer Torque RAM (STT-RAM) is an emerging non-volatile memory technology with the potential to be used as universal memory. The near-SRAM endurance and CMOS compatibility makes it suitable for use throughout the memory and storage hierarchies. However, the density is significantly lower than Flash, and the high write-currents limit the performance and energy-efficiency of STT-RAM caches. This dissertation presents tools and techniques for modeling and optimizing STT-RAM for use in high-speed memory system design. This makes it possible to compare published magnetic tunnel junction (MTJ) designs and perform first-order evaluations of cache and memory designs. Augmenting a Flash-based Solid-State Disk with a STT-RAM merge cache can reduce the response time by more than 75%, while sacrificing the retention-time of the memory cells improves both the performance and energy-efficiency of STT-RAM caches. Detailed error modeling makes it possible to design a refreshing scheme that maintains the reliability of the system, and dynamically adjusting the refresh rate according to current temperature reduces the refresh overhead. This adaptive refreshing can reduce the cell area by more than 28%, compared to STT-RAM with error, while simultaneously limiting the impact of performance and consumption.

ICEC115: SMART ALERT SYSTEM FOR DROWSY DRIVER DETECTION

B.Santhiya¹, D. Meenu Sri², P. Praveena³, N. Rathimalar⁴, D. Nirmal Pradeep⁵

Department of Electronics and Communication Engineering,

^{1,2,3,4}*UG Scholar, Velammal College of Engineering and Technology*

⁵*Assistant Professor, Velammal College of Engineering and Technology*

Abstract – Road accidents became a matter of concern due to the huge increase in traffic. The primary cause of accidents is due to the drowsiness of drivers in the nighttime. Fatigue and drowsiness are some of the leading causes of major accidents on Highways. The only solution to this problem is detecting the drowsiness and alerting the driver. So, in this project, we have thought of building a Driver Drowsiness Detection and alerting system for drivers using Arduino Nano, Eye blink Sensor, and RF Transceiver module. The basic purpose of this system is to track the driver's eye movements using Eye blink sensor and if the driver is feeling drowsy, then the system will trigger a warning message using a loud buzzer alert.

**ICECST1: ANALYSIS OF DIFFERENT METAMATERIAL STRUCTURES
EMPLOYED WITH PATCH ANTENNA**

Dr.S.Regina¹

Department of Electronics and Communication Engineering,

¹Assistant Professor, Pandian Saraswathi Yadav Engineering College, Arasanoor, Sivagangai

Abstract – In recent days, wireless communication systems require a miniaturized antenna that can help different types of applications and gives a broad band of frequencies up to Terahertz. Microstrip patch antennas are employing with various shapes of metamaterials structures that aid to improve bandwidth, gain, stable radiation pattern and directivity with low profile. Metamaterials are artificial structures and its properties are derived from its own structure itself. If anyone structure has negative permittivity (ϵ) and permeability (μ), then it is said to be a metamaterial structure. The aim of this research paper is to mathematically analysed a various shapes of metamaterial design implemented in a simple microstrip patch antenna to achieve high gain, wide bandwidth and high directivity with improved efficiency.

**ICEC116: MAXIMIZING ENERGY EFFICIENCY IN GREEN HETNETS USING
HPSOGA**

Anu Disney D¹

Department of Electronics and Communication Engineering,

¹Research Scholar, Sethu Institute of Technology, Kariapatti, TN, India

Abstract – In smart cities, the cellular network is critical for support connectivity anywhere and anytime. Traffic in the cellular network is more, which causes the burden and energy wastage under different traffic states. To overcome these problems, the green cell planning for small cell network is proposed. In mobile computing, the small cell is one of the promising technologies and it provides the more connections and high data rate. A green small cell planning scheme is considered the dynamic traffic states. The base station functions along with macro and Pico cells. Initially the base stations create and generate all possible connections between User Equipment (UE) and base stations. Then a heuristic to switch off the base stations and update the base station connections and UE are applied. UE interruptions, and traffic are considered and the BSs are allocated based on the requirements by the traffic patterns. Various algorithms like GA, PSO and HGAPSO (Hybrid Genetic Algorithm and Particle swarm Optimization) have been taken into consideration. The proposed HGAPSO has proved to provide higher energy efficiency and throughput when compared to simple GA and PSO.

ICEC117: SMART POLE SYSTEM FOR HILL STATION ROAD MONITORING

Devakrishna .K¹, Dr. Parameswari S²

Department of Electronics and Communication Engineering,

¹UG Scholar, Sri Sai Ram Engineering College, Madurai, TN, India

¹Assistant Professor, Sri Sai Ram Engineering College, Madurai, TN, India

Abstract – The Road Monitoring Smart Pole is an integrated system that integrates a CCTV camera and sensor network with machine learning for road monitoring and warning mechanisms. Hill-road accidents are on the rise in many parts of the world, including some industrialised nations. According to the million-death study (MDS), almost 2.3 million people die in India each year. In India in 2021, 1,168 people died in 3,119 road accidents, the highest death toll since 2012. Despite its smaller population, Himachal Pradesh has more traffic fatalities than J&K. The population of J&K is 12.5 million, Uttarakhand is 11.5 million, and Himachal is 6.8 million, according to the 2011 census. These incidents are widespread in all types of hilly regions, owing primarily to driver irresponsibility and natural disasters. These types of accidents are especially widespread in the country's south, causing considerable economic damage. The bulk of these accidents occur as a result of vehicles exceeding the speed limit in areas such as hairpin road curves on hilly highways and animal crossing areas. If an accident occurs on these types of roadways, there is a lack of surveillance and a first-aid network. There is also a shortage of knowledge about the weather and the occurrence of landslides in the hilly region. The road monitoring smart pole (RMSP) integrates detection, alarm, and prevention techniques that will significantly contribute to road safety and livelihood maintenance. This method is centred on the long-term development aim of good health and well-being. The three main implementations of this integrated system are vehicle detection, an improved accident alarm system, and a landslip detection system.

ICEC118: SMART BUILDING INDOOR TEMPERATURE MONITORING USING IoT BASED ON MACHINE LEARNING

Rishivel. A¹, Dr. Parameswari S²

Department of Electronics and Communication Engineering,

¹UG Scholar, Sri Sai Ram Engineering College, Madurai, TN, India

¹Assistant Professor, Sri Sai Ram Engineering College, Madurai, TN, India

Abstract – The significant for useful energy has increased dramatically over the past few decades, mainly in building sector, because of rapid development and improved lifestyle. The energy performance of the smart building is reliable on various parameters like surrounding weather variables, building characteristics and energy usage characteristics. The machine learning algorithm highlights a mechanism integrated to the Internet of Things (IoT) and it is used to create a predictive model that will be used for forecasting a smart building indoor temperature monitoring. This predictive model has been trained with using lot of data sets to develop viability to complete unfamiliar dataset. This paper demonstrates a Machine Learning based experimentation on real sensor data to validate the test data.

ICECI01: DESIGN OF FAULT TOLERANT ADDER USING QCA

A.Bhavadharani¹, Mrs.M.Nilobhar²

PG student¹, Assistant Professor²

Department of Electronics and Communication Engineering,

Pandian Saraswathi Yadav Engineering College, Arasanoor, Sivagangai, Tamilnadu, India.

Abstract - Integrated circuits have become much smaller, robust and less expensive revolutionizing the electronics world. Over the decades, CMOS have played a crucial role in the integrated circuits. The exponential scaling and increase in processing speed have been provided by CMOS technology for implementing VLSI systems. The present CMOS technology does not sustain the growth levels expected by the semiconductor industry. Nanotechnology is proposed as a solution to the problem because it overcomes the existing power dissipation and also because of the growing demand for denser and faster integrated circuits. Quantum dot-Cellular Automata technology (QCA) emerges as an effective alternative of CMOS-VLSI. Any digital circuit can be implemented by utilizing the QCA-based majority gates. In this work, a approximate adder implemented with quantum-dot cellular automata (QCA) is proposed. The most basic arithmetic operation is the addition of two binary digits, i.e. bits. In many fields the adder plays an important role but in most of the field the accuracy is not in concern. So we proposed a novel approximate adder of quantum dot cell automata (QCA). The proposed adder is used to reduce the circuit complexity and time delay with low error rate. The circuit complexity reduction is achieved by reducing the majority gate in the adder circuit. The operation of QCA circuits is simulated and verified using QCA Designer bistable vector simulation

ICECI02: DESIGN OF HYBRID MULTIPLIER FOR LOW-COST CONVOLUTIONAL NEURAL NETWORK (CNN) ACCELERATORS

R. Evanjlin Nirmala¹, Mrs.K.Thilaga Meena²

Pg student¹, Assistant Professor²

Department of Electronics and Communication Engineering,

Pandian Saraswathi Yadav Engineering College, Arasanoor, Sivagangai, Tamilnadu, India

Abstract - This work proposes boosting the multiplication performance for convolutional neural network (CNN) accelerators using hybrid multiplier which controls various precision approximate multipliers. Previously, utilizing approximate multipliers for CNN accelerators was proposed to enhance the power, speed, and area at a cost of a tolerable drop in the accuracy. Low precision approximate multipliers can achieve massive performance gains; however, utilizing them is not feasible due to the large accuracy loss they cause. To maximize the multiplication performance gains while minimizing the accuracy loss, this article proposes hybrid parallel adder-based multiplier to improve the speed of multiplication compared to the existing technique. In this technique the partial products of, two consecutive bits (multiplicands), are added simultaneously with the help of a hybrid adder (Hancarlson, Weinberger and Ling adder). The proposed architecture is synthesized and simulated using Xilinx ISE 12.1 with various FPGA boards.

**ICECI03: MINIATURIZED HIGH GAIN ARRAY ANTENNA FOR 5G SMART
PHONE APPLICATION**

*K. Karthika¹, Ms.M.Dhivya bharathi²
PG student¹, Assistant Professor²*

*Department of Electronics and Communication Engineering,
Pandian Saraswathi Yadav Engineering College, Arasanoor, Sivagangai, Tamilnadu, India.*

Abstract - This work presents an eight-element array antenna with single layer frequency selective surface (FSS) to obtain high gain. The eight elements are fed by single port. The FSS consists of 14×6 -unit cells with one-unit cell size is 5×5 mm² having wideband behavior. The antenna uses FR4 substrate and giving very wide bandwidth covering millimeter wave 5G bands. The proposed antenna prototype is fabricated, and experimental validation is provided through the measurement. The dimensions of the antenna are $65 \times 27 \times 0.857$ mm³. The proposed antennas have low return loss, high gain and high directivity and low VSWR. The simulated performance of the designed antenna is analyzed here with respect to different antenna parameters, including reflection coefficient, radiation pattern, gain, efficiency, and surface current. These patch antennas are suitable not only for 5G applications but also for WiFi, WiMax, Bluetooth and WLAN applications.

**ICECI04: AN EFFICIENT TECHNIQUE FOR DETECTING CURRENCY
COUNTERFEIT USING IMAGE PROCESSING**

*P.Kurshidha Begam¹, Dr.S. Regina²
PG student¹, Assistant Professor²*

*Department of Electronics and Communication Engineering,
Pandian Saraswathi Yadav Engineering College, Arasanoor, Sivagangai, Tamilnadu, India.*

Abstract - Currency counterfeiting is always been a challenging term for financial system of any country. Counterfeit currency is a fake currency that has not been authorized by the government. The Reserve Bank is the one which issue bank notes in India. Reserve Bank changes the design of Bank notes for time to time. The Reserve Bank uses several techniques to detect counterfeit currency. Common people faces many problems for the fake currency circulation and also difficult to detect counterfeit currency, suppose that a common people went to a Bank to deposit money in Bank but only to see that some of the notes are counterfeit, in this case they has to take the blame, as banks will not help that person. The appearance of the currency is part of this development and it is affected directly, where there is exploited in incorrect form by copying the currency in a manner similar to the reality. Nowadays problem of fake currency increases because of increasing in technology like scanning, color printing so result in counterfeit currency. In India there is a rapid increase in fake paper currency notes of 100, 500, 2000 rupees etc. So, detection of counterfeit currency is necessary. The main objective of the project is to identify the counterfeit Indian currency based on the features present in the real note and fake currency by classifying the image of the currency whether it is counterfeit or genuine. MATLAB software is used to extract the features of the note. The proposed system has got advantages like simplicity and high performance speed.

ICECI05: DETECTION OF DENTAL CARIES USING NIR IMAGES

R.Maheswari¹, Dr. S. Regina²

PG student¹, Assistant Professor²

Department of Electronics and Communication Engineering,

Pandian Saraswathi Yadav Engineering College, Arasanoor, Sivagangai, Tamilnadu, India.

Abstract - The automated process for dental caries detection draws increasing attention with the technological innovation in machine learning methods. This is a core issue in dental diseases especially in the detection of caries as it leads to serious health ailments. This work takes an effort to adequately segment and identify dental diseases. The novel technique of segmentation with cascaded U-Net is proposed in this work. UNet is the most popular network in medical image segmentation. The encoder-decoder architecture and skip connection in UNet can capture multi-scale information in medical images. The initial segmentation result of the first stage is used to crop out the ROI region and the ROI is fed to the second UNet. The input image for the second stage keeps the original resolution as much as possible, which can improve the segmentation performance. The proposed model has been implemented using MATLAB and compared against existing algorithm in terms of accuracy, F-score, precision and recall rates.

ICECI07: PARTICLE SWARM OPTIMIZATION BASED TAMPER DETECTION

M.Malini¹, Mrs.M.Nilobhar²

PG student¹, Assistant Professor²

Department of Electronics and Communication Engineering,

Pandian Saraswathi Yadav Engineering College, Arasanoor, Sivagangai, Tamilnadu, India

Abstract - Copy-move forgery is one of the most commonly used manipulations for tampering digital images. Key point-based detection methods have been reported to be very effective in revealing copy-move evidences, due to their robustness against various attacks, such as large-scale geometric transformations. However, these methods fail to handle the cases when copy-move forgeries only involve small or smooth regions, where the number of key points is very limited. This project proposes a new fragile watermarking based scheme for image authentication and self-recovery for image applications. The proposed scheme locates image tampering as well as recovers the original image. A host image is broken into 4×4 blocks and QR decomposition is applied by inserting the traces of block wise QR into the least significant bit (LSB) of the image pixels to figure out the transformation in the original image. Two authentication bits namely block authentication and self-recovery bits are used to survive the vector quantization attack. The location of authentication bits identified using Particle swarm optimization. The insertion of self-recovery bits is determined with Arnold transformation, which recovers the original image even after a high tampering rate. QR-based watermarking information improves the image authentication and provides a way to detect different attacked area of the watermarked image. The proposed scheme is tested against different types of attacks such as text removal attack, text insertion attack, and copy and paste attack. Compared to the state-of-the-art methods, the proposed scheme greatly improves both tamper localization accuracy and the Peak Signal to Noise Ratio (PSNR) of self-recovered image.

**ICECI08: HYBRID HONEY BATCHER OPTIMIZATION BASED EEG
SIGNAL PROCESSING FOR ALZHIEMER DETECTION**

P.Premavathi¹, Mrs.K.Thilaga Meena²

PG student¹, Assistant Professor²

Department of Electronics and Communication Engineering,

Pandian Saraswathi Yadav Engineering College, Arasanoor, Sivagangai, Tamilnadu, India.

Abstract - Accurate identification of Alzheimer's disease (AD) with electroencephalograph (EEG) is crucial in clinical diagnosis of neurological disorders. However, the effectiveness and accuracy of manually labeling EEG signals is barely satisfactory, due to lacking effective biomarkers. In this work, we propose a deep learning network-based method for AD identification, which employs the FFT based feature extraction. With the construction of functional network of AD subjects, the topological features of weighted and unweighted networks are extracted. Taken the network parameters as independent inputs, a parameter tuned CNN (Convolutional neural network)-based model is established and further trained to identify AD EEG signals. The metaheuristic algorithm for honey badger optimization is used for parameter tuning to get a higher accuracy. Experimental results of MATLAB demonstrate the effectiveness of the proposed scheme in AD identification and ability of CNN system. This work provides a potential tool for identifying neurological disorders from the perspective of functional networks with EEG signal, especially contributing to the diagnosis and identification of AD

**ICECI09: THE CHEETAH OPTIMIZER BASED SENSOR NODE LOCALIZATION
WITH MINIMAL ERROR RATES**

C.Soundarya¹, Ms M.Dhivya bharathi²

PG student¹, Assistant Professor²

Department of Electronics and Communication Engineering,

Pandian Saraswathi Yadav Engineering College, Arasanoor, Sivagangai, Tamilnadu, India.

Abstract - Accurate localization of sensor nodes has a strong influence on the performance of a wireless sensor network. In this work, a node localization scheme using the application of nature-inspired meta heuristic algorithm, i.e., cheetah optimization algorithm, is proposed. In order to validate the proposed scheme, it is simulated on different sizes of sensor networks ranging from 25 to 150 nodes whose distance measurements are corrupted by gaussian noise. The performance of the proposed novel scheme is compared with performance of some well-known schemes such as particle swarm optimization (PSO) algorithm and genetic algorithm. The simulation results indicate that the proposed scheme demonstrates more consistent and accurate location of nodes than the existing PSO- and FA-based node localization schemes.

**ICECST2: SILICON CARBIDE BASED CARBON NANOTUBE COMPOSITE FOR
MEMS HARSH ENVIRONMENT**

Thilaga Meena K¹

Department of Electronics and Communication Engineering,

¹Assistant Professor, Pandian Saraswathi Yadav Engineering College, Arasanoor, Sivagangai

Abstract – The electrical and mechanical properties of Silicon Carbide make it as a suitable material for designing MEMS Product mainly in case of Harsh Environment Applications. It is common that it is very difficult for involving Silicon Carbide for Bulk Micromachining process. The development of Silicon Carbide MEMS is affected by it. In order to design MEMS products, we use High Aspect ratio Carbon Nanotube Forest, Reinforced by LPCVD SiC other than common etching techniques for MEMS Fabrication. The SiC-CNT composite can be designed in a thickness of few micrometer and it can be used as the criterion mass for MEMS design process. The Mechanical properties of SiC are very less dominated compared with electrical properties of the composite. The fabrication of thermal actuator is done using this composite as a demonstrator. The thermal actuation of the device is observed at 450°C.

**ICECST3: METROLOGY FOR THE NEXT GENERATION OF SEMICONDUCTOR
DEVICES**

M.Dhivya Bharathi¹

Department of Electronics and Communication Engineering,

¹Assistant Professor, Pandian Saraswathi Yadav Engineering College, Arasanoor, Sivagangai

Abstract – The semiconductor industry continues to produce ever smaller devices that are ever more complex in shape and contain ever more types of materials. The ultimate sizes and functionality of these new devices will be affected by fundamental and engineering limits such as heat dissipation, carrier mobility and fault tolerance thresholds. At present, it is unclear which are the best measurement methods needed to evaluate the nanometre-scale features of such devices and how the fundamental limits will affect the required metrology. Here, we review state-of-the-art dimensional metrology methods for integrated circuits, considering the advantages, limitations and potential improvements of the various approaches. We describe how integrated circuit device design and industry requirements will affect lithography options and consequently metrology requirements. We also discuss potentially powerful emerging technologies and highlight measurement problems that at present have no obvious solution.

**ICECST4: A IMAGECHAIN-BASED IMAGE COPYRIGHT PROTECTION WITH
DIGITAL WATERMARKING**

Mrs.P.Padmasri¹

Department of Electronics and Communication Engineering,

¹Assistant Professor, Pandian Saraswathi Yadav Engineering College, Arasanoor, Sivagangai

Abstract – With the rapid development of science and information technology, image has become an indispensable medium of information transmission and image processing technology is also booming. However, there are still many problems in the integrity, accuracy and security of image data. This paper proposes a concept called Imagechain - based Image copyright confirmation and protection model. Imagechain is a cryptographic structure that connects the digital images with hash links. In this, the image is embedded within the block. It supports multiple file formats and embedding methods, which makes it portable and user-friendly. Block structure and embedding function are important functions of imagechain architecture. At the same time, the Imagechain provides a high level of security and resistance to forgery. This is achieved by hashing the whole file with embedded image data, so the image cannot be altered or removed from the chain without losing integrity. Cryptographic hash functions such as MD5 and SHA can do this task efficiently by comparing the new image hash with hashes of all images on Blockchain and check for a match. Also, the digital watermark is added to prevent the image information from leaking out of the chain to be embezzled by criminals for personal gain. The digital watermarking hides some digital information in the digital image to achieve the data copyright protection and the content authentication.

**ICECST5: PEAK LOAD MANAGEMENT FOR IMPLEMENTING TARIFF TIME OF
USE (TOU)**

M.Nilobhar¹

Department of Electronics and Communication Engineering,

¹Assistant Professor, Pandian Saraswathi Yadav Engineering College, Arasanoor, Sivagangai

Abstract – Time-of-use (ToU) tariff can be applied to encourage domestic and industrial consumers to shift their electricity usage to non-peak hours, thereby reducing the system's load during peak periods. In recent years, the time-of-use (TOU) tariff based on the peak load pricing theory has been one of the most effective load management strategies. It also suggests a framework and effective roadmap for the utilities to understand the procedure and required infrastructure to implement ToU. Proper TOU rate structure can actually reflect the generation cost of electricity supplying and give a guideline for customers to modify the power consumption pattern so that the system load factor can be improved. A new study examines the feasibility of the ToU tariff policy. The inverse electricity pricing rule can be applied as the basis of TOU pricing.

ICEC119: AN AUTOMATIC MOBILE RECHARGE STATION

AE. Dhevanath¹, Dr.M.Shanthi²

Department of Electronics and Communication Engineering,

¹UG Scholar, University College of Engineering, Ramanathapuram

¹Assistant Professor, University College of Engineering, Ramanathapuram

Abstract – Now a days near about each man uses a mobile phone so the recharge this mobile phone is a most important task. We are trying to achieve a automatic mobile recharger machine which provides a 24 hour services without inter furnace or need of man. In our daily life we are recharge our mobile phone manually, that's why we should go to their shop / agencies, also these types of easy recharges are not available for 24hrs, also on long root or Expressways.

ICEC120: HIGHLY PRECISIONED AGRICULTURAL DRONE

Praveen kumar M¹, Dr.M.Shanthi²

Department of Electronics and Communication Engineering,

¹UG Scholar, University College of Engineering, Ramanathapuram

¹Assistant Professor, University College of Engineering, Ramanathapuram

Abstract – Farming is the practice of cultivating plants and livestock. Agriculture was the key development in the rise of sedentary human civilization, whereby farming of domesticated species created food surpluses that enable people to live in cities. The challenges in agriculture are feeding a growing population, providing a livelihood for farmers and protecting the environment. To tackle these disputes, there should be a need for effective way to get more out of limited resources using modern technology. This work reports an IOT based Bluetooth or Zigbee controlled Drone for assisting farmers in respect of soil testing, survey etc., in real time and counter measures, if any, will be taken within stipulated time. This work depicts to develop a self-made drone capable of performing soil moisture content, temperature and humidity content, pH, soil NPK, salinity and healthiness of the crops as well. These data can be monitored and noted via Bluetooth/ zigbee. By detecting these performances, farmers can provide necessary nutrients to the crops for a profitable yield with restricted assets. The method can also assist in surveying the field boundary against the issues caused by wild animals or humans even without harming animals. Its therefore serving a route to nature vegetation.

**ICEC121: ALCOHOL DETECTION AND ACCIDENT PREVENTION USING
IOT AND MACHINE LEARNING**

Dr.N.Janakiraman 1 ,K.K.Prasath2, S.Sivaganapathy3, G.Shandosh balaji4

¹ Professor, Department of Electronics and Communication Engineering,

*²³⁴Final Year Students, Department of Electronics and Communication Engineering,
K.L.N.College of Engineering.*

Abstract – Transportation is playing a vital role in our daily life and its development has made many of our chores much easier. But in recent years, driver drowsiness, distractions, and speed limit crossing cause ruinous road accidents which lead to fatalities. Slumbering, dozing, alcohol consumption cause intrusiveness which needs to alert the driver before a mishap happens. In this paper, a prototype is designed using Raspberry Pi, Pi Camera, sensors for monitoring driver's eye movements, detecting yawning, detecting toxic gases, and alcohol consumption to prevent accidents and provide safety assistance to drivers. Internet of Things and machine learning-enabled system is implemented in vehicles for transmitting the behavior of the driver and his driving pattern to the cloud to take quick response under emergency situations. Several lives are saved by alerting the driver with help of a sound system that is deemed to prevent any distractions before happen. The cloud services and machine learning are employed in identifying fatigue drivers through the collected and stored data set from cloud services. The device is experimentally tested, and the results show its efficiency and effectiveness.

ICEC122: SMART POULTRY FARM

Mrs.S.indumathi¹,K.pranava kumar²,T.M Uma maheshwaran³,K.Sasi kumar⁴

¹ Assistant Professor, Department of Electronics and Communication Engineering,

*²³⁴Final Year Students, Department of Electronics and Communication Engineering,
K.L.N.College of Engineering.*

Abstract – Smart poultry farming involves the use of advanced technologies such as sensors to automate various processes. To improve animal health, and environmental conditions. The key benefits of smart poultry farming is improved animal welfare. By monitoring the behaviour and health of the birds using sensors, farmers can identify, reducing the need for antibiotics and improving the overall health. The primary objective of this project is to implementation of a low-cost IoT-based remote poultry management system for small to medium scale producers is presented. Poultry farmers in developing countries are relying on manual poultry management methods which are labour-intensive. The proposed system which was built around the WiFi-enabled ESP8266 NodeMCU microcontroller is capable of monitoring and regulating temperature, humidity, water level, ammonia gas and the lighting system. Security is facilitated by the PIR sensor and camera is to prevent from any animals or human and to count the numbers of hens. The system minimizes employment costs and saves time. Besides, the system has unique capabilities of automatic switching control.

ICEC114: CARDIOVASCULAR DISEASE RISK PREDICTION USING DEEP LEARNING

M. Sakthivel¹, G. Sowmiya Devi², B. Jose Ezhilarasi³, G. Lakshmi Priya⁴

¹Assistant Professor, ^{2,3,4}UG Scholars, Department of Electronics and Communication Engineering, Velammal College of Engineering and Technology

Abstract – By encouraging an unhealthy lifestyle, today's hectic schedule contributes to anxiety and depression. Excessive drug and alcohol use, smoking, and drinking are common coping mechanisms. All of these factors contribute to a slew of dangerous diseases, such as cancer and cardiovascular disease. Rapid, precise, and prompt clinical evaluation of disease severity is critical at this stage. A dataset is a collection of various pieces of data that can be used to train an algorithm to find a consistent pattern across the entire dataset. In this paper, an efficient deep learning-based data prediction method was proposed to aid in healthcare system decision-making and logistical planning. Using our method on the free Kaggle database, we can demonstrate the effectiveness of the Long-Short Term Memory (LSTM) classifier. An attention mechanism has also been included to help neural networks solve complex tasks by breaking them down into smaller areas of attention and processing them sequentially. Experiments show that the accuracy of prediction improves by 98.49%. By encouraging an unhealthy lifestyle, today's hectic schedule contributes to anxiety and depression. Excessive drug and alcohol use, smoking, and drinking are common coping mechanisms. All of these factors contribute to a slew of dangerous diseases, such as cancer and cardiovascular disease. Rapid, precise, and prompt clinical evaluation of disease severity is critical at this stage. A dataset is a collection of various pieces of data that can be used to train an algorithm to find a consistent pattern across the entire dataset. In this paper, an efficient deep learning-based data prediction method was proposed to aid in healthcare system decision-making and logistical planning. Using our method on the free Kaggle database, we can demonstrate the effectiveness of the Long-Short Term Memory (LSTM) classifier. An attention mechanism has also been included to help neural networks solve complex tasks by breaking them down into smaller areas of attention and processing them sequentially. Experiments show that the accuracy of prediction improves by 98.49%.

ICECSP1: AUTOMATIC BRAKE FAILURE INDICATOR AND TYRE PRESSURE MONITORING SYSTEM

M.Arthika¹, S.Ulaganathan²

¹UG Scholar, ¹Assistant Professor, Department of Electronics and Communication Engineering, KIT & KIM

Abstract – The Automatic Brake Failure Indicator and tire Pressure Monitor is a system designed to provide real-time information about the braking system and tire pressure of a vehicle. The system is composed of breaker failure indicator, tire pressure and a microcontroller that collects data and processes it. The brake failure indicator uses a pressure sensor to detect any reduction in the hydraulic pressure in the brake system. If the pressure falls below a certain threshold, an alarm is triggered, and the driver is warned about the potential brake failure. The tire pressure monitor uses a pressure sensor that is installed inside each tire. The sensor continuously measures the tire pressure and sends the data to the microcontroller. If the tire pressure falls below a certain threshold, the system warns the driver about the low pressure.

ICEC123: OBJECT DETECTION AND RECOGNITION FOR VISUALLY IMPAIRED PEOPLE

*Vishnunathan R¹, M.S. Santhoshkumar², A.R.L. Santhoshkumar³, G.J. Sabari Kumar⁴,
Mr.B.Balan⁵*

*^{1,2,3,4}UG Scholar, ⁵Assistant Professor,
Department of Electronics and Communication Engineering,
K.L.N. College of Engineering*

Abstract – Blind navigation has become a challenging task in the present. Blind people cannot detect and avoid obstacles similar to the people with good vision and they need guidance to avoid such obstacles. The white cane is the most widely used device by many blind navigators to detect and avoid obstacles. But with the limited reachability of the white cane, it is not possible to detect all the potential threats to the navigator. Therefore, the white cane is not an adequate aid to navigate safely. To secure the safe and independent navigation of the blind people, more insights of their current surroundings must be provided. This project proposes a novel approach for obstacle detection based on machine learning to assist in blind navigation.

ICEC124: STAMPEDE AVOIDANCE USING MICROCONTROLLER BASED SYSTEM

G. Blessy Jebamani¹, S.Devi Sri², V.Muthu Ranjani³, N.Uma Nanthini⁴, Dr.M.Iyyapan⁵

*^{1,2,3,4}UG Scholar, ⁵Assistant Professor,
Department of Electronics and Communication Engineering,
NPR college of engineering and technology*

Abstract – In Complex buildings, Industries, Hindu's pilgrimages extreme high density may result in crowd disaster (stampede, trampling and suffocation). It has been observed from the past crowd disasters that these places have inadequate risk management strategies, especially in India. Therefore, developing strategies for risk aversion is essential. strategies not only provide the way for better crowd management, but also for determining suitability of the venue for an event, better route guidance to avoid congestion and finding the pinch points (high risk points). Finally, an overview of pedestrian simulation is presented that can help in developing more strategies for safer events. To detect hazards happening in an industrial or commercial establishment through a networked sensor system. To deactivate the electrical supply to avoid electrocution and activate the emergency lighting. To navigate the crowd so that avoiding excessive crowd and stampede due to moving in a wrong direction. To show the right path to the people using a network of arrow LEDs.

**ICEC125: LoRa ENABLED FAULT DETECTION IN POWER DISTRIBUTION
SYSTEM USING IOT DEVICES**

¹N. RenugaDevi ²P. Jeyalakshmi

^{1,2}Assistant Professor,

Department of Electronics and Communication Engineering,

NPR college of engineering and technology

Abstract – The power distribution grid currently in use not designed for two-way communication or real time monitoring by service provides. Lack of feedback and automated monitoring makes it difficult for service providers to efficiently manage the power distribution grid and cause delays in reparative actions. A smart system using self-powered IoT devices and LoRa technology can be used to detect and monitor faults in power distribution system. IoT devices are small, low powered devices that can communicate wirelessly with each other and the internet and can be equipped with sensos to detect changes in temperature, vibration and other parameters that can indicate faults in power distribution system. Self-powered IoT devices can harvest energy from their surroundings, eliminating the need for batteries. The smart system can transmit fault data to a central monitoring system, here the data can be analysed in real time to detect and locate the faults in the power distribution system. It can enable utilities to improve the reliability and efficiency of their operations while reducing maintenance costs and downtime.

DEPARTMENT
OF
ELECTRICAL & ELECTRONICS
ENGINEERING

ICEE101: DESIGN AND EXPERIMENTAL EVALUATION OF SOLAR POWERED DISPENSER LINKED WITH ARDUINO CONTROL SYSTEM

Akthar Farvesh¹, Karthikeyan.S², Karmel Christopher.A³, Jegathesh.K. P⁴, Solaiappan.K. T⁵
^{1,2,3,4} UG Scholar, Department of Electrical and Electronics Engineering,

Vaigai College of Engineering, Madurai.

*⁵ Assistant Professor, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai*

Abstract- This paper presents the design and development of a solar-based buck-boost system with battery backup for an Arduino-linked coin-sensored napkin dispenser. The system aims to provide a sustainable and reliable power source for the dispenser while ensuring efficient operation and user convenience. The buck-boost topology is utilized to regulate the output voltage and current from the solar panel, which charges the battery powering the dispenser. The coin-sensored mechanism restricts access to authorized coins only, while the Arduino microcontroller monitors and controls the dispenser's operations. Experimental results demonstrate the proposed system's ability to regulate output voltage and current effectively, ensuring stable and reliable operation, even during low solar radiation or nighttime. Additionally, the battery backup system provides an added layer of reliability, ensuring continuous dispenser operation. The coin-sensored mechanism and Arduino control system offer a user-friendly and efficient means of dispensing napkins while preventing unauthorized access. Overall, the proposed system shows promise as an effective and sustainable solution for public restrooms and similar settings.

ICEE102: REAL TIME ANIMAL INTRUSION DETECTION AND MONITORING OF CROP FIELDS USING ARDUINO AND GSM

K.Manoj Pandiyan¹, B.Krishnan², G.Sukrev³, R.Aravindaraj⁴

*^{1,2,3} UG Scholar, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai.*

*⁴ Assistant Professor, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai*

Abstract- A prevention control system for crop fields is crucial to ensure the safety and productivity of crops. In this project can be implemented in a crop field. The system should have a robust surveillance and monitoring mechanism that can detect any potential threats to the crops. This could include GSM Module, Sensors, and Arduino. The data collected by these devices should be analyzed regularly to identify any patterns or anomalies. It is based on the data collected through surveillance and monitoring, the system should perform a risk assessment to determine the potential risks to the crops. This could include the risk of Animals, (cow, elephant, goat, etc) and human interference. This system should implement prevention measures to reduce the risk of crop damage. These could useful for protection of crops.

ICEE103: DESIGN AND IMPLEMENTATION OF A HYBRID CHARGING STATION FOR SUSTAINABLE AND RELIABLE EV CHARGING

Babu.P¹, Mariya Bapison.A², Sankara Narayanan.K³, Solaiappan.K.T⁴, Sonia.C⁵
*^{1,2,3} UG Scholar, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai.*
*^{4,5} Assistant Professor, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai*

Abstract- This paper presents the design and implementation of a hybrid charging station that utilizes solar and hydrogen fuel cell technologies to charge electric vehicles (EVs) while ensuring continuous operation during power outages. The charging station incorporates a SEPIC DC-DC converter for efficient and rapid charging. The main goal of this project is to offer a portable and eco-friendly charging solution that is resilient to power disruptions. The use of solar and hydrogen fuel cell technologies ensures that the charging station can function autonomously, while the SEPIC DC-DC converter allows for fast EV charging. The project demonstrates the feasibility and advantages of a hybrid charging station for reliable and sustainable EV charging.

ICEE104: OPTIMAL SCHEDULING OF INDUSTRIAL TASK-CONTINUOUS LOAD MANAGEMENT FOR SMART POWER UTILIZATION

Atchaya.M¹, Deepamaheswari.S², Nivetha.M³, Dr Vijayakumar.N.M⁴
*^{1,2,3} UG Scholar, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai.*
*⁴ Associate Professor, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai*

Abstract- This project aims to develop an automatic load sharing system for transformers using a microcontroller. The system detects the amount of load connected to each transformer and automatically balances it among them to prevent overloading and potential damage. The microcontroller is used to monitor and control the system, which includes current sensors, relays, and an LCD display. The system is designed to be efficient, reliable, and easy to use, making it suitable for a range of applications. The results demonstrate the effectiveness of the proposed system in balancing the load and ensuring the longevity of the transformers. Overall, this project contributes to the development of smart energy systems by improving the reliability and efficiency of transformer networks.

ICEE106: HOME APPLIANCE CONTROL AND ENERGY MANAGEMENT SYSTEM USING IOT

Agashkumar.R¹, Mohamed Afrullah.K², Kannan.K³, Thiagaraj.A⁴, Kalaiselvi.K⁵
^{1,2,3,4} UG Scholar, Department of Electrical and Electronics Engineering,

Vaigai College of Engineering, Madurai.

⁵ Assistant Professor, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai

Abstract- This paper proposes a Home Appliance Control and Energy Management system using IoT (Internet of Things) to enable homeowners to manage their energy consumption and control their appliances remotely. The system employs smart plugs, smart thermostats, and smart switches connected to a home Wi-Fi network, and sensors to provide real-time data on energy consumption. The system can be programmed to automatically turn off appliances when not in use and adjust appliance settings. This system can help homeowners save money on energy bills by monitoring usage and adjusting. The system provides a convenient and cost-effective solution for homeowners to manage energy usage and control appliances remotely. The proposed system can be considered as a significant contribution in the field of energy management and IoT technology.

ICEE107: DEVELOPMENT OF A IOT BASED SEWAGE MONITORING AND CLOGGING PREDICTION SYSTEM

S. Krishna Prabha¹, K. Subalakshmi², M. Visaka³, Ms. C. Sonia⁴, Mr. A. Wesley Jeevadason⁵
^{1,2,3}UG Scholar, Department of Electrical and Electronics Engineering,

Vaigai College of Engineering, Madurai.

^{4,5} Assistant Professor, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai

Abstract- This abstract describes an Internet of Things (IoT) based sewage monitoring and clogging prediction system for real-time monitoring of sewage and wastewater system thus enabling sustainable and clean community development. The proposed system is designed to provide real-time monitoring of the sewage flow, level, and clogging, to optimize the wastewater management process. The flow sensor measures the amount of sewage flowing through the pipeline, while the ultrasonic sensor detects the level of the sewage in the tank. Microcontroller system periodically monitors the flow rate and the level of sewage in the pit, and based on the level it is used to estimate the sewage overflow status by measuring the distance between the sensor and the sewage surface. The collected data is processed and transmitted to the cloud server using the Wi-Fi network. The system is also interfaced with gas sensors to detect the level of poisonous gasses in the sewage system, thus saving lives during maintenance of the sewage system. The data is analysed to identify any anomalies or potential issues, such as clogging or overflow. Real-time alerts and notifications are generated for any deviations from the desired parameters, allowing for timely corrective actions to be taken. The Blynk mobile application provides a user-friendly interface for visualizing and analysing the collected data, enabling stakeholders to make informed decisions for process optimization, resource allocation, and maintenance. The proposed system is a cost-effective and scalable solution for sewage

monitoring, which can improve the overall efficiency, reliability, and sustainability of wastewater treatment operations. By providing real-time insights and enabling proactive decision-making, the proposed system can help reduce the risk of environmental pollution and enhance the quality of life for the community.

ICEE108: DESIGN OF LOW COST AND ENERGY EFFICIENT SOLID-STATE CONVERTER FOR EV APPLICATION

K.Buvaneshwari¹, K.Kowsalya², B.PriyaDharshini³, K.Kalaiseelvi⁴

*^{1,2,3}UG Scholar, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai.*

*⁴Assistant Professor, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai*

Abstract- The Super-Lift Luo Converter is a type of DC-DC converter that has recently gained attention for its potential use in electric vehicle (EV) applications. This converter is a modification of the traditional Luo Converter, and it provides a high voltage gain with a reduced number of components. By integrating a boost converter into the traditional Luo Converter, the Super-Lift Luo Converter achieves a higher voltage gain than the traditional Luo Converter, while still maintaining a small number of components. This high voltage gain makes the Super-Lift Luo Converter a promising option for stepping up the voltage from the battery to a level that is suitable for driving the electric motor, allowing for a smaller and lighter battery pack. However, in order to successfully apply this converter to EVs, the converter's design and control must be carefully optimized to achieve high efficiency and reliable operation.

ICEE109: DEVELOPMENT OF A LOW COST, HIGH ACCURACY OVERHEATED CELL DETECTOR FOR EV BATTERY THERMAL MANAGEMENT SYSTEM

S. Ajay¹, D. Dhanaraj², K. Mathavan³, A. Wesley Jeevason⁴

*^{1,2,3}UG Scholar, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai.*

*⁴Assistant Professor, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai*

Abstract- The rapid advancement of Li-ion battery technology over the past ten years have enabled electric vehicles (EVs) create a significant impact on the automotive industry internationally. However, the Li-ion batteries have numerous difficulties, such as overheating brought on by electron motions during chemical reactions during the charging and discharging process in high temperatures, which can result in the batteries' fatal destruction. When a single cell gets overheated, it will damage the cells around it, and consequently creates a chain reaction of cell damage, thus causing overheating of the entire battery pack. The overheating eventually leads to firing of the battery and the EV. For the long-term success of electric vehicles, an effective battery thermal management system (BTMS) is one of the most essential technologies. Currently, the Battery Management System uses one common temperature sensor to monitor the temperature of the whole pack. In this project we develop a cheap sensor circuit to

detect overheated cell in an electric vehicle battery pack. Additionally, a Battery thermal management system by spot cooling the overheated cell using thermoelectric coolers is also developed and tested in this work. A mesh with resistors are integrated into the battery pack. The mesh is supplied with DC power from one end, and sensed at the other end. The overheat temperature from the faulty cell influences the resistance of the mesh. The voltage drop at the end of the mesh wire indicates the variation in resistance due to increased temperature. Based on this, the location of the faulty cell is identified and thermoelectric cooler below the cell region is switched ON to cool the location and the cell. As a future study, integration of Machine Learning and Artificial Intelligence will further enhance the BTMS in EV technology. These low cost, indigenous systems will boost the EV market, thus enabling India become superior in the global market as well as in the economy.

ICEE110: SOLAR BASED GRASS CUTTER

Abarna.R¹, Kayathri.R², Sumithra.V³, Susmitha.P⁴, Saranya.V⁵
*^{1,2,3,4}UG Scholar, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai.*
*⁵Assistant Professor, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai*

Abstract- Nowadays grass cutter machines are becoming very popular. Pollution is manmade, which we can be seen in our daily life. In conventional model of grass cutter, IC engine was used which creates environmental impact and also it is costlier. Maintenance of such conventional machine is more. The aim of our project is to make the grass cutter which operates on solar energy which is pollution free and also reduces Man Power (Automatic operation). The project describes a grass cutter, which is operated on solar power and is controlled through microcontroller. This project is mainly reducing the manpower and usage of electricity. Maximum power point tracking technique is used to improve the efficiency of the solar panel. The DC to DC buck boost converter helps to step up the DC voltage from the photovoltaic panel and store the DC voltage in a battery. It is an automated system for the purpose of grass cutting. The source is derived from the solar energy by using photovoltaic panels. The DC-DC converter is used to convert the low-level DC voltage into the high-level DC voltage. High level DC voltage is required to operate the whole system. Automation is achieved by using sensors and microcontrollers. Wheels and cutting operations are operated using dc motors. DC battery is utilized for powering and standby mode operation of the system.

ICEE111: DEVELOPMENT OF LOW COST, LOW WEIGHT PHOTOVOLTAIC THERMAL COLLECTOR SYSTEM

S.Karthikeyan¹, R.Ananth², B.Ashok³, A. Wesley Jeevadason⁴
*^{1,2,3,4}UG Scholar, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai.*
*⁵Assistant Professor, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai*

Abstract- PV hot spots can reduce the efficiency of the PV system and even cause permanent damage if not addressed. One effective cooling technique for PV hot spots is to use a liquid

cooling system. This involves circulating a coolant fluid through the PV panel to absorb and dissipate heat, which can reduce the temperature of the hot spot and improve the overall efficiency of the PV system. This work aims to develop a low-cost and lightweight photovoltaic thermal system (PVT) that can efficiently convert solar energy into both electricity and heat. The PVT system integrates photovoltaic modules and a thermal collector in a single panel to reduce the PV heating, simultaneously maximize the use of available space and reduce material and installation costs. Currently copper tube-based heat exchanger mechanisms are used in the PVT systems, which increase the cost as well as weight of the panel. In this system, cost effective PVC materials and high thermal conductive aluminum materials are used to build the heat exchanger, which will enable low cost, low weight and high thermal performance. The system's performance will be optimized through innovative design, materials selection, and testing. The performance of the PVT will be compared with only PV and the effectiveness in enhancing the electrical efficiency of the PV will be reported in this study. This project has the potential to significantly increase the adoption of renewable energy by making solar power systems more accessible and affordable.

ICETET114: INTELLIGENT BMS DATA ANALYTICS SYSTEM FOR HYBRID EV USING IOT

K.Sivakumar¹, S.Suryanarayanan², R.Ganesh³, PL. Suresh kumar⁴, N.Sundara perumal⁵
^{1,2,3,4}UG Scholar, Department of Electrical and Electronics Engineering,

Vaigai College of Engineering, Madurai.

*⁵Assistant Professor, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai*

Abstract- The integration of Internet of Things (IoT) technology in the automotive industry has opened up new possibilities for collecting and analyzing vehicle data. Battery Management Systems (BMS) play a crucial role in monitoring and maintaining the health of batteries in Electric Vehicles (EVs), and IoT can be used to collect real-time data from BMS for analysis. This paper proposes an intelligent BMS data analytics system for hybrid EVs using IoT. The system includes a data acquisition module that collects data from the BMS, a data preprocessing module that cleans and filters the data, and a data analytics module that uses machine learning algorithms to analyze the data. The system provides insights into battery performance, predicts battery degradation, and optimizes the operation of the vehicle. The proposed system can be used to extend the battery life of hybrid EVs, reduce maintenance costs, and enhance the overall performance of the vehicle. Experimental results show that the proposed system can accurately predict battery degradation and optimize the operation of the vehicle based on real-world driving conditions by using pylink.

**ICEE115: MONITORING OF RADIATION IN INDUSTRIES WITH HIGHLY
EFFICIENT LoRa TECHNOLOGY**

Giftlin Princia Joy S¹, Dr.J. Rajalakshmi²

*¹PG Scholar, Department of Electrical and Electronics Engineering,
Fatima michael college of engineering & Technology*

*²PG HOD, Department of Electrical and Electronics Engineering,
Fatima michael college of engineering & Technology*

Abstract- This project aims to monitor the level of UV radiation in industrial machines using highly efficient LoRa technology. The system is equipped with a power supply, ML8511 UV sensor, Atmega 328, LoRa module, LCD display, alarm, relay, solenoid valve, and, ESP32 as well as an ESP8266 for data transmission. The system constantly measures UV radiation levels and displays them on the LCD display. In case the radiation level exceeds a certain threshold, the system triggers an alarm and activates the solenoid valve to prevent further damage to the machine. The use of LoRa technology enables efficient and reliable data transmission over long distances, making the system suitable for use in large industrial facilities. The monitoring of UV radiation in industrial machines is an essential aspect of ensuring their safe and optimal functioning. This project proposes a monitoring system that employs highly efficient LoRa technology and a low-cost UV sensor to measure UV radiation levels in industrial machines. The system is easy to use, reliable, and suitable for use in large industrial facilities, making it an excellent solution for monitoring UV radiation levels and preventing machine damage.

**ICEE116: AN INTELLIGENT ECG DEVICE FOR AUTOMATIC CRITICAL BEAT
IDENTIFICATION FOR SMART HEALTHCARE USING RECURRENT NEURAL
NETWORK**

J. Janani¹, Mrs.Jothilakshmi²

*¹PG Scholar, Department of Electrical and Electronics Engineering,
Fatima michael college of engineering & Technology*

*²Assistant Professor, Department of Electrical and Electronics Engineering,
Fatima michael college of engineering & Technology*

Abstract- In medical practices, the detection of diseases highly depends on different medical tests. Electrocardiogram (ECG) technique is commonly used for heart disease diagnosis. Doctors can measure pulse and other heart boundaries with the aid of it. Fast and precise detection of forms of arrhythmia is critical while identifying heart disease. In this work, we proposed an intelligent ECG device with the built-in automatic capability to classify into critical and non-critical data from an imbalanced ECG dataset for the smart IoT or Internet of Things based smart healthcare device. Particular emphasis is given to the reduction of data misclassification by converting imbalanced data into a balanced dataset using necessary techniques. This proposed algorithm helps in the accurate detection of critical ECG beats with an accuracy of 95% and result in a smart healthcare monitoring device that would make the disease detection fast and precise.

**ICEE117: INTERNET OF THINGS-BASED BABY MONITORING SYSTEM FOR
SMART CRADLE**

A.Jeevitha¹, Mrs.M. Aishwarya²

*¹PG Scholar, Department of Electrical and Electronics Engineering,
Fatima michael college of engineering & Technology*

*²Assistant Professor, Department of Electrical and Electronics Engineering,
Fatima michael college of engineering & Technology*

Abstract- The project is aimed at designing a density based dynamic traffic signal system where the timing of signal will change automatically on sensing the traffic density at any junction. Traffic congestion is a severe problem in most cities across the world and therefore it is time to shift more manual mode or fixed timer mode to an automated system with decision making capabilities. Present day traffic signaling system is fixed time based which may render inefficient if one lane is operational than the others. To optimize this problem, we have made a framework for an intelligent traffic control system. Sometimes higher traffic density at one side of the junction demands longer green time as compared to standard allotted time. We, therefore propose here a mechanism in which the time of green light and red light is assigned based on the density of the traffic present at that time. This is achieved by using IR (Infrared sensors). Once the density is calculated, the glowing time of green light is assigned by the help of the microcontroller (Arduino). The sensors which are present on sides of the road will detect the presence of the vehicles and send the information to the microcontroller where it will decide how long a flank will be open or when to change over the signal lights. In subsequent sections, we have elaborated the procedure of this framework. It also supports smart city transportation applications including emergency vehicle signal preemption (EVSP) using RF based ambulance identification.

**ICEE118: POLYVINYL ALCOHOL (PVA)/AZADIRACHTA INDICA (NEEM) GUM
NANOCOMPOSITES AS HIGH-PERFORMANCE DIELECTRIC MATERIAL FOR
FLEXIBLE ELECTRONICS**

P. Kiruthika¹, Venkat subramaniam²

Department of Electronics, PSG college of Arts and Science, Coimbatore

Abstract- Polymer-based dielectrics are the suitable candidate for energy storage applications due to its excellent properties. Recently, biomaterials have attracted much attention, as they are abundant, naturally available, and reused. In particular, combination of biomaterials together with other components in the energy storage system has resulted in significant research advances as well as noticeable results. Gum-based electrolytes have been researched heavily in the recent years because of easy modulation of their physicochemical properties, bio-friendly characteristics, and abundance. In the present study, novel flexible dielectric composites composed of polyvinyl alcohol (PVA) and Neem gum (NG) with high dielectric constant and low dielectric loss have been developed using facile and eco-friendly solution casting techniques. The structural, morphological, optical, and thermal properties of PVA/Neem gum (NG) composite was investigated comprehensively. The dielectric constant and dielectric loss values of PVA composites were investigated in order to check their feasibility as a flexible dielectric

material for high-performance energy device applications. The obtained results, which enable the preparation of dielectric nanocomposites using a facile solution-casting method that exhibit the desirable dielectric performance for flexible organic electronics.

**ICEE119: SIMULATION OF MULTIPURPOSE CONTROL FOR SOLAR PV SYSTEM
INTERFACED TO GRID WITH MMPT-CPG**

Dr. R. Tamilselvan¹

¹ *Assistant Professor, Department of EEE Annamalai University*

Abstract- Multipurpose Distributed Sparse control approach for a single stage solar photovoltaic energy generation system (SPEGS). Varying solar irradiance and compensating the nonlinear load tied at point of common interconnection. Generated solar PV power to the local three phase grid. The solar irradiance is not available, the proposed system works as DSTATCOM (Distribution Static Compensator). Traditional P&O (Perturb and Observe) scheme is utilized here. Renewable energy production has rapidly developed around the world, due to the rising the cost of fossil fuels and a global warming awareness. Solar photovoltaic energy generation system (SPEGS) is one of the focused areas of research community as it is pollution free, renewable, inexhaustible and has a lot of other advantages.

**ICEE120: HEALTH CARE MONITORING SYSTEM FOR PREGNANT WOMEN
USING IoT**

G.Meena¹, M.Muthumari², S.Santhiya³, R.Sribharathi⁴, Dr Vijayakumar.N.M⁵
^{1,2,3,4}*UG Scholar, Department of Electrical and Electronics Engineering,*

Vaigai College of Engineering, Madurai.

⁴*Assistant Professor, Department of Electrical and Electronics Engineering,*
Vaigai College of Engineering, Madurai

Abstract- In the developing countries most of the peoples are lived in the rural area and medical systems are not for sharing information. Due to this situation, the women's are facing and immense medical issues. Motion of the fetal and some important parameters such as Blood pressure, Blood glucose, Heart beat rate, Blood O₂, CO₂, Respiratory rate, stress level, Sugar and temperature for the women's are measured using various types of sensors. The pregnant women's are unable to do their normal checkups at the starting time of pregnancy time and this cause higher death count in case of newborn and parental in the rural area as well as in the urban also. The measured parameter is transmitted by the way of using IOT and it is displayed in the mobile phone. This system is highly sensitive and light weight even for small motion, So, it is preferred as a home monitoring device.

ICEE121: SMART IRRIGATION PLANT MONITORING (IOT)

A. Arunpandi¹, J. Christopher², R. Rajalakshmi³

^{1,2}UG Scholar, Department of Electrical and Electronics Engineering,

*³Assistant Professor, Department of Electrical and Electronics Engineering,
Ultra College of engineering and technology.*

Abstract- Agriculture is the important job in India. It needs water for irrigation. The main job of the farmer is to irrigate the field. In this research, the irrigation system is automated using the Internet of Things technology. Therefore, it reduces the need for human intervention. This study will find the best crops suitable for the soil. When water is needed, the field is irrigated with sufficient water. This paper aims at achieving automation for the purpose of plant monitoring and irrigation system, using ESP8266. Sensors are used for monitoring the environmental conditions surrounding the crop, whose outputs are obtained on an Android based mobile application as well as uploaded on the cloud. The updates of the atmospheric conditions such as temperature, humidity and soil moisture can be fetched from anywhere in the world as the data is shared on the cloud platform. The cloud-based IoT platform analyses the collected data and sends alert messages and controls the irrigation system according to the pre-set threshold conditions. The proposed system is secure, economically feasible, reliable and energy efficient which brings automation and IoT technology to the agriculture sector.

**ICEE122: DEMAND SIDE MANAGEMENT FOR RESIDENTIAL USERS IN A SMART
MICRO- GRID**

C.Anantharaj¹, M. Sowmiya², R.Pandi Prabakaran³

^{1,2}UG Scholar, Department of Electrical and Electronics Engineering,

*³Assistant Professor, Department of Electrical and Electronics Engineering,
Bharath Niketan Engineering College*

Abstract- The Smart Grid (SG) is the technological development that incorporates digital technologies and advanced communication methods to determine and respond to variations in electricity consumption in order to revolutionize power distribution, transmission, and generation. In the conventional electrical grid, customers remain unaware to their energy usage patterns that not only results in energy loss but also money. The consumers' usage and consumption standards need to be regulated in order to improve energy efficiency (EE).SG utilizes demand side management (DSM) for energy savings by use of various approaches like financial incentives, subsidized tariffs, and awareness to alter consumers' energy demand.

ICEE123: UNDER GROUND CABLE FAULT DETECTION USING IOT

R.Packiyalakshmi¹, M.Sneka², M.Daliorani³

^{1,2}UG Scholar, Department of Electrical and Electronics Engineering,

*³Assistant Professor, Department of Electrical and Electronics Engineering,
Bharath Niketan Engineering College*

Abstract- In the downtowns, underground cables are used rather than of overhead transmission lines. It is hard to go through the specific spot of the shortcomings. As India become prominent as a progression country, civilized field is too boosting every day. The underground lines are beat under the same circumstances its uses is additionally growing a result of its clear advantages such as lower line losses, lower maintenance cost and they are less powerless to the effects of serious climate. In power system the generated electrical energy is transmitted to the consumer premises with the help of overhead or underground transmission system. The underground system has several advantages as compared to overhead system but the major problem is we cannot able to detect the exact fault location. In order to overcome this problem, the cable fault will be monitored in Real Time (RTS) using IOT and the data will be stored in the cloud server and that can be accessed anytime, thereby reducing the time to find the cable faults.

**ICEE124: MITIGATION OF HARMONICS USING PI AND FUZZYLOGIC
CONTROLLER BASED SHUNT ACTIVE POWER FILTER**

Gnana prabha K¹, M V Suganyadevi², C pearline kamalini³

¹PG Scholar, Department of Electrical and Electronics Engineering,

²Associate Professor, Department of Electrical and Electronics Engineering,

*³Assistant Professor, Department of Electrical and Electronics Engineering,
Saranathan College of Engineering, Trichy*

Abstract- This paper presents simulation of mitigation of harmonics using PI and fuzzy logic controller-based shunt active power filter. The quality of electrical power system is an important issue for both utility companies and end-users, but that quality may be affected by electromagnetic disturbances & others. Harmonics is one of the major causes for power quality issues. Harmonics are majorly produced due to non-linear loads in the electrical system. Active power filters can be used to filter out the produced harmonics in the power systems which are significantly below the switching frequency of the filter. Shunt active power filter (SHAPF) is the best solution to reduce the harmonics. The objective of this project is to develop the PI controller and fuzzy logic controller-based approach of using shunt active power filters to reduce the harmonics which is produced in the system and reactive power compensation technique is proposed for single phase non-linear load and the harmonic indices is calculated using MATLAB/SIMULINK model.

ICEE125: FALL DETECTION AND PREVENTION ANALYSIS OF LIVING AND NON-LIVING THINGS USING IOT

Kabil Santh. T¹, Mr. K.Balamurugan²

¹PG Scholar, Department of Electrical and Electronics Engineering,

*²Assistant Professor, Department of Electrical and Electronics Engineering,
Fatima Michael College of Engineering & Technology, Madurai*

Abstract- Falls of the elderly always lead to serious health issues as the decline of their physical fitness. Fracture is the most common injury in fall of an elderly and there is also a certain possibility to get coma, brain trauma, and paralysis. At most fall situations, the fall process is the main source of injury because of the high impact. But sometimes the late medical salvage may worsen the situation. That means the faster the salvage comes, the less risk the elderly will face. Fall detection is a major challenge in the public healthcare domain, especially for the elderly as the decline of their physical fitness, and timely and reliable surveillance is necessary to mitigate the negative effects of falls. This paper develops a novel fall detection system based on a wearable device. The system monitors the movements of human body, recognizes a fall from normal daily activities by an effective quaternion algorithm, and automatically sends request for help to the caregivers with the patient's location. Motion sensor-based method is also commonly used. Accelerometer and gyroscope could provide linear and angular motion information directly. Sensor measurements or their proper fusion could be used to distinguish a real fall. There are several kinds of detection methods which differ in constitution of motion sensors and detection algorithms. The first kind of detection method is using an accelerometer. A single tri axial accelerometer can provide object's accelerations in three directions which include the influence of gravity. A coordinate will be built when the accelerometer is fixed on human's body. The influence of gravity or dynamic acceleration is available by using a low pass filter or a high pass filter. Some kinds of angular movement information can also be calculated based on the relationship between acceleration components and their vector sum. A wearable device is placed on human's waist. The system can detect the elderly falling by acceleration analysis. Then it will get the elderly geographic position and send fall alarm short message to caregivers. So the elderly who has fallen can get timely help to minimize the negative influence. A single tri axial accelerometer is quite enough for human fall detection as sufficient information could be extracted from its measurements. Besides this, the accelerometer coordinate does not have to be fixed if only the magnitude of sum vector is needed, and that is quite convenient for wearable application. Fall detection algorithm design is based on the choice of recognition features. According to the recognition feature, fall detection algorithms are classified as threshold based and machine learning based. For threshold-based method, threshold of recognition feature is set by the response and less resource consumption. For machine learning based design, the classification of fall and normal activities is available with the assistance of technologies such as support vector machine (SVM) and neural network.

ICEEI01: CURRENT REFERENCE CONTROL BASED MPPT AND INVESTIGATION OF POWER MANAGEMENT ALGORITHM FOR GRID-TIED SOLAR PV-BATTERY SYSTEM.

S. Abirami¹, Dr.N. Ezhilmathi²

¹P.G. Scholar, Pandian Saraswathi Yadav Engineering College

²Project Guide, Pandian Saraswathi Yadav Engineering College

Abstract- To achieve unity power factor operation, harmonic mitigation, faster dc-link voltage regulation, and smooth transfer of modes of operation, this work aims to propose an adaptive control scheme for a photovoltaic (PV) grid-tied power conversion system. The grid-tied PV system consists of a battery storage unit interfaced with the dc link using a bidirectional converter and dc link is connected to the ac bus using a voltage source converter. Apart from the mentioned control objectives, maximum power extraction from the PV systems and effective power management for seamless operation are also challenging. The shortcoming of the conventional maximum power point tracking technique to track global power under varying environmental conditions is addressed by developing a simple and efficient current reference control technique, which enables faster tracking of the global maximum power. Furthermore, a suitable power management algorithm is formulated to generate reference currents for all the power converters in the proposed system, considering various system dynamics. The viability of the control scheme for the PV-battery-based grid-tied system is validated through extensive real-time investigation under dynamic test conditions.

ICEEI02: MULTI-FUNCTIONAL PV INVERTER WITH LOW VOLTAGE RIDE-THROUGH AND CONSTANT POWER OUTPUT

S. Krishnaveni¹, K. Jeyapriya²

¹P.G. Scholar, Pandian Saraswathi Yadav Engineering College

²Project Guide, Pandian Saraswathi Yadav Engineering College

Abstract- Renewable photovoltaic (PV) energy is a primary contributor to sustainable power generation in microgrids. However, PV grid-tied generators remain functional as long as the grid voltage and the input PV source remain normal. Abnormal conditions like transient grid sags or solar irradiation flickering can make the grid-tied inverter go offline. Simultaneous shut down of PV generators residing in the distribution grid may lead to an overall grid instability or outage. Therefore, PV generators must be equipped with fault-ride-through mechanisms in order to remain connected and operational during faults. This paper presents a PV-inverter with low-voltage-ride-through (LVRT) and low-irradiation (LR) compensation to avoid grid flickers. The single-phase inverter rides through the voltage sags while injecting reactive power into the grid. The proposed control strategy ensures a steady DC-link voltage and remains connected to the grid during AC-side low voltage and DC-side low-irradiation faults. Unlike other PV inverters, the controller maintains the maximum-power-point-tracking (MPPT) in all conditions. LVRT, constant power output, and robust MPPT are the noticeable features of the proposed system. Frequency analysis, simulations, and a laboratory prototype validate the proposed control strategy.

**ICEEI03: PLANNING AND OPTIMIZING ELECTRIC-VEHICLE CHARGING
INFRASTRUCTURE THROUGH SYSTEM DYNAMICS**

A. Sam Steve¹, S.SenthilKumar²

¹*P.G. Scholar, Pandian Saraswathi Yadav Engineering College*

²*Project Guide, Pandian Saraswathi Yadav Engineering College*

Abstract- One of the key solutions to address the issue of energy efficiency and sustainable mobility is to integrate plug-in electric vehicle (EV) infrastructure and photovoltaic (PV) systems. The research proposes a comprehensive EV infrastructure planning and analysis tool (EVI-PAT) with solar power generation for micro-scale projects for the deployment of EV Charging Stations (EVCS). For the evaluation of the proposed infrastructure, a case study of Qatar University (QU) campus is chosen for the integration of the EV charging infrastructure and PV power generation to evaluate the performance of the presented framework. The model estimates the EV adoption and the number of vehicles based on the inputs related to the country's EV adoption, campus vehicle count, and driving behavior. Economic and environmental indicators are used for evaluating policy choices. The findings in the paper show that the proposed planning framework can find the optimum staging plan for EV and PV infrastructure based on the policy choices. The staging plan optimizes the sizes and times of installing EVCSs combined with solar PV keeping the EV-PV project at maximum economic and environmental targets. The optimum policy can affect the optimum power infrastructure limit to maximize the economic benefit by the solar tariff.

**ICEEI04: ENERGY ECONOMY OF HOUSEHOLDS WITH PHOTOVOLTAIC
SYSTEM AND BATTERY STORAGE UNDER TIME OF USE TARIFF WITH
DEMAND CHARGE**

K.Saranya¹, R.Saravanan²

¹*P.G. Scholar, Pandian Saraswathi Yadav Engineering College*

²*Project Guide, Pandian Saraswathi Yadav Engineering College*

Abstract- Power utilities are introducing cost-reflective tariffs, such as a time of use tariff to incentivize electricity use during off-peak periods, some of which include a demand charge during peak periods. The uptake of such tariffs depends on their economic benefits compared to other tariffs. The impact of such emerging tariffs on the household energy economy has not been widely investigated in the South Australian context. This research analyses the energy cost of grid-connected homes with photovoltaic (PV) systems under a time of use tariff with demand charge, recently introduced in South Australia. First, an optimization problem is formulated to minimize the annual household energy cost under a time of use tariff with demand charge, which is also applicable to other tariffs. Then, four types of South Australian PV-installed households are analyzed with various battery energy management strategies and tariffs. The results show that a time of use tariff with demand charge can deliver savings in household annual energy cost, which can be further increased using the most appropriate energy management strategy for each tariff. Another key finding is that with battery storage, the time of use tariff with demand charge can reduce the peak load on the distribution feeder by 35% compared to the ordinary time of use tariffs.

**ICEEI05: A TOTAL-CROSS-TIED-BASED DYNAMIC PHOTOVOLTAIC ARRAY
RECONFIGURATION FOR WATER PUMPING SYSTEM**

R.Sivaranjana¹, S.Pandimeena²

¹*P.G. Scholar, Pandian Saraswathi Yadav Engineering College*

²*Project Guide, Pandian Saraswathi Yadav Engineering College*

Abstract- Most Photo-voltaic (PV) applications require a shadow-free area for the installation of the PV panels. However, shading is inevitable in a few applications like building-integrated PV pumping systems (BIPVPS). Partial shading occurs due to soiling, clouds, shades of nearby trees, buildings, current, and telephone poles. During this partial shading condition, the PV array output power decreases, reducing the efficiency of the BIPVPS. In this paper, a novel dynamic array reconfiguration technique is proposed to enhance the power output from the PV array. The proposed system uses a boost converter with an incremental conductance algorithm for operating enhanced power at the maximum. Sinusoidal Pulse Width Modulation (SPWM) technique based on V/f control operates the induction motor. Thus, the proposed algorithm and maximum power point technique (MPPT) enhance the power output from the PV array and track the global power. The PI and V/f control regulate the dc-link voltage and speed of the Induction motor. Simulations and experimental studies are performed to show the effectiveness of the proposed algorithm. The proposed system results in additional 234 W PV power extraction compared to the conventional system. Thus, making the proposed BIPVPS efficient.

**ICEEI06: VOLTAGE ORIENTED CONTROLLER BASED VIENNA RECTIFIER FOR
ELECTRIC VEHICLE CHARGING STATIONS**

V.Karthikraja¹, V.Suganya²

¹*P.G. Scholar, Pandian Saraswathi Yadav Engineering College*

²*Project Guide, Pandian Saraswathi Yadav Engineering College*

Abstract- Vienna rectifiers have gained popularity in recent years for AC to DC power conversion for many industrial applications such as welding power supplies, data centers, telecommunication power sources, aircraft systems, and electric vehicle charging stations. The advantages of this converter are low total harmonic distortion (THD), high power density, and high efficiency. Due to the inherent current control loop in the voltage-oriented control strategy proposed in this paper, good steady-state performance and fast transient response can be ensured. The proposed voltage-oriented control of the Vienna rectifier with a PI controller (VOC-VR) has been simulated using MATLAB/Simulink. The simulations indicate that the input current THD of the proposed VOC-VR system was below 3.27% for 650V and 90A output, which is less than 5% to satisfy the IEEE-519 standard. Experimental results from a scaled-down prototype showed that the THD remains below 5% for a wide range of input voltage, output voltage, and loading conditions (up to 2 kW). The results prove that the proposed rectifier system can be applied for high power applications such as DC fast-charging stations and welding power sources.

**ICEEI07: OPTIMIZING A DIGITAL TWIN FOR FAULT DIAGNOSIS IN GRID
CONNECTED INVERTERS**

S.Manikandan¹, S.Pandimeena²

¹*P.G. Scholar, Pandian Saraswathi Yadav Engineering College*

²*Project Guide, Pandian Saraswathi Yadav Engineering College*

Abstract- The project focuses on optimizing digital twins for fault diagnosis in grid-connected inverters through parameter tuning-based optimization. Online optimization of digital twins is important for achieving high precision in fault detection and diagnosis. The proposed framework allows for flexible implementation with limited data and also allows integration of tools to improve parameter tuning capabilities. The framework also enables model versioning and deployment of digital twins, making it easy to maintain and update. The optimization of digital twins can lead to more accurate fault diagnosis and quicker response times, improving the overall efficiency and reliability of grid-connected inverters. Digital twin technology creates a virtual replica of a physical asset or system. It allows for real-time monitoring, simulation, and testing of the physical system. Digital twins can be used to improve efficiency, reduce downtime, and optimize maintenance schedules. The technology has a wide range of applications, including in manufacturing, healthcare, and transportation. By analysing data from the digital twin, machine learning algorithms can be used to predict and prevent failures, improving safety and reliability.

**ICEEI08: STEP-UP DC-DC SWITCHING CONVERTER WITH SINGLE SWITCH AND
MULTI-OUTPUTS BASED ON LUO TOPOLOGY**

A.Muthuraja¹, C.Kalarani²

¹*P.G. Scholar, Pandian Saraswathi Yadav Engineering College*

²*Project Guide, Pandian Saraswathi Yadav Engineering College*

Abstract- In this paper, a step-up DC-DC multi-output converter is introduced by integrating a super lift Luo converter, fly back topology, and coupled inductor concept. The proposed multi-output converter has positive output super-lift structure while simultaneously generating step-up voltages in its outputs. The proposed step-up converter has two non-isolated and one isolated output with a simple structure using one switch and one magnetic core. There is no voltage spike by the leakage inductance of the coupled inductor across the switch in the proposed converter. Therefore, the switch has low-stress voltage. The energy in the leakage inductor is recycled leading to higher efficiency in comparison to similar converters with the coupled inductor. The operating principles and the characteristics of the proposed converter are analyzed and discussed. The experimental results of 110W prototype verify the theoretical analysis and the benefits of the proposed converter in comparison to similar multi-output converters. The conducted electromagnetic interference evaluation of the proposed converter is presented and it is reduced using a common-mode choke.

ICEEI09: A NOVEL HIGH GAIN DUAL INPUT SINGLE OUTPUT Z-QUASI RESONANT (ZQR) DC/DC CONVERTER FOR OFF-BOARD EV CHARGING

S.Nathiya¹, J.GrishGowtham²

¹*P.G. Scholar, Pandian Saraswathi Yadav Engineering College*

²*Project Guide, Pandian Saraswathi Yadav Engineering College*

Abstract- This manuscript focuses on a multi-port non-isolated (Dual input and single output) DC/DC power electronic interface based on Z-Quasi Resonant (ZQR) network. The converter accommodates grid and Photovoltaic panel (PV) as its input sources. Unlike the basic DC/DC converters, the recommended DC/DC converter requires fewer switches and provides continuous current, high gain in voltage, and minimal voltage stress on converter switch up to 40% duty cycle owing to the presence of ZQR network. This feature of the converter makes it to find its application in Electric Vehicle (EV) off-board charging where high voltage gain is required. In the proposed multi-port ZQR converter, additional input and output ports could be appended without compromising the converter's gain and efficiency. The developed converter can operate continuously even if any one of the input sources fails to charge the EV. The proposed converter is mathematically modeled using basic laws that govern the converter performance and analyzed in MATLAB Simulink platform under various operating modes. A detailed analysis under steady-state, dynamic conditions and a comparison of the developed multiport ZQR DC/DC converter with the topologies addressed in published literature are also presented in this manuscript. In order to verify the proposed converter performance, a prototype model of 300 W has been fabricated with switching frequency of 20 kHz. Experimental results confirm the effectiveness of the theoretical analysis, the aforementioned advantages, and features of the proposed multiport ZQR DC/DC converter.

ICEEI10: MULTIPLE-POWER-SAMPLE BASED P&O MPPT FOR FAST-CHANGING IRRADIANCE CONDITIONS FOR A SIMPLE IMPLEMENTATION

A.Ranjithkumar¹, S.Senthilkumar²

¹*P.G. Scholar, Pandian Saraswathi Yadav Engineering College*

²*Project Guide, Pandian Saraswathi Yadav Engineering College*

Abstract- This article proposes an improved maximum power point tracking (MPPT) method that features a simple design, and improved efficiency in fast-changing irradiance conditions. The method uses three consecutive measurements and compares the power difference between each two consecutive samples, furthermore the voltage variation between the last two successive samples is observed. According to the obtained result of these comparisons, the algorithm applies the suitable action either increasing or decreasing the voltage. This simple concept allows easy implementation and reduces the implementation cost and calculation burden. Second, the method has a prompt tracking response during fast changes in solar irradiance (e.g., due to passing clouds). The proposed method is validated through experimental tests using solar irradiance profiles according to the EN50530 standard and is compared to the classical Perturb and Observe method. The experimental results show that the proposed effectively identifies the change in solar irradiance, and maintains high tracking efficiency even in fast-changing conditions.

**ICEEI11: NEW SUBMODULE IMPROVING FAULT-TOLERANT CAPABILITY OF
MODULAR MULTILEVEL CONVERTERS**

C.Vidhya¹, Dr.N. Ezhilmathi²

¹P.G. Scholar, Pandian Saraswathi Yadav Engineering College

² Project Guide, Pandian Saraswathi Yadav Engineering College

Abstract- This paper presents a new submodule (SM) circuit that facilitates the fault-tolerant capability for modular multilevel converters (MMCs) under various internal and external faults. The proposed SM circuit ensures continued operation of the MMC subsequent to multiple SM failures and symmetrical and asymmetrical grid faults without the need for additional hardware implementation. The proposed SM circuit can be simply integrated into conventional half bridge-based MMCs by using the switching signal adapter block. The switching signal adapter unit duly assigns a switching pattern to the SMs in each arm to obtain the most efficient current path and inherent capacitor voltage balancing features. A fully modular structure, enhanced internal fault management, external fault handling capability, and ease of expandability are the key features of the proposed SM circuit. The configuration, modeling, and gating signal pattern of an MMC that adopts the proposed SM are discussed and analyzed in detail. Time-domain simulation studies using detailed nonlinear models validate the effectiveness of the proposed configuration and its principle of operation in an MMC-HVDC system under various fault conditions. In addition, hardware-in-the-loop test results confirm the feasibility of hardware implementation of the proposed SM circuit.

**ICEEI12: IOT-BASED DC/DC DEEP LEARNING POWER CONVERTER CONTROL:
REAL-TIME IMPLEMENTATION**

R.Vinoth¹, V.Suganya²

¹P.G. Scholar, Pandian Saraswathi Yadav Engineering College

² Project Guide, Pandian Saraswathi Yadav Engineering College

Abstract- Recently, a modularized smart grid (SG) architecture, entitled the Internet of Thing (IoT)-grid, is developed that accommodates the IoT technology into the DC-DC converters to build a programmable grid with a single voltage bus. This modern architecture can be established with low computing hardware that facilitates the control and management of IoT-based grids. Due to the uncertainties originated from the integration of IoT technology and power electronic converters, the deterministic methodologies are unable to precisely model the SG anymore. In response to these challenges, the current paper addresses a novel adaptive data driven method based on Active Disturbance Rejection Controller (ADRC) for the voltage regulation of an IoT based DC-DC buck converter feeding constant power loads (CPLs). In particular, Deep Deterministic Policy Gradient (DDPG) with Actor-Critic architecture is adopted for the online adjusting of the ADRC controller. The established DDPG considers the ADRC controller coefficients into the design objective and offers the ADRC controller with the online coefficient setting ability through neural network learning. The IoT based system is tested on a real time testbed with the Constrained Application Protocol (CoAP) protocol and (WiFi) network to assess the applicability of the suggested controller in the presence of network degradations. The impact of both packet loss and interfering traffic on the reduction

performance of the DDPG adaptive ADRC controller is investigated, simultaneously. The supremacy of the suggested adaptive data-driven controllers is verified by a comprehensive comparative analysis with the state-of-the-art methodologies.

ICEE113: CLOUD BASED WATER LEVEL CONTROLLER USING ULTRASONIC SENSOR IN ARDUINO

Fayaj Mohamed.P¹, Mannavan.K², Susil Kanth.K³, Dr Vijayakumar.N.M⁴

*^{1,2,3}UG Scholar, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai.*

*⁴Assistant Professor, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai*

Abstract- This Project mainly aims at optimizing the use of water. Since water wastage has become a major and global issue now, hence water conservation has now become more important. One of the common sources of wastage we encounter is the overflow of water. This project aims to help judge the water level inside the water tank and display it accordingly on the screen while also preventing any overflow of water which is achieved through the Arduino Uno. The ultrasonic sensors used helps determine the water level in tank which is then send to the Arduino Uno, the LCD then attached to it displays the level to us. According to the level of water inside the tank, the Arduino helps turn ON or OFF the servo motor hence closing the source of water. In this way, through the automation of water control, we intent to save the energy and our natural resource.

ICEE126: DUAL AXIS SOLAR TRACKER

Renu Dharshini K¹, Dr K Baskaran²

¹UG Scholar, Department of Electrical and Electronics Engineering,

*²Assistant Professor, Department of Electrical and Electronics Engineering,
Alagappa Chettiar Govt College of Engineering and Technology, Karaikudi*

Abstract- The solar photovoltaic system is in demand these days due to its efficient and clean energy. Setting up a solar panel which tracks the sun for the whole day can give a continuous power to any building for general utilities. The placing of solar panels at exact angle and direction according to the motion of sun can maximize the efficiency of the system. This research work implements the solar tracking system which tracks the sun in both the axis i.e. horizontal and vertical. Solar tracking allows more energy to be produced because the solar array can remain aligned to the sun. Solar modules are devices that cleanly convert sunlight into electricity. In this project, we design a dual-axis solar tracker that allows solar panels to move on two axes, aligned both north-south and an east-west. This project makes use of the Light Depending Resistor (LDR) which is important to detect the sunlight by following the source of the sunlight location. The system utilized an Arduino UNO microcontroller to control motion of two PMDC motors, which rotate solar panel in two axes. The amount of rotation was determined by the microcontroller, based on inputs retrieved from four photo sensors located next to solar panel.

**ICEE127: USING IOT BATTERY MANAGEMENT SYSTEMS FOR ELECTRIC
VEHICLE APPLICATIONS**

S. AjayRam¹, S.Pasupon Pandi², M.Prabhakaran³, Mr.T.Robert Nobili Britto⁴

^{1,2,3}UG Scholar, Department of Electrical and Electronics Engineering,

*⁴Assistant Professor, Department of Electrical and Electronics Engineering,
Vaigai College of Engineering, Madurai*

Abstract- Batteries are combinations of electrochemical cells that generate electricity to power electrical devices. Batteries are continuously converting chemical energy to electrical energy, and require appropriate maintenance to provide maximum efficiency. Management systems having specialized monitoring features; such as charge controlling mechanisms and temperature regulation are used to prevent health, safety, and property hazards that complement the use of batteries. These systems utilize measures of merit to regulate battery performances. In this work, we propose a continual learning method of neural network to monitor the aforementioned parameters using a data-driven approach. We use a machine learning algorithm that extracts significant features from the discharge curves to estimate these parameters. Extensive simulations have been carried out to evaluate the performance of the proposed method under different currents and temperatures.

DEPARTMENT
OF
MECHANICAL ENGINEERING

ICME101: A REVIEW ON NANOFLUIDS

Dr.M. Muruganandam¹, P. Thavarajan²

¹Professor, Department of Mechanical Engineering,

*²Assistant Professor, Department of Marine Engineering,
Mohamed Sathak Engineering College, Kilakarai*

Abstract – Now a day's heat transfer enhancement techniques are different methods used to increase the rate of heat transfer without affecting much the overall outcome of the system. These techniques are used in production industries and Some other application of cooling of electrical and electronics, cooling of transformer oil, increasing diesel generator efficiency, cooling of heat exchanging devices based on results available in the literatures, It has been found nano fluids have much higher and strongly temperature dependent, thermal conductivity at very low particle concentration than conventional fluids. So many researchers have shown that the thermal conductivity and the convection heat transfer co-efficient of the fluid can largely enhance by suspended nano particles. The most of the oxide nanofluids are ineffective as heat transfer liquids and certain CNT nanofluids are effective. Because of carbon having higher thermal conductivity when compare any other materials. This review articles give the idea about preparation of nanofluids, characterizations and applications.

ICME102: ACCIDENT IDENTIFICATION SYSTEM WITH AUTOMATIC SMS INFORMER

S.Bharathikumar¹, P. Murugesan², V.Senthilpandian³

^{1,2}UG Scholar(s), Department of Mechanical Engineering,

*³Assistant Professor, Department of Marine Engineering,
Mother Teresa College of Engineering and Technology*

Abstract – In today world highway accident has become a common occurrence. Many people die each year due improper medical care after the accident happen. So, we have to design such a device which will not only detect any accident that happen to the car and also inform the appropriate authorities immediately as soon as the accident occurs.

ICME103: EXPERIMENTAL INVESTIGATION OF MECHANICAL PROPERTIES OF GLASS AND SISAL FIBER HYBRID COMPOSITE ADDITION OF CaCO₃ AND CHARCOAL

Madhavan Raj K¹, Abishek M², Vijay Prabu A S⁴, Anantha Manikandan S⁵

^{1,2}UG Scholar, Department of Mechanical Engineering,

*^{3,4}Assistant Professor, Department of Mechanical Engineering,
Sree sowdambika college of engineering Aruppukottai*

Abstract – The aim of present study is to investigate and compare the mechanical properties of sisal fiber and glass fiber reinforced polyester composites. To improve the mechanical properties, sisal fiber was hybridized with glass fiber with addition of CaCO₃ and Charcoal. The sisal and glass fiber were prepared with 20%, 30%, weight ratios and then incorporated into the polyester

matrix by hand layup moulding technique to form composites. The tensile, flexural tests were carried out using hybrid composites samples. This work shows that addition of sisal fiber in glass fiber/polyester composites weight results in increasing the mechanical properties. This paper presents a review on the mechanical properties of sisal-glass fiber reinforced polymer composites.

ICME104: AUTOMATIC VALVE OPEN DURING LPG CYLINDER FILLING OPERATION

M. Guruprakash¹, M. Kaviyaran², R. Ramkumar³

^{1,2}UG Scholar, Department of Mechanical Engineering,

*³Assistant Professor Scholar, Department of Mechanical Engineering,
Ultra-college of engineering and technology*

Abstract – The automatic valve open system during LPG cylinder filling operation is an innovative solution to improve the safety and efficiency of LPG filling operations. This system uses sensors to detect the presence of a cylinder and automatically opens the valve to allow the LPG to flow into the cylinder. Once the cylinder is full, the system automatically shuts off the valve to prevent overfilling and potential accidents. The system is designed to be user-friendly and can be easily integrated into existing LPG filling operations. This abstract provides an overview of the automatic valve open system and its benefits, including increased safety, reduced labor costs, and improved efficiency.

ICME105: EXPERIMENTAL ANALYSIS OF RIGID POLYURETHANE FOAM COMPOSITES WITH GRAPE POMACE (NATURAL FIBER)

Haresh Durai Karuppaiah¹, Mr.M. Kamaraj²

¹PG Scholar, Department of Mechanical Engineering,

*²Associate professor, Department of Mechanical Engineering,
Centre for Composite and Advanced Materials, Department of Mechanical Engineering,
SRM Institute of Science and Technology, Kattankulathur, Chengalpattu*

Abstract – Rigid polyurethane foam (RPUF) is a broadly used low-density material with high performance on thermal insulation and good mechanical properties. The study was designed to develop a Rigid polyurethane foam composite with grape pomace (natural fiber) used as filler. The objective of this study is to understand the influence of the filler on the performance of RPUF. The filler (grape pomace) was dried using a hot air oven, grounded, and size reduced using a ball mill. The RPUF composites with varying filler ratios were produced in the laboratory setup, and the production procedures were established. The influence of varied filler ratios and its effect on foam growth with respect to time scale and raising height were studied. Post the growth of foaming and the component was annealed with relative humidity. To obtain the material properties, the annealed components were tested using various test procedures. The changes in the cell structure and filler dispersion were studied using a microscope. X-ray diffraction was performed to verify the crystalline phase of the composites. Compressive

strength in longitudinal (raising direction) and lateral (perpendicular to raising direction) was determined using the universal tensile tester. In addition, the apparent density was determined. Based on the above-mentioned test results, the optimized combination of filler ratio was selected for the application on thermal and also in automotive applications.

**ICME106: EXPERIMENTAL INVESTIGATION OF BIDIRECTIONAL HYBRID
FIBRE (JUTE AND CARBON) POLYMER COMPOSITES WITH FISH SCALE
POWDER AS NATURAL FILLER**

Saravanaumar Subbu¹, Dr.M. Kamaraj²

¹PG Scholar, Department of Mechanical Engineering,

²Associate professor, Department of Mechanical Engineering,

*Centre for Composite and Advanced Materials, Department of Mechanical Engineering,
SRM Institute of Science and Technology, Kattankulathur, Chengalpattu*

Abstract – Hybridization of Composite materials with Synthetic and Natural fibres gaining momentum in many fields to reduce weight and cost to attain optimum mechanical properties. Globally more studies are ongoing for utilisation of Natural waste in the field of Composite Materials to analysis the impacts and support to reduce environmental hazards. So, Fish Scale powder selected as Natural filler in Bidirectional Jute and Carbon fibre combination in Polyester Matrix. Composites were prepared using Hand layup method and Compression moulding technique. Jute fibres were chemically treated using Alkali treatment and Benzoyl Chloride Treatment. Different stack up combination were prepared using Jute and Carbon fibres in mat form. Unsaturated Polyester resin cured using with MEKP as catalyst and Cobalt naphthalate as accelerator. Prepared samples were investigated for tensile strength, flexural strength, impact strength and damping properties. Results shows good correlation of stacking combinations and impact of natural filler addition in Hybrid fibre composite Materials.

**ICMEST1: MECHANICAL BEHAVIORS OF CLAW PARTICLES FILLED COIR
POLYESTER COMPOSITES**

S. Rajamuneeswaran¹

¹Associate Professor, Department of Mechanical Engineering,

Pandian Saraswathi Yadav Engineering College, Sivagangai

Abstract – During the last few years, Natural fibers have received much more attention than ever before, from the research community all over the world. These natural fibers offer a number of advantages over traditional synthetic fibers. In the present investigation, a study on the mechanical properties of a new series of filler added composites, consisting of natural coir as a reinforcing material in a polyester resin-based polymer matrix has been reported. In the present investigation, the mechanical behaviours of Claw particles added Coir-poly ester composites were studied. Claw particles are used in the filler material in this investigation. The compression moulding process was used for fabricating filler added coir- poly ester composites. Composites

were prepared for fiber lengths of (10, 30 & 50) mm, diameters of (0.1, 0.18 & 0.25) mm, and filler content of (0 %, 2 % & 4 %). The mechanical properties (Tensile strength, flexural strength and impact strength) of impregnated Claw particles of coir fiber-reinforced Polyester composites were determined for the various combinations of fabrication parameters, as per ASTM standards. The mechanical behaviours of Claw particles added randomly oriented Coir- polyester composites were evaluated.

**ICME107: AUTOMATIC POWER GENERATION BY OUR DAY TO DAY
TRANSPORTATION (POWER CITY)**

M.S Bharanidharan¹, Mr R. Ramkumar²

¹UG Scholar, Department of Mechanical Engineering,

*²Assistant Professor, Department of Mechanical Engineering,
Ultra-college of engineering and technology*

Abstract – The topic is automatic power generation by our day to day transportation also we can call as power city. The reason why we chose the name power city is that we are going to generate the power by our day to day routine. The main part of this project is piezoelectric disc and we are going to use the disc in our city. Then we are going to use other major parts such as vertical windmill with solar 3.0 on highways and also we are using sbpg (speed breaker power generation system) the side pathways are made up of flavor blocks here, we are going to place the piezoelectric disc that under the blocks. There will be no difference in the appearance of the pathways and people's feeling while walking on it also simultaneously the generation of power will be under process. On the other hand, the dividers in the highways are large and there we are going to set the vertical windmill that windmill will create electricity with the help of speed of the vehicles and solar panel at the top of it will also generate the power simultaneously. Also, on roads the speed breaker will generate its power automatically when vehicles cross it. When we look at the third party which is subway and bridges which consists steps. When can also construct those steps with piezoelectric disc and while people pass through those steps, the power will generate automatically. When we setup this in the cities we can gain more electricity than a current production, the implementation of this project to reality can lead our city to get free electricity.

**ICME108: COMPARISON BETWEEN AlCrN & DLC TO EVALUATE
TRIBOLOGICAL BEHAVIOR IN Ti-6Al-4V**

K Amuthaprakash¹, Mr C Senthil², Dr.R.Prasanna venkatesh³

¹PG Scholar, Department of Mechanical Engineering,

*^{2,3}Assistant Professor, Department of Mechanical Engineering,
SACS MAVMM Engineering College, Kidaripatty, Madurai.*

Abstract – The present study is to focus on the comparison of the tribological performance of AlCrN and DLC (a-C: H) coatings by Arc physical vapor deposition on the Ti-6Al-4V alloy. Pin on disc wear tests of coated Ti-6Al-4V inserts against Si₃N₄ disc are carried out, with load of

10N, speeds of 3m/s, and distance (1200m) with different temperatures of 100, 200, 250, 300°C. The micro hardness as well as Nano indentation tests are performed to characterize and the basic hardness. A normal load and different temperatures, which corresponds to the end of coating life was identified for each AlCrN and DLC coated system. At the significantly increasing temperatures, all the coatings are effective in significantly reducing wear by comparison to the uncoated alloy.

ICME109: ANALYSIS OF TURNING PROCESS PARAMETERS FOR HOLLOW SHAFT

S Manoranjan¹, Mr K.Senthil², Dr.R.Prasanna venkatesh³
¹PG Scholar, Department of Mechanical Engineering,
^{2,3}Assistant Professor, Department of Mechanical Engineering,
SACS MAVMM Engineering College, Kidaripatty, Madurai.

Abstract – Analysis of machining process parameters to achieve a set of quality attributes is important in bridging up the quality and productivity requirements especially in turning operations. The present work applies to analyze the process parameter for turning medium carbon steel bar using HSS tool bit via conventional machining. The process analyses the difference in surface roughness by varying the free length of the work piece. Increase in holding length helps in reducing the surface roughness by increased vibration is also studied. Experiments have been conducted based on L9 Orthogonal Array Design with different combinations of process control parameters: (Cutting speed, Length, cutting force) Surface roughness is the response parameter that will be analyzed. The obtained result will be verified through confirmatory test. This work emphasizes the effectiveness of the proposed method for analyzing the process parameters of turning process.

ICME110: TQM METHODOLOGY USED ON MANUFACTURING PLANT TO ELIMINATE REJECTION ON MODULAR TRUCKS - AVTR M/C FOR GEAR END & FLYWHEEL END SIDE UNCLEAN

T Gopal¹, Mr K.Senthil², Dr.R.Prasanna venkatesh³
¹PG Scholar, Department of Mechanical Engineering,
^{2,3}Assistant Professor, Department of Mechanical Engineering,
SACS MAVMM Engineering College, Kidaripatty, Madurai.

Abstract – After globalization and liberalization, quality has become the most important area of concern for industrial businesses, along with productivity. Overall operational effectiveness is now a requirement for the businesses due to the removal of geographic barriers and the pressure of global market competition. Modern lean manufacturing characteristics, which are driven by both market pull and technology push, have compelled firms to achieve world-class performance by fostering continual product and process improvement. By focusing on process outputs that are crucial to customers, TQM is a business improvement approach that aims to identify and eliminate causes of defects in business processes. As a result, process performance is improved, customer satisfaction is increased, and the bottom line is impacted through savings and reduced costs. By focusing on process outputs that are crucial to customers, TQM is a business

improvement approach that aims to identify and eliminate causes of defects in business processes. As a result, process performance is improved, customer satisfaction is increased, and the bottom line is impacted through cost savings and increased revenue. Unquestionably, TQM is a management strategy that may significantly enhance a company's manufacturing performance and, ultimately, its bottom line. The current study demonstrates the true potential of TQM in achieving manufacturing excellence and highlights the effects of strategic TQM initiatives on manufacturing performance.

**ICME111: IMPLEMENTATION OF VALUE STREAM MAPPING APPLICATION
INTO LAMP MANUFACTURING ORGANIZATION**

K Mahendran¹, Mr.K.Senthilkumar², Dr.R.Prasanna venkatesh³

¹PG Scholar, Department of Mechanical Engineering,

*^{2,3}Assistant Professor, Department of Mechanical Engineering,
SACS MAVMM Engineering College, Kidaripatty, Madurai.*

Abstract – Indian economy is generating both opportunities and challenges for small and medium enterprises to compete in global and local market. And to endure for long term, the manufacturer has to be ensly fulfilling thdlee needs of customers. To overcome this problem, lean manufacturing is used as a premeditated weapon to decrease the nonvalue added activity (waste) and also improve the business profitability. The objective of this paper is to minimize the nonvalue added activity and revamp the existing system of brass lamp manufacturing Company by implementation of lean concept using seven step approaches. This paper provides a useful platform for in brass lamp manufacturer SME in India for their productivity improvement. The result shows significant improvement in increase productivity, reduction in lead time, reduction in inventory and also improves the process ratio.

**ICME112: REDUCTION OF V BELT REJECTION BY VARYING WIRE BAND
LENGTH IN VRC**

A. Periyapalichi¹, V.S. Sriviknesh², A.Albin sophiya³

^{1,2,3}UG Scholar, Department of Mechanical Engineering,

Ultra-college of engineering and technology

Abstract – V-belts are widely used for power transmission in various industries. However, one common issue with V-belts is rejection or failure due to various factors such as wear, fatigue, and inadequate tensioning. In this study, we investigate the effect of varying wire band length in a V-belt tensioning system known as Variable Radius Contact (VRC) in order to reduce belt rejection. The VRC system a wire band that wraps around the V-belt and is adjustable to change the effective radius of the pulley, thereby adjusting the tension in the belt. The length of the wire band can be varied to achieve different tension levels in the V-belt. In this study, we hypothesize that by carefully adjusting the wire band length, we can reduce belt rejection and increase the overall reliability of the V- belt system. To investigate this hypothesis, we conducted experiments using a test setup that simulates real-world V-belt operation. We varied the wire band length within a predefined range and measured the tension in the V-belt using strain

gauges. We also monitored the belt wear, fatigue, and other relevant parameters during the experiments. Our results showed that varying the wire band length in the VRC system had a significant impact on the tension and performance of the V-belt. We observed that by optimizing the wire band length, we could reduce belt rejection by up to 30% compared to a fixed wire band length. The results also indicated that the optimal wire band length varied depending on the specific operating conditions, such as the power transmission requirements, belt type, and environmental factors. In conclusion, our study demonstrates that varying the wire band length in the VRC system can be an effective approach to reduce V-belt rejection and improve the overall reliability of V-belt power transmission systems. The findings of this study have practical implications for industries that rely on V-belts for power transmission, providing insights into optimizing the tensioning system to reduce belt rejection and increase operational efficiency.

ICME113: EFFECT OF LOCKED IN STRESS ON THE MECHANICAL BEHAVIOR OF SS 304

V.Yesuraja¹, Mr.M.Rajkumar², Dr.R.Prasanna venkatesh³
¹PG Scholar, Department of Mechanical Engineering,
^{2,3}Assistant Professor, Department of Mechanical Engineering,
SACS MAVMM Engineering College, Kidaripatty, Madurai.

Abstract – Weariness is an occurrence which should be taken into reflection in an engineering design. Locked in stresses or Residual stress is one of the significant factors that affect fatigue life. Tensile residual stresses are harmful for product life and should convert into compressive residual stresses. Welding is a metal joining process, and amount of residual stress produced in welding is more than other mechanical processes. Two plates of SS 304 grade of dimension 250 x 250 x 2 mm are used in present work. TIG welding is use for joining of plates. Longitudinal and transverse specimens are extracted from this plate. Another two plates are welded at an angle of 45° and same shaped specimen is extracted named as Angular weld specimen. These specimens are tested on UTM by using tensile test. Using Labeas and Diamantikos formula calculated residual stress is assigned as an initial stress in finite element software Ansys Workbench. Transient thermal and transient structural analysis is carried out, in order to investigate effect of residual stress on fatigue strength of a component. Stress vs. strain curves for virgin, longitudinal, transverse and angular specimens are compared and analyzed. Structural strength is also examined through this research work.

ICME114: CFD ANALYSIS OF A CAR BODY

V.Saruhasan¹, N. Muthulakshmi², M. Kannan³
^{1,2}Assistant Professor, Department of Mechanical Engineering,
¹UG Scholar, Department of Mechanical Engineering,
St. Michael college of Engineering &Technology, Kalayarkoil

Abstract – Aerodynamics directly contributes to the fuel economy with any modifications not in the engines but in the shapes. Drag minimization is depends on side design of the car body. Till now the drag reduction for the car is done for windshield angle and this project for provide the side chamber angle. Hence a virtual model has to be developed using Pro-e and Analysis to be

done using CFD Flotran. Future work may involve the drag reduction of fore body, underbody, rear end etc. Because the aerodynamic loads, which are acting on the high-speed vehicles, play a significant part concerning the dynamic behavior of the latter, the aerodynamics is one of the most important design considerations for cars. The conclusions are demonstrated by the results, using the relative increment of drag, lift and pitching moment, and by the computer-graphics visualizations. There are also presented some considerations concerning the importance of the rotating wheels in aerodynamics of the road vehicle and the opportunity to simulate it in a virtual environment. The design for aerodynamics of front-body of a car plays an important role on the car's performance. The endplates are attached at the end of front wing to reduce turbulence. Endplate deflects flow away from wheel to reduce drag. Proper orientation of airfoil gives maximum down-force with least drag-force acting on the front wing. For orientation of the airfoil, an optimum angle of attack for the wing is determined, which corresponds to maximum lift-drag ratio. The aerodynamic performance of Formula-One car is determined by measuring the drag-force and down-force acting on the car. Various geometric models of the car are created in the CAD package PRO-E the CFD analysis is done by using ANSYS Flotran. It shows the flow pattern over the car. The behavior of the flow is greatly influenced by the front wheels which were simulated with the front wing and therefore the design has to take into account the environment of the front wing. The endplates demonstrate their utilities as deflectors that are able to deflect the flow outward to the wheels. They also show that the additional down-force can be created by attaching a plate to the endplate at the end of wing. Hence the front wind shield angle and side chamber angle is evaluated with respect to pressure and velocity sum of the car body design.

ICME115: DESIGN AND FABRICATION OF ULTRASONIC NAVIGATION FOR THE BLIND

M. Manikandan¹, Dr N. Nagaprasad²

*²Professor, Department of Mechanical Engineering,
ULTRA College of Engineering and Technology*

Abstract – The “Helping Hand for Blind”, is designed to help the blind to overcome the lack of visual sense, by using other senses like sound and touch. It uses audio and vibration signals to notify the user about upcoming hurdle. As the distance between glove and obstacle decreases, frequency of both audio and vibration signals increases. Thus, the system helps to ease the navigation process for the needy. A study that helps those people to walk more confidently is proposed. The study theorizes a smart walking glove that informs visually-impaired people over obstructions, depths thus this device could help them in walking with less accident. Lots of blind people suffer in their own lives because of their vision loss. Vision is one of the five important senses in the human body. People with Vision loss have their own incapacity. Many countries around the world provide special support to these needed people to improve their life quality as good as possible. They provide them with special tools for their disability to improve their daily life like voice message service, electronic stick that guide them while moving around and other specialized equipment. This paper presents a project idea to establish and provide ultrasonic gloves to blind people for supervisory them to their right roads without the need for another people assistant. This Can be done through Ultrasound waves that will be sent to the surrounding

then it will be collected by detector in the gloves then to be sent as vibration or Audio signals to the blind's so they can be aware of their surroundings and they can choose their own road and way without another people assistant.

**ICME116: EXPERIMENTAL ANALYSIS OF ALUMINUM7075 WITH SIC
REINFORCED METAL MATRIX COMPOSITE**

G.Akshaya¹, Dr.K.Senthil kumar²

¹PG Scholar, Department of Mechanical Engineering,

*²Professor, Department of Mechanical Engineering,
Syed Ammal Engineering College, Ramanathapuram*

Abstract – The aim of this work is to study about the wear characteristic of Aluminium 7075 based composite reinforced with Silicon carbide. The metal matrix composite will be prepared by Bottom pour stir casting process and wear performance will be analyzed on prepared hybrid metal matrix composite. The wear analysis test is to be conducted by pin on disc apparatus using various loads. Wear test are used to determine the wear resistance capacity of the material. Optimization is done on the prepared hybrid composite materials.

ICME117: CUTTING TOOL PARAMETER ANALYSIS USING ANSYS

Mr.C.Rajesh¹, Mr.G.Sabari Narayanan²

^{1,2} Assistant Professor, Department of Mechanical Engineering,

St.Michael College of Engineering and Technology

Abstract – There is a need for materials of high hardness and resistance to cutting. As we know the machining of these materials has always been a great challenge. Machining of these alloys and materials required for cutting high-strength, which sometimes is not economical and sometimes even impractical. And even the non-conventional processes are generally limited to the point of view of productivity. The advantages of easy component manufacturing of excessive hard materials can be substantial in terms of reducing costs and lead times machined compared to the traditional one involves the heat treatment, grinding and manual finishing / polishing. In the hot working at a temperature of work piece is increased so as to reduce its shear strength. This paper will focus on hot working of high manganese steel with petroleum fuel. Several parameters, such as cutting speed, feed, depth of cut and the temperature of the work piece are taken. An experiment was conducted. Even the machining process was simulated in ANSYS and DEFORMS 2D to find corresponding deformation, rate of tool wear, cutting force and the temperature distribution.

**ICME118: DESIGN AND STRUCTURAL ANALYSIS OF FLYWHEEL FOR
DIFFERENT MATERIALS USING ANSYS**

M.Nachiyappan¹, Mr.D.Mathavan²

¹UG Scholar, Department of Mechanical Engineering,

*²Assistant Professor, Department of Mechanical Engineering,
Karaikudi Institute of Technology and Karaikudi Institute of Management*

Abstract – A flywheel used in machines serves as a reservoir which stores energy during the period when the supply of energy is more than the requirement and releases it during the period when the requirement of energy is more than supply. For example, in I.C. engines, the energy is developed only in the power stroke which is much more than engine load, and no energy is being developed during the suction, compression and exhaust strokes in case of four stroke engines. The aim of the project is to design a flywheel for a multi cylinder petrol engine flywheel using the empirical formulas. A parametric model of the flywheel is designed using 3D modeling software CATIA V5R20. The strength of the flywheel is validated for alloy materials (Silicon carbide) by applying the rotational velocity on the flywheel in analysis software ANSYS. Structural analysis is used to determine whether flywheel withstands under working conditions.

**ICME119: DESIGN AND STRUCTURAL ANALYSIS OF FLYWHEEL FOR
DIFFERENT MATERIALS USING ANSYS**

M.Selvaganesh¹, Mr.V.Ilanthiraiyan²

¹UG Scholar, Department of Mechanical Engineering,

*²Assistant Professor, Department of Mechanical Engineering,
Karaikudi Institute of Technology and Karaikudi Institute of Management*

Abstract – A heat exchangers of water is proposed with simplified model for the study of thermal analysis of shell and tubes. Shell and tube heat exchangers are having special significance in boilers, power plants, condensers, turbines. This research work focus on computational fluid dynamics analysis of shell and tube heat exchanger. In this research work we have shown how the heat transmission rate changes by changing the flow of water in a counter flow and parallel flow. The 3D modeling of the shell and tube heat exchanger is designed in CATIA V5R20 and its analysis is done in ANSYS-FLUENT 14.5. In this paper, the shell and tube heat exchanger is considered in which hot water is flowing inside one tube and coldwater runs over that tube. For variation we are analyzing with different velocities of inlet for hot fluid.

ICME120: EFFECT OF MACHINING SPECIFICATIONS ON THE GRADUAL FAILURE OF CUTTING TOOL & HOLE QUALITY OF MARINE GRADE STAINLESS STEEL IN BORING OPERATION

G. Abhinav shankar¹, Prof.Mr.S. Narayanan², Dr. R. Prasanna Venkatesh³

¹UG Scholar, Department of Mechanical Engineering,

²Professor, Department of Mechanical Engineering,

*³Assistant Professor, Department of Mechanical Engineering,
SACS MAVMM engineering college, kidaripatty, madurai*

Abstract – This project focuses on the effect of boring specification on gradual failure of cutting tool and hole quality in terms of diameter error, roundness, cylindricity, and surface roughness. In this work, the boring was conducted using an uncoated carbide tool with a diameter of 5 ± 0.01 mm with a point angle of 135° and a helix angle of 30° . The drilling was done at different levels of spindle speed (16- and 30-mm min⁻¹) and feed rate (0.03, 0.045 and 0.06 mmrev⁻¹). Austenitic stainless-steel Marine grade stainless steel called AISI 316L was the workpiece material. Comparatives analysis was done on hole diameter, roundness, cylindricity, and surface roughness of the drilled holes by experimentation. From the result, the hole quality characteristics are mostly influenced by cutting speed and feed rate. An exception was for circularity error where a two-tail t-test for circularity error indicates that cutting speed and feed rate give no significant influence on circularity error. As the cutting speed increases, the surface roughness decreases (1.29 μ m). Contrary, when the feed rate increases, the surface roughness value increases as well. For cylindricity errors, a lower cutting speed and lower feed rate will give a better result. In terms of diameter error, feed rate influences more than cutting speed. Minimum diameter error was achieved when low cutting speed and low feed rate were employed.

ICME121: NUMERICAL STUDY OF MACHINING PARAMETERS IN DRILLING WITH AL 356 ALLOY USING BACTERIAL FORAGING OPTIMIZATION

A. Muthiah¹, S. Velladurai²

Department of Mechanical Engineering

¹Professor, P.S.R.Engineering College Sivakasi,Tamilnadu.

²PG Scholar, P.S.R.Engineering College Sivakasi,Tamilnadu

Abstract – Very commonly, a mechanical workpiece manufactured industrially includes more than one machining operation. Even more, it is a common activity of programmers, who decide in this regard every time a milling and drilling operation is performed. Tool wear and borehole quality are two critical issues for high precision drilling processes, while experimental planning uses Al 356 alloy used. In this study drilling parameters will be evaluated to obtain optimal parameters in minimizing the impact of drilling damage on alloy by swarm-based optimization model. The drilling parameters are optimized using the Bacterial Foraging Optimization (BFO) method with three control factors, namely the, Depth, feed rate and spindle speed, each parameter is designed in three levels, with multiple performance characteristics including thrust force, surface roughness and delamination factor. From this study were carried out to get the appropriate optimization. It was found that the critical factor causing delamination in drilling is the feed rate followed by spindle speed, where this phenomenon occurs in each diameter of the

drill bit. The results show that the feed rate and the type of drill are the most significant factors which affect the drilling process and the performance in the drilling process can be effectively improved by using this approach.

**ICME122: MECHANICAL AND TRIBOLOGICAL BEHAVIOUR OF Mg METAL
MATRIX COMPOSITE IN AEROSPACE APPLICATIONS**

¹Arunkumar.K, ²Karuppasamy.M, ³Mareeswaran.A, ⁴Muthusamy K Muthiah A⁵

Department of Mechanical Engineering

^{1,2,3} UG Student, P.S.R.Engineering College Sivakasi

⁴Assistant Professor, P.S.R.Engineering College Sivakasi

⁵Professor, P.S.R.Engineering College Sivakasi,Tamilnadu

Abstract – Magnesium is the lightest metal used as the source for constructional alloys. Today Magnesium based metal matrix composites are widely used in aerospace, structural, oceanic and automobile applications for its light weight, low density, good high temperature mechanical properties and good to excellent corrosion resistance. The reason of designing metal matrix composite is to put in the attractive attributes of metals and ceramics to the base metal. In this study magnesium metal matrix composite are developed by reinforcing pure magnesium with aluminum oxide by the method of powder metallurgy. The tests were performed for the both samples. The results revealed that the micro hardness of the composite was increased up to 2.5% with addition of Alumina as 30% whereas the results compared with the composition as 20%. Because, the hardness increases with the increased proportion of hard particles. Many studies reveal that increased reinforcement content to increase the hardness and the essential mixing/blending process. The wear resistance has increased by increasing of applied load and also an addition of reinforcement. Based on, Microstructure and SEM images shows a formation of metal matrix which have a good bonding & equal distribution of Alumina without pore defects by this PM method. Literally, the results observed that the composition of Mg (70%) and Alumina (30%) gave the better metal matrix, mechanical and tribological property than another one.

**ICME123: PERFORMANCE ANALYSIS OF AN I.C. ENGINE BLOCK BY VARYING
COOLING FLUIDS**

A.Muthiah¹, C. Sivaprakash²

Department of Mechanical Engineering

¹Professor, P.S.R.Engineering College Sivakasi,Tamilnadu.

²PG Scholar, P.S.R.Engineering College Sivakasi,Tamilnadu

Abstract – Cooling system plays important roles to control the temperature of car's engine. One of the important elements in the car cooling system is cooling fluid. The usage of wrong cooling fluid can give negatives impact to the car's engine and shorten engine life. An efficient cooling system can prevent engine from overheating and assists the vehicle running at its optimal performance. This thesis was conducted to study the effectiveness of various types cooling agent in the vehicle cooling system which will influence the operation time of the

engine block mainly cylinder in the light vehicle cooling systems. Theoretical calculations were done to determine the overall heat transfer coefficient and heat lost by the cylinder by varying the fluids and material of cylinder. Three main types of fluids were used in this study, which are 1. Tap water, 2. Distilled water, 3. Distilled water with Ethylene glycol. Thermal analysis is done on the cylinder by varying the materials Cast Iron, Aluminum alloys 7475 and 6061.

ICME124: DESIGN AND CONSTRUCTION OF SOLAR DRYER FOR MORINGA LEAVES

Gokul Prasath M¹, Prabakaran M²

^{1,2}Department of Mechanical Engineering,

Fatima Michael College of Engineering and Technology

Abstract – Fruits and Vegetables are dried to enhance storage stability and preservation of nutrients. Recent research on drying methods focuses on the advancement of energy consumption, product recovery and preservation of nutrients. The moringa leaves are nutritionally very rich, leaving behind carrots, oranges and even milk in terms of nutrition value. The moringa leaves are find many uses in Indian cuisine as they are versatile and can be incorporated into the diet in many ways like it is used for asthma, diabetes, breast-feeding. To storage moringa leaves here we are using Solar Dryer method to retain the nutrients. Traditionally we are using open sun drying method to drying fruits and vegetables but it will lost their nutrition values when it have more heat, to reduce this here we are using solar Dryer method to maintain the nutrition value.

ICMEST2: DESIGN AND ANALYSIS OF MODERN DISC BRAKE BY USING ANSYS SOFTWARE

R.Pandi Thurai ¹

*¹Assistant Professor, Department of Mechanical Engineering,
Pandian Saraswathi Yadav Engineering College, Sivagangai*

Abstract – Disc brake consists of a cast iron disc bolted to the wheel hub and a stationary housing called caliper. The caliper is connected to some stationary part of the vehicle like the axle casing or the stub axle as is cast in two parts each part containing a piston. Due to the application of brakes on the disc brake rotor, heat generation takes place due to friction and this temperature so generated has to be conducted and dispersed across the disc rotor cross section. The aim of this project was to investigate the temperature fields and also structural fields of the solid disc brake during short and emergency braking with four different materials. The distribution of the temperature depends on the various factors such as friction, surface roughness and speed. The effect of the angular velocity and the contact pressure induces the temperature rise of disc brake.

ICMEST3: PRODUCTION OF BIODIESEL FROM WASTE COOKING OIL BY INTENSIFICATION TECHNIQUES

*S. Pounraj*¹

*¹Assistant Professor, Department of Mechanical Engineering,
Pandian Saraswathi Yadav Engineering College, Sivagangai*

Abstract – Energy security and air pollution is the challenging issues now days. Current, globally depleting fossilized fuel reserves, increasing environmental pollution and problems are the key motivating factors to pursue research on an alternative fuel derived from biomass, which can fulfil the ever-increasing energy demand for sustainable development. Biodiesel as a sustainable alternative helps in the protection of the environment due to its non-toxic, renewable, and biodegradable nature and produces less sulphur emissions and greenhouse gases. It is easy to use as well as clean and safe to handle as compared to gasoline diesel. The present work is mainly motivated on design and development of an environment- friendly, energy-effective and industrially viable process intensification (PI)-based techniques {Ultrasound, Microwave, and Conjoint (microwave + ultrasound technique)} using both homogeneous (potassium hydroxide, KOH) and heterogeneous (calcium oxide, CaO) catalyst to synthesize biodiesel from waste cooking oil (WCO) and blended oils. The outcomes of independently studied ultrasound process observed to have enhanced the biodiesel yield (98 % for KOH and 96.45 % for CaO catalyzed conditions). Biodiesel is an effective alternative fuel. In present study, biodiesel is prepared using waste cooking oil, using intensification techniques such as Mechanical stirring and Microwave Irradiation method is used to draw biodiesel.

ICMEST4: EXTENSIVE REVIEW OF EXPERIMENTAL INVESTIGATIONS TO STUDY THE INFLUENCE OF TWISTED TAPE INSERT ON HEAT TRANSFER ENHANCEMENT

*K. D. Jaganathan*¹

*¹Associate Professor, Department of Mechanical Engineering,
Pandian Saraswathi Yadav Engineering College, Sivagangai*

Abstract – Heat transfer augmentation with compact and effective manner are the recent developments of the heat exchangers. Considering cost reduction, simplicity, compact size etc were the parameters considered for the design and development of heat exchangers. Use of passive techniques like creating fins, rough surface on the flow path, wire coil inserts, generation of swirl on the flow path and mounting inserts like blocks, winglets and twisted tapes were the impressive methods of heat transfer intensification in heat exchanger design. Twisted tape insert is one of the most influencing technique adopted to enhance the heat transfer in heat exchanging devices. Many investigators involved on the experimentation to augment the heat transfer rate employing twisted tapes by varying the geometry of the twisted tape, shape of the twisted tape and the size of the duct etc. This extensive review emphasizes on the argumentation of heat transfer by twisted tape insert with parameters like varying twisted tape geometry, twisted tape with peripheral cut, multiple twisted tapes, twisted tapes with micro fin tube, perforated twisted tapes, centre cleared twisted tape, alternate axis twisted tape, modified twisted tapes, twisted tape

with coil and rings etc.. are discussed and disclosed in detail. This review revealed the outcomes of the literatures reported for the past decade.

ICMEI01: HYBRID ARTIFICIAL TREE FOR SOLAR/WIND POWER GENERATION

S. Rasathi¹, Dr.K.D.Jaganthan Ph.D²

¹PG Scholar, Pandian Saraswathi Yadav Engineering College

²Project Guide, Pandian Saraswathi Yadav Engineering College

Abstract – In today's life, this project introduces the Artificial tree which gives electrical energy and the oxygen. This tree provides an oxygen to be emitted in the air for breathing. For the electrical energy, the renewable sources of Solar and wind is used. The leaves mean solar panels and fans that are used for collecting sunlight and wind which is converted into light energy with the help of PV cell. The collect energy is then stored in battery there it can be used for street lighting. In this project, the artificial tree is designed and with the hybrid sources of Solar PV and wind power generation respectively. Here, the Solar power keeps the surroundings disinfectant and healthier. Photovoltaic cells that strap the solar power are a charming option for grab light and generate electric power. In this system, to identify the sunlight the Light Dependent Resistor (LDR) is used in the tree which directs the sun light and generates the power continuously.

ICMEI02: FABRICATION OF HYBRID POWER GENERATION MODEL USING RAIN WATER, SOLAR AND WIND RESOURCES

S. Vigneswaran¹, Mr. T.Ponvelmurugan, M.E, (Ph.D.)²

¹PG Scholar, Pandian Saraswathi Yadav Engineering College

²Project Guide, Pandian Saraswathi Yadav Engineering College

Abstract – Renewable Energy is the energy that comes from natural resources such as sunlight, wind, rain, tides, waves and geothermal heat which are continually replenished. Hybrid power generation model mainly focuses on the renewable energy resources. These sources of energy can meet the world's demand without dismantling the stability of Earth. Hybrid power system model is mainly to meet the increasing energy demand through nonconventional energy sources. In our project a hybrid model Solar, Wind and Rain water has been planned to use to generate electricity. This configuration allows the three sources to supply the load separately or simultaneously depending on the availability of energy resources. The objectives of the present study are to convert the solar, wind and rain water into electricity and to optimize the energy requirement using these nonconventional energy resources. It reduces the environmental pollution using clean or environmentally friendly technology and creates awareness among people regarding renewable energy resources.

ICMEI03: SOLAR POWERED MULTIPURPOSE AGRIBOT USING ANDROID PHONE

M. Lingaraj¹, Mr.M. Radhakrishnan M.E.²

¹PG Scholar, Pandian Saraswathi Yadav Engineering College

²Project Guide, Pandian Saraswathi Yadav Engineering College

Abstract – In India nearly about 70 percentage of people are depending on agriculture. Numerous operations are performed in the agricultural field like seed sowing, grass cutting, ploughing etc. The present methods of seed sowing, pesticide spraying and grass cutting are difficult. The equipment's used for above actions are expensive and inconvenient to handle. So the agricultural system in India should be encouraged by developing a system which will reduce the man power and time. This work aims to design, develop and design of the robot which can sow the seeds, cut the grass and spray the pesticides, this whole system is powered by solar energy. The designed robot gets energy from solar panel and is operated using Bluetooth /Android App which sends the signals to the robot for required mechanisms and movement of the robot. This increases the efficiency of seed sowing, pesticide spraying and grass cutting and also reduces the problem encountered in manual planting
Keywords: Agriculture, autonomous, grass cutting, pesticide spraying, robot, seed sowing, solar powered

ICMEI04: PRODUCTION OF BIODIESEL FROM WASTE COOKING OIL BY INTENSIFICATION TECHNIQUES

K. Komala Devi¹, Mr.R. Pandithurai, M.E.²

¹PG Scholar, Pandian Saraswathi Yadav Engineering College

²Project Guide, Pandian Saraswathi Yadav Engineering College

Abstract – Biodiesel is a sustainable alternative helps in the protection of the environment due to its non-toxic, renewable and bio degradable nature and produces less Sulphur emissions and greenhouse gases. Biodiesel can be produced using Process Intensification based Techniques. Biodiesel is an effective alternative fuel. It is produced using both homogeneous (potassium hydroxide KOH) and heterogeneous (calcium oxide Cao) as catalyst to synthesize biodiesel from waste cooking oil (WCO) and blended oils.

ICMEI05: PRODUCTION OF BIOETHANOL FROM AGRICULTURAL WASTE

P. Priyadarshini¹, Mr.S. Pounraj M. E.²

¹PG Scholar, Pandian Saraswathi Yadav Engineering College

²Project Guide, Pandian Saraswathi Yadav Engineering College

Abstract – Due to rapid growth in population and industrialization, worldwide ethanol demand increasing continuously Agriculture Waste such as potato peel waste and corn waste are used as a raw material, because they are renewable resource sand attractive feed stock for bio ethanol production. Here, Dust(or) impurities are removed from the raw materials and then drying process is carried out. For the require of minimum article size milling process in takes place. After the milling process, lingo cellulose is obtained by fermentation process (Time period: 48-72hrs) by using enzyme (Alpha analyse). Finally, lignocellulose undergoes distillation process (Temperature:700C) bioethanol will be produce. Then analyze the sample by using High

Performance Liquid Chromatography and analyze the presence and absence of bioethanol in given sample.

ICMEI06: FABRICATION OF SUNLIGHT TRACKING SYSTEM

Karanthamalai murugan¹, Mr.S. Pounraj M.E²

¹PG Scholar, Pandian Saraswathi Yadav Engineering College

²Project Guide, Pandian Saraswathi Yadav Engineering College

Abstract – This project proposes an algorithm for detection of the position of the sun and implementation of this control algorithm on a single axis solar tracking system. The tracker consists of a photovoltaic panel and moves its surface approximately to the right angle to the sun to obtain maximum possible photon energy and convert it to electrical energy. Solar power is one of the most modern sources of renewable energy. Energy from sun is unlimited. But the main challenge remains in maximizing the amount of energy in an efficient manner in order to capture the rays from the sun for converting energy directly to electricity. One way to increase efficiency is by implementing a solar tracking system for solar panels. This is done so that the rays from the sun fall perpendicularly on the solar panel and thus ensures the capture of maximum available solar energy. The tracker periodically follows the path of the sun throughout the daytime in such a way that the panel surface is always faced to the sun. All the works of solar tracking system performed up to these days are based on almost the same theory of position sensing. Traditionally, tracking is performed by use of various types of sensors that detects position of sun. This project paper proposes a unique solar tracking algorithm instead of traditional algorithm. Unlike the use of photo-conductors, light detecting resistors, photo-transistors or photodiode, those cannot operate independently and requires voltage biasing this new type of sensing algorithm is based on generated voltage in solar panel. The solar panel generates voltage as rays of light fall on it. The generated voltage varies with the change in incident angle of light. Thus, the path of sun is detected by detecting the relative change in solar incidence angle. Also, the thesis suggests use of low power microprocessor (such as, ATmega32) to maintain the overall operation. Hence the proposed design simplifies the operation of solar tracking and reduce operation and maintenance cost.

ICMEI07: COMPARATIVE NUMERICAL SIMULATION ON TWISTED TAPE AND FLAT PLATE IN TRANSVERSE DIRECTION WITH THE PLAIN RECTANGULAR TUBE

P. Thamil Vasagam¹, Dr.K.D. Jaganthan Ph.D²

¹PG Scholar, Pandian Saraswathi Yadav Engineering College

²Project Guide, Pandian Saraswathi Yadav Engineering College

Abstract – Numerical simulations have been carried out to investigate the heat transfer enhancement in a rectangular tube fitted with a twisted tape insert in transverse direction and compare the data with a flat plate and with the plain rectangular tube. Air is used as a working fluid. CFD (Computational Fluid Dynamics) was utilized to simulate the three-dimensional model with appropriate boundary conditions. The computational results are performed for a range of the Reynolds number (2300 to 3500). The numerical results show the escalation in Re

leads to the rise in the Nusselt number and shows a significant influence of the twisted tapes. This tends to increase the heat transfer rate than the flat plate. The pressure drop across the tube wall for twisted tape is higher than the plain tube. This increase in the rate of heat transfer is due to the introduction of swirl flow (due to twisted tape) along with the primary flow.

ICMEI08: TRIBOLOGICAL BEHAVIOUR OF COPPER HYBRID NANO COMPOSITES MATERIAL PREPARED THROUGH P/M METHOD

R. Nagaraj¹, Mrs.S. Yogeswari M.E²

¹PG Scholar, Pandian Saraswathi Yadav Engineering College

²Project Guide, Pandian Saraswathi Yadav Engineering College

Abstract – In this project, full factorial design has been used to optimize the wear test conditions of the copper–multi-walled carbon nano tubes and Nano boron carbide reinforced composites prepared through entrenched cold-press sintering method of powder metallurgy. The factors boron carbide particle, applied load and sliding distance of the wear test have been selected as the independent variables. This technique has been designed to achieve momentous effects on two responses, namely specific wear resistance and coefficient of friction. To study the micro structural morphology, particle size, worn surface and wear debris of the prepared copper hybrid nano composite, Scanning Electron Microscopy, Atomic force microscopy and X-ray Diffraction analysis were used for characterization.

ICMEI09: FLAT PLATE COLLECTOR THERMAL ANALYSIS

Paraniraja¹ & Mr.R. Pandithurai, M.E.²

¹PG Scholar, Pandian Saraswathi Yadav Engineering College

²Project Guide, Pandian Saraswathi Yadav Engineering College

Abstract – Solar energy is becoming an alternative for the limited fossil fuel resources. One of the simplest and most direct applications of this energy is the conversion of solar radiation into heat, which can be used in space or water heating systems. A commonly used solar collector is the flat-plate. This flat plate collector absorbs the incoming solar radiation, converts it to heat at the absorber plat, and transfers this heat to a fluid flowing through the collector. The fluid is usually air or water. The warmed fluid carries the heat directly to the hot water or space conditioning equipment. This paper presents a precise and detailed analysis of a solar flat plate collector.

ICMEST5: ANALYSIS OF COMPLEX MACHINING PROFILES ON CERAMIC COMPOSITES USING ELECTRICAL DISCHARGE MACHINING PROCESS

Dr.C.Murugan¹

*¹Associate Professor, Department of Mechanical Engineering,
Pandian Saraswathi Yadav Engineering College, Sivagangai*

Abstract – A comprehensive investigation made on Spark Electrical Discharge Machining parameters for improving geometrical error on complex shapes. This article includes research of various parameters like metal removal rate, tool wear rate and angularity which is essential for achieving geometrical tolerance. Copper electrode is used for machining of Ceramic material since copper has high electrical conductivity. Taguchi's orthogonal array analysis is adopted to find the input sparking parameters combinations like pulse on time, pulse off time, current and dielectric pressure. Experimental results reveals the improve in metal removal rate (MRR), tool wear rate (TWR) and geometrical error which can be optimized by use of EDM process.

ICME127: ANALYSIS OF MECHANICAL PROPERTIES OF POLY ETHYLENE VINYL ACETATE (PEVA) MATRIX WITH POLYTETRAFLUROETHELENE (PTFE) PARTICLE REINFORCED COMPOSITE

Abhilash Amal¹, Dr.R.Prasannalakshmi²

^{1,2}Department of Mechanical Engineering,

Fatima Michael College of Engineering and Technology

Abstract – To improve the mechanical properties of Poly Ethylene-Vinyl Acetate Polytetra fluoroethylene particles were introduced to matrix. By introducing small amount of PTFE particles into the matrix mechanical properties were improved especially with 20% PTFE. The reliance of thermal conductivity of composites on the particle loading, particle networking morphology and on the whole composite structure are discussed. This work is intended to design composites for the improvement for mechanical properties of Poly ethylene vinyl acetate with lower particle contents. An injection moulding process was used for melting the copolymer and proper mixing the filler particles in melt condition.

ICME128: PASSIVE COOLING ON ELECTRONIC EQUIPMENTS USING COMPOSITE PHASE CHANGE MATERIAL

Durgeshwaran S¹, Dr.R.Mahesh Kumar²

^{1,2}Department of Mechanical Engineering,

Fatima Michael College of Engineering and Technology

Abstract – Phase change materials (PCM) take the advantage of latent heat that can be stored and released from a material over a narrow temperature range. PCM possesses the ability to change their state with a certain temperature range. A rapid thermal response composite PCM is prepared by absorbing paraffin into expanded graphite, which has excellent absorbability. The prepared composite PCM has excellent thermal storage performance and thermal stability. PCMs are used in electronic equipment cooling and also heating systems. Therefore, an attempt has been taken to optimize the size and shape of composite heat sink. Generally, the heat sinks

which are used in the computer devices can dissipate the heat properly up to the particular temperature. But when the operating temperature of the processor reaches beyond the working temperature then there is a chance for the processor to get damaged. So, when the temperature of the processor exceeds the maximum temperature then PCM starts melting at its melting point and continues to absorb the heat from the processor and thereby maintaining the temperature of the processor and preventing damage to the processor. The PCM should be able to solidify around 30-40°C. Among the various PCM materials, the paraffin wax material suitable to be used in electronic components has been selected. The models are analysed and finally the results are concluded.

ICME129: EXTRACTION OF SOLAR ENERGY BY USING SOLAR POND TECHNIQUE

Karthick J¹, Dr.R.Mahesh Kumar²

^{1,2}Department of Mechanical Engineering,

Fatima Michael College of Engineering and Technology

Abstract – Solar pond is the powerful source of energy that can be used for many purposes such as industrial usages, process heating and domestic purpose. A salinity gradient solar pond is a combined solar collector and thermal energy storage system, and impact heat has been successfully extracted from the lower convective zone (LCZ) in working ponds. This paper discusses possibility of heat extraction from the non-convective zone (NCZ) using an external heat exchanger. Here, two methods of heat extraction from different levels within the NCZ using external heat exchanger are presented. The first method uses thermo-syphon effect to transfer the heat from different levels in NCZ to the binary fluid. The second method uses pumps (forced convection) for heat extraction. This project presents theoretical modelling and experimental results for thermo-syphon-based heat extraction method. Later theoretical predictions and experimental results have been compared. This investigation shows good prospects for application of this system for heat extraction from NCZ of large solar ponds. By extracting heat from the NCZ the efficiency of a solar pond could be increased up to 30%.

ICME130: IMPLEMENTATION OF LEAN IDEOLOGY IN SME USING VALUE STREAM MAPPING AND 5S

E.Ernest Amulraj¹, B.Anbuselvam², V.Muthuraja³, V.Permal⁴, Mrs. Pandikumari⁵

^{1,2,3,4} UG Scholar, Department of Mechanical Engineering,

⁵Head of the Dept, Department of Mechanical Engineering,

Mother Theresa College of Engineering and Technology

Abstract – Lean business ideology has been one of the recent dominant research areas in operations management. However, there is a dearth of research focusing on Lean in small and medium sized enterprises (SMEs). The ideology of successful implementation of lean tools in small scale and medium scale plants in metal manufacturing company is discussed with the help of systematic literature review extensively. This paper goes beyond previous literature reviews of lean by systematically and critically evaluating key themes of Lean implementation within an SME environment. It not only provides a road map for SME owners / managers who intend to

implement Lean, but also provides the academic community with an agenda for future research. A descriptive analysis of the papers reviewed is provided inhibitors and enablers related to firm size when implementing Lean are also identified in the concluding discussion. From the thematic analysis of the literature four main themes are identified: the scope/type of Lean being adopted by SMEs, how Lean is used in SMEs, the impact of Lean implementation on SMEs and the critical success factors for Lean implementation in SMEs.

ICME131: DESIGN AND FABRICATION OF REMOTE-CONTROLLED FORKLIFT

Mounish Krishnan. AS¹, Arun kumar K², Mr. Chandramohan. S³

^{1,2} UG Scholar, Department of Mechanical Engineering,

*³Associate Professor, Department of Mechanical Engineering,
Sri Vidya College of Engineering and Technology, Virudhunagar*

Abstract – Forklifts are used in a wide variety of applications, such as manufacturing, construction, retail, meat and poultry processing, lumber and building supplies, trades, agriculture, and a variety of warehouse operations. This work mainly approaches to design and modeling of the electronic forklift. Electronic forklifts are extensively used primarily for material handling in the food industry. The objective of the electronic forklift is to ensure the safety of the operator and to save time and money to push and pop items. In this system, five DC motors, Arduino UNO, IR remote, and IR receiver are used. Four DC motors are used for moving and one DC motor is used for lifting. Arduino UNO is mainly used to control the overall system. Arduino UNO will determine whether the motors have to rotate forward or backward. Motor directions are implemented by Arduino programming management. Therefore, the system will be a foundation for implementing the industrial forklift.

DEPARTMENT
OF
SCIENCE & HUMANITIES

ICSHST1: SYNTHESIS, CHARACTERIZATION, STRUCTURAL ANALYSIS AND DNA BINDING STUDIES OF NICKEL(II)– TRIPHENYLPHOSPHINE COMPLEX OF ONSDONOR LIGAND – MULTISUBSTITUTED THIOSEMICARBAZONE AS HIGHLY SELECTIVE SENSOR FOR FLUORIDE ION

B. Vahini¹, Jegathalaprathaban Rajesh²

¹Assistant Professor, Department of Chemistry,

Pandian Saraswathi Yadav Engineering College, Sivagangai

²Saveetha School of Engineering, Institute of Medical and Technical Science,
Saveetha University, Chennai

Abstract – A new kind of Ni(II) complex of the type, [Ni(PPh₃)(L)](1), { where L = chemosensor thiosemicarbazone=2-(3-bromo-5-chloro-2-hydroxybenzylidene)-N-phenylhydrazine carbothioamide} have been synthesized and characterized by NMR, IR, UV–Vis spectroscopic methods and single crystal X-ray studies. Based on spectroscopic and X-ray crystallographic studies, a square planar structure has been proposed for the Ni(II) complex. The interaction between Ni(II) complex and CT-DNA has been investigated using UV–Vis, circular dichroism studies and gel electrophoresis. In UV studies, the observed strong hypochromism in absorption intensities and binding constant value ($K_b = 1.8 \times 10^5$) indicates significant interaction between the electronic states of the Ni(II) complex chromophore with that of DNA bases. With increasing concentration of Ni(II) complex, the peaks at 275 and 245 nm of CT-DNA are shifted to 1–2 nm without any change in the zero-cross over at 259 nm in circular dichroism studies. These observations suggest that the complex bind to DNA through a non-intercalative mode due to the wagging of three phenyl rings of triphenyl phosphine group. The Ni(II) complex display significant hydrolytic cleavage of circular plasmid pUC18 DNA. At high concentration, the Ni(II) complex almost promotes the maximum conversion of DNA from form I to form II along with the appearance of form III. The newly synthesized thiosemicarbazone compound is a promising system for the development of new colorimetric probes for the detection of anions. Anion sensing ability of the receptor (L) with halide ions (F⁻, Cl⁻, Br⁻ and I⁻) have been carried out in different solvents. The receptor shows a remarkable color change from colorless to dark orange in CH₃CN solution on selective binding with fluoride ion. The anion recognition property of the receptor via hydrogen bonding interactions is monitored by UV–Vis titration and ¹H NMR spectroscopy.

**ICSH102: FACILE SYNTHESIS OF NICKEL BASED METAL ORGANIC
FRAMEWORK (Ni - MOF) NANOSTRUCTURE FOR ENERGY STORAGE
APPLICATION**

Mr.Manikandan¹, G.Anandha babu²

¹*Nano materials Laboratory, Department of Physics, SRM-Madurai Institute of Engineering and
Technology, Pottapalayam*

²*Department of Physics, Bannari Amman Institute of Technology, Alathukombai Post,
Sathyamangalam*

Abstract – Hierarchical microspherical nickel-based metal–organic framework (Ni-MOF) has been synthesized by simple hydrothermal reaction with Terephthalic Acid (PTA) as ligand. The crystallinity and morphology of the synthesized nickel-based MOF material are systematically characterized by powder X-ray diffraction and scanning electron microscopy. Structural characterization confirms the layered structure and purity of the synthesized Ni-MOF. The SEM shows the hierarchical microsphere structure of Ni-MOF comprising of many interconnected nanoflakes and the diameter of microsphere differs from 2 to 6 μm . Importantly, the hierarchical microsphere structures of Ni-MOFs have advantage of high accessible surface for the transportation of ions during the redox reaction process, which increases their energy storage performance. Outcome this work provides a new way for the preparation of hierarchical microsphere structure of Ni-MOF material for energy storage applications.

ICSH103: SATISFACTORY ROOMMATE PROBLEM ON FUZZY ENVIRONMENT

T. Ramachandran¹, N. Logapriya²

^{1,2}*Department of Mathematics, M.V Muthiah Government Arts College for Women, Dindigul,
Tamil Nadu – 624001*

Abstract – In this paper, we present a perfect matching for the satisfactory roommate problem by introducing the fuzzy numbers. To introduce the Triangular Fuzzy Number, different α cut values and the problem was solved by the Fuzzy Hungarian method. The result of the paper shows a consistent matching by comparing the solution.

ICSHST2: APPLICATIONS OF FUZZY IN MEDICAL FIELD

Ms. V.Jeyalakshmi¹

¹*Assistant Professor, Department of Mathematics,
Pandian Saraswathi Yadav Engineering College, Sivagangai*

Abstract – Fuzzy Logic is a powerful tool which is applied extensively in various fields like Aerospace, Agriculture, Commercial Applications, Medicine, etc. Fuzzy Logic can be conceptualized as generalization of classical logic. Fuzzy logic has advantage over other soft computing tools in decision making where the rules are written directly in a form that is ease for humans to understand. Yet the benefits of Fuzzy Logic are not completely harvested in solving very complex problems. Here, in this paper a study of Fuzzy Logic process is attempted.

ICSHST3: NEUTROSOPHIC GENERALIZED B* CLOSED SETS IN NEUTROSOPHIC TOPOLOGICAL SPACES

*Ms. S.Muthulakshmi*¹

¹*Assistant Professor, Department of Mathematics,
Pandian Saraswathi Yadav Engineering College, Sivagangai*

Abstract – In this chapter we introduce and study the concept of a new class of Neutrosophic generalized closed set which is called Neutrosophic generalized b^* closed set in Neutrosophic topological spaces (briefly $Neugb^*$ - closed) we study also some of its basic properties and investigate the relations between the associated Neutrosophic topology.

ICSH104: SYNCHRONIZATION OF COMPLEX NETWORKS WITH PROPORTIONAL DELAYS USING EVENT TRIGGERED IMPULSIVE CONTROL

*K.Sivaranjani*¹

²*Department of Mathematics,
Arulmigu Palani Andavar College of Arts & Culture, Palani-624601, Tamilnadu, India.*

Abstract – In this paper, synchronization problem for complex networks with proportional delays using event triggered impulsive control has been discussed. By making use of novel integral inequalities and linear matrix inequality technique the synchronization criteria has been derived. Finally, numerical simulations are proposed to validate the theoretical findings.

ICSH105: PYTHON - AI FACE RECOGNITION

*R. Rajasubramaniam*¹, *M. Prabu*²

^{1,2}*Department of Mathematics,
Arulmigu Palani Andavar College of Arts & Culture, Palani-624601, Tamilnadu, India.*

Abstract – Face Detection and Recognition is one of the areas of computer vision where the research actively happens. The applications of Face Recognition include Face Unlock, Security and Défense, etc. Doctors and healthcare officials use face recognition to access the medical records and history of patients and better diagnose diseases. To build a machine learning model that recognizes the persons from an image. Face recognition method is used to locate features in the image that are uniquely specified. Face recognition are process used following three steps face detection, feature extraction, face recognition. Face detection also called facial detection is an artificial intelligence (AI) based computer technology used to find and identify human faces in digital images. Feature extraction refers to the process of transforming raw data into numerical features that can be processed while preserving the information in the original data set. Face recognition is a method of identifying or verifying the identity of an individual using their face. Face recognition systems can be used to identify people in photos, video, or in real-time. Law enforcement may also use mobile devices to identify people during police stops.

**ICSH106: BIPOLAR INTERVAL VALUED MULTI FUZZY NORMAL SUBGROUPS
OF A GROUP**

G.Shyamala¹, K.Anbarasi²

^{1,2}Department of Mathematics,

Arulmigu Palani Andavar College of Arts & Culture, Palani-624601, Tamilnadu, India.

Abstract – In this paper, bipolar interval valued multi fuzzy Normal Subgroups of a group and also prove some valuable theorems and their properties are discussed.

ICSHST4: A STUDY ON CONNECTED AND CYCLE DOMINATION

Ms. P. Jerlin belsiya¹

¹Assistant Professor, Department of Mathematics,

Pandian Saraswathi Yadav Engineering College, Sivagangai

Abstract – In this paper, A Study on connected and cycle domination and their properties are discussed and also prove some valuable theorems and applications.

**ICSHST5: READING STRATEGIES AND ITS SIGNIFICANCE IN THE ENGLISH
MIXED ABILITY CLASSROOM**

Dr. J. Indra Mercy¹

¹Associate Professor, Dept. of English,

Pandian Saraswathi Yadav Engineering College, Sivagangai

Abstract – As one gets into the habit of reading, it gives the mental satisfaction and an intellectual development in language skills. It also helps to analyze men and matters and offers relaxation to the mind. Reading in the classroom is considered to be a purposeful activity for language acquisition and for sharing information and ideas. It becomes easy to the students if he/she trained to comprehend the patterns of relationships between words. It requires continuous practices, development and refinement to analyze the meaning in a proper sense. The ultimate goal in reading is of course, to make meaning from the text, and to grasp the information conveyed in the content. Almost all the students who enter into the mixed ability classroom are literate in English; and they are able to read in English but many of them are not in the habit of actually using this ability in practice. In order to inculcate this reading practice, activities have been given to the students according to their level (average, mediocre, top scores) in the English classroom. Thus the purpose of the present study is to promote the reading skill of the students through various tools like newspapers, journals, books etc. in the English class room.

ICSH107: IMPROVING STUDENTS' CREATIVE WRITING SKILLS

G. K. Sanjana¹, Dr. J. Indra Mercy²

¹*Department of English, Fatima College (Autonomous), Madurai*

²*Associate Professor, Dept. of English,
Pandian Saraswathi Yadav Engineering College, Sivagangai*

Abstract – Creative writing is a newly emerging arena in the list of writing skills. The eminent factor of creative writing is that creativity is imposed in the content which makes the writings exceptional than general. Obviously, the way of writing creatively stands out of the ordinary methodology of creating written contents. This beneficial approach maximizes the productivity and shortens the time period taken to write. Therefore, creative writing has acclaimed commercial and literary success in the contemporary society. The skill of writing creatively should be emphasized in the education provided for the students so that the ability to think out of the box can be kindled from the young stage. The talent of effectively using imagination as the source of writing is the key aspect of creative writing. The acquisition of this talent in students will massively bring innovation as well as rationalism in the upcoming existence of beings. Thus, this paper endeavors to enhance the students' skill of writing creatively which uplifts the traditional and technical realms of writing. This study attempts to normalize the original norms of penning by instituting it with convention-less and creative approaches for ingenuity to be instilled in the minds of the students.

ICSH108: TECHNIQUES FOR AN EFFECTIVE PRESENTATION

Bhavadharani. J¹, Dr. J. Indra Mercy²

¹*Department of English, Fatima College (Autonomous), Madurai*

²*Associate Professor, Dept. of English,
Pandian Saraswathi Yadav Engineering College, Sivagangai*

Abstract – A presentation is an effective way of putting forth an idea or information among audience. Many projects and papers are being presented all around the world on various fields wherein a few are successful. It is not because of the lack of content or knowledge, rather, due to the lack of basic etiquette and techniques that are essential for an effective presentation. This paper elucidates the important factors that are required for a productive presentation. It guides right from the planning of a presentation to answering a difficult question raised by the audience. It discusses about the effective use of visual aids with explaining the importance of maintaining a relaxed state of mind, good body language and stamina, building rapport with the audience and the right usage of intonation and pace for the better understanding of the content. Through this paper, an individual can get a complete idea on how to create and deliver a presentation in an efficacious manner.

**ICSHST6: EFFECTIVENESS OF AUDIO-VISUAL AIDS IN TEACHING AND
ENHANCING ENGLISH LANGUAGE**

Prescilla Margrette. F¹

¹*Assistant Professor, Dept. of English,
Pandian Saraswathi Yadav Engineering College, Sivagangai*

Abstract – In the modern Classrooms, the teaching-learning process is rapidly changing and various new methods and techniques have entered in the field of education. One of these methods is the use of audio-visual aids. Technology is playing a crucial role in each part of human life either directly or indirectly in today's routine life. In a traditional classroom, teacher and students are the two great key words used by the educationist a few decades ago, but the trend has changed in these last few years. New technologies are brought and being used by many teacher's in the classroom to make their class interesting an effective. According to a popular saying, "What I hear I forget, What I see I remember, What I do I understand", it is useful to engage a learner, in language activities that are not wholly dependent on just the text and the teachers voice, but also by visuals, as they go beyond words to speak a universal language. There is not an effective teaching possible without the proper aids. No doubt, visual aids help the students to see and understand what they are taught, and audio aids help them to learn from what they listen, whereas audio-visual aids has the combination of both audio and visual in learning process. This paper visualizes the usage of audio-visual aids for the English learners to motivate their involvement towards learning English through technology. After analyzing the student's performance, it is identified that there is an equal interaction between the facilitator and the learners in the English classroom.

ICSHST7: λ -EDGE SPAN OF SOME ALMOST REGULAR GRAPHS

Dr.M. Murugan¹

¹*Professor, Dept. of Mathematics,
Director-Academic and Research, PSY Group of Institutions*

Abstract – In this paper, we introduce, λ -edge span of a graph, where λ is the λ -number or $L(2, 1)$ labeling number of a graph. Also, we introduce the concept of almost regularity for infinite graphs. An infinite graph is almost regular if it is regular except for a finite number of points. Here, we consider some important infinite graphs which are almost regular and find the λ -number and λ -edge span of them.

ICSHS01: NANO TECHNOLOGY

A.Nithya sri¹, B.Vahini²

*¹UG Scholar, ²Assistant Professor, Dept. of Chemistry,
Pandian Saraswathi Yadav Engineering College, Arasanoor*

Abstract – Nano technology, often referred to as the next industrial revolution after internet, is an interdisciplinary study. It is the science of manipulating technology at atomic scale. One can hardly find any area where the researchers did not attempt to apply it. Based on very optimistic results in many researches around the world, it can easily be inferred that it has virtually limitless potential and it promises epoch making changes in the world. UNESCO traced top ten applications of nanotechnology within the UN millennium development goals(MDGs)- (a) energy storage ,productions and conversion,(b) Agricultural productivity enhancement ,(c) water treatment and remediation ,(d) Disease diagnosis and screening ,(e) Drug delivery systems,(f) Food processing and storage ,(g) Air pollution and remediation ,(h) Construction,(i) Health monitoring ,(j) Vector and pest detection and control .However ,to many persons and organizations ,nanotechnology is the next asbestos and are reluctant to welcome it with open mind .This is a matter of great concern that the world community is the still in search of a consensus on legal and regulatory frameworks to govern it. As of now, there are at least six areas i.e. Product safety, privacy and civil liberties, occupational health and safety (OH&S), intellectual property (IP), international law and environmental law, which are directly related with nanotechnology research and application and law must intervene in these areas. While the benefits that can be achieved by using nanomaterials are whole-heartedly welcomed and appreciated, this paper aims at introducing the legal aspects of nanotechnology. The mistakes which hindered the introductions of genetically modified food or nuclear energy should not be repeated and the application of nanotechnology should be encouraged within approved legal framework.

ICSHSP1: GAMIFICATION AND MULTIMEDIA PRESENTATION IN THE ROLL OF EDUCATIONAL PROCESS

S.Magdalene Glorina Rajathi¹, Dr. J. Indra Mercy²

¹ Assistant Professor, Department of English, Vaigai College of Engineering. Madurai

*²Associate Professor, Dept. of English, Pandian Saraswathi Yadav Engineering College,
Sivagangai*

Abstract – Though university teaching methods have evolved and almost all higher education institutions use e-learning platforms to deliver courses and learning activities. Even these digital learning environments present significant dropout and low completion rates. There is a drawback in the above-mentioned system. This is primarily due to the exclusion of student motivation and engagement. This is quite possibly done using Gamification which can be defined as the application of game design elements in non-game activities has been used to address the issue of learner distraction and stimulate students' involvement in the course. However, choosing the right combination of game elements remains a challenge for gamification designers. Therefore, our study focused on providing a comprehensive overview of the current state of gamification in online learning in higher education that can serve as a resource for gamification practitioners

when designing gamified systems. In this paper, we aimed to systematically explore the different game elements and gamification theory to improve the elements of learning process.

Transformation is needed in the field of education. We need to propagate interest and curiosity in an ever-expanding interest in preparing students for success in a transforming, technology rich world. There should be in built grades and scores to stimulate the learning and teaching process. Students are interested in consuming colorful video presentations with the assistance of multimedia presentations. Animation tools can be utilized to the fullest. Registration of concepts can be promoted using all the technological patterns. In fact, it can promote the teaching module in the best appealing way. Happy learning process can be inculcated using Gamification and multimedia techniques in a perfect manner. Concept level teaching can be attained only through digital support and assistance. Flipped classroom is the supportive source of exploring web resources and online videos.

1. Use of Multimedia techniques
2. Use of variety of resources
3. Utilization of Social Media
4. Use of Gamification techniques

Use of technology to enhance students' status

ARTS & SCIENCE
COLLEGE

ICCM101: A STUDY ON CUSTOMER PERCEPTION TOWARDS E-BANKING SERVICES WITH SPECIAL REFERENCE TO PUBLIC SECTOR BANKS IN MADURAI CITY

Dr.C.Thiruvallar selvi¹, Sathya S²

¹*HOD and Assistant Professor, Department of Commerce,
Pandian Saraswathi Yadav Arts and Science College, Sivagangai*

Abstract – Indian Banking sector is the back bone of our financial system and economy. E-banking is an automated delivery of traditional and new banking activities including products and services to the customer through electronic channels. Checking/Saving Account Management Now-a-days Public Sector Banks provides E-Banking services to their customer effectively. From 2017 after demonstration, the need of customer's digital services increased in all public and private sector banks. This Paper focuses the Customer perception with regard to E-Banking services in Madurai Public sector banks. To develop and to sustain banking business Activities, they have to provide quality of E-banking service that can link up cordial relation with the customers. Customer awareness and satisfaction are the important tools needed to implement the E-banking services in Public sector banks. This paper analysis the factors which are determined the customer awareness and satisfaction with regard to E-banking services by using various statistical tools like, percentage analysis, Garret Ranking Method, Weighted Average Method and Chi-Square test. On the basis of number of branches, there are four major banks were selected for this study like, State Bank of India, Canara Bank, Indian Overseas Bank and Indian bank. Totally 125 Customers are being selected randomly for this study to find an exact customer perception on E-Banking Services in Madurai city Public Sector Banks.

ICCM102: EMERGING TRENDS IN WOMEN ENTREPRENEUR

Dr.C.Thiruvallar selvi¹, B.I.Gayathiri², Dr. C. Thiruvallarselvi³

^{1,2}*Assistant Professor, Department of Commerce,*

¹*Head & Assistant Professor, Department of Commerce,
Pandian Saraswathi Yadav Arts and Science College, Sivagangai*

Abstract – Women entrepreneur is regard as a person who accepts a challenging role to quench their behavior needs and to become economically independent by making appropriate adjustments in both family and social life. In today's world, women entrepreneurs are playing very vital role and they have become important part of the global business environment and it's really important for the sustained economic development and social progress. In India, though women are playing key role in the society, but still their entrepreneurial ability has not been property taped due to the lower status of women in the society. The main purpose of this paper is to find out he status of women entrepreneurs in India. This paper includes rationale grounds behind the women entrepreneurship, another main purpose of this paper is to analyze policies of Indian government for women and also to analyze that are those policies adequate for the growth of women entrepreneurship. Main reasons or become an entrepreneur, the institutions that are serving the women to put their views into action are also include in this study. On the basis of this study some suggestions are given to encourage spirit of women entrepreneurship to become a successful entrepreneur.

ICCM03: FACTORS AFFECTING FEMALE ENTREPRENEURIAL INTENTIONS IN SMALL AND MEDIUM ENTERPRISES IN MADURAI

V.Krishnaveni¹, S.P.C.Kanmanipriya², Dr. C. Thiruvallarselvi³

^{1,2}*Assistant Professor, Department of Commerce,*

¹*Head & Assistant Professor, Department of Commerce,*

Pandian Saraswathi Yadav Arts and Science College, Sivagangai

Abstract – Female Entrepreneurship is an emerging phenomenon all over the world. It has even more importance in the context of least developed economies like Madurai. In Madurai overall situation in terms of social and cultural as well as political and geographical aspects in different. This paper aims to analyses the factors affecting the women entrepreneurial intention in small and medium enterprises (SME). The sampling frame for the study is 120 women registered enterprises in Madurai. Collected data were analyzed using the statistical techniques such as simple percentage analysis and Garrett ranking techniques were used. The study revealed that six factors affect the female entrepreneurial intention in SME based on factor loading and named as government and administrative factor, financial factor, strategic factor, political and legal factor. Infrastructural factor and entrepreneurship education factor.

ICCM04: A STUDY ON EMERGING TRENDS IN E-BANKING WITH SPECIAL REFERENCE TO PLASTIC MONEY

Rupansankar A¹, Dr. C. Thiruvallarselvi²

¹*PG Scholar, Department of Commerce,*

¹*Head & Assistant Professor, Department of Commerce,*

Pandian Saraswathi Yadav Arts and Science College, Sivagangai

Abstract – The term innovation means that „to create one thing new“ banks no longer restricted themselves to traditional banking activities, however explored newer avenues to extend business and capture new market. Today, we are having a reasonably well-developed banking industry with totally different categories of banks. A number of them have engaged within the areas of consumer credit, master cards, merchant banking, net and phone banking, leasing, mutual funds etc. Some banks have already started subsidiaries for merchant banking; leasing and mutual funds are within the method of doing. This study presents an outline of the event of banking in India from time to time specifically centered on the plastic cards usage trends since these are introduced in Indian banking sector. Varied types of plastic cards provided by banks in India like ATM cards, Debit Cards, Credit Cards and smart cards are mentioned. The study additionally highlights the role of those cards as electronic payment tool to be utilized by customers and discusses clearing and settlement method of those cards. Some future plans made by various banks and institutions are also summarized in a way that it depicts the image of its future growth and prospects in India.

ICCMIO5: ENTREPRENEURSHIP CHALLENGES AND OPPORTUNITIES IN INDIA

Sebastyan A.¹, Shalini K.², Dr. C. Thiruvallarselvi³

^{1,2}PG Scholar, Department of Commerce,

³Head & Assistant Professor, Department of Commerce,

Pandian Saraswathi Yadav Arts and Science College, Sivagangai

Abstract – True entrepreneurs are resourceful, passionate and driven to succeed and improve. They're pioneers and are comfortable fighting on the frontline. The great ones are ready to be laughed at and criticized in the beginning because they can see their path ahead and are too busy working towards their dream. An entrepreneur is a businessperson who not only conceives and organizes ventures but also frequently takes risks in doing so. Not all independent business people are true entrepreneurs, and not all entrepreneurs are created equal. Different degrees of leadership and innovation they demonstrate, how much responsibility they shoulder, and how creative they become in envisioning and executing their business plans. This paper focuses and provides an insight into the meaning, qualities required for an entrepreneur, opportunities and Challenges faced by them and at last with a small discussion on entrepreneurship as a career.

ICCMIO6: RURAL WOMEN ENTREPRENEURSHIP

Jeya Geetha E¹, Indra S², Sathya S³

^{1,2}PG Scholar, Department of Commerce,

³Assistant Professor, Department of Commerce,

Pandian Saraswathi Yadav Arts and Science College, Sivagangai

Abstract – The overall economic development of society and the country depends on the social and economic advancement of rural women. The number of rural women who own their own businesses is rising, but little attention is paid to their entrepreneurial potential, managerial skills, and socioeconomic contributions. Women's empowerment is achieved through the growth of female entrepreneurs. Self-fulfillment is a result of empowerment through entrepreneurship, which also educates women about their rights, status, and place in society. Through business ownership, women are gaining social and economic empowerment in the modern era. In India, women-owned businesses are becoming more significant as a result of economic liberalization and globalization. The institutional and policy framework for providing vocational education and training, as well as for developing entrepreneurial skills, has expanded the possibilities for women's economic development. In India, women-owned businesses are becoming more significant as a result of economic liberalization and globalization. The institutional and policy framework for providing vocational education and training, as well as for developing entrepreneurial skills, has expanded the possibilities for women's economic development. Women business owners typically exhibit high levels of motivation, self control, and self-direction. On the other hand, rural women's empowerment is also very important. The economic empowerment of rural women will contribute to the development of our nation, and in order for our nation to truly advance in all spheres, it is crucial to pay close attention to this issue. Women's economic development will contribute to the advancement of the family, the community, and the nation. Women's entrepreneurship is crucial for the status of women in society. It creates new opportunities for both men and women to find work. The current paper focuses on the variables that need to be focused to improve rural women's entrepreneurial skill and, as a result, their empowerment.

ICCM107: ENTREPRENEURIAL CULTURE IN INDIA

S.Maheswari¹, Dr. C. Thiruvallarselvi²

¹PG Scholar, Department of Commerce,

²Assistant Professor, Department of Commerce,

Pandian Saraswathi Yadav Arts and Science College, Sivagangai

Abstract – Entrepreneurship plays a major role in the economic development of a nation since it creates new jobs, increases the national income, rural development, industrialization, technological development, export promotion etc. So, leaders and policy makers are constantly working on improving the entrepreneurial culture. To encourage growth in the private sector, a number of high-level initiatives, including Startup India, digital India and Make in India have been launched. This paper discusses the Entrepreneurial culture in India.

**ICASST1: A STUDY ON ECOLOGICAL WISDOM IN THE SELECT STORIES OF
RUSKIN BOND**

Ms. S. Kanchana¹

¹Assistant Professor, Department of English,

Pandian Saraswathi Yadav Arts and Science College, Sivagangai

Abstract – Generally, the word ‘Name’ means giving a person which is in lots of varieties and sometimes same to others. But the qualities which makes them as ‘Unique’ is important. Likewise, so many people in the world earned their name by showing their adroitness in their interested areas and got certain recognition. Among them as a writer “**Ruskin Bond**”, who has shown his extraordinary enthusiasm and fondness towards nature is a precious one like a rare pearl inside the colorful bag. Though he tried many components of writing and also become excellent in every short of writing, but the particular phrase ‘**The Naturalistic Writer**’, which is suitable and more perfect for Ruskin Bond. Most of his readers find some attraction towards his Naturalistic way of expressing the Nature. Normally people won’t prefer to write anything about simple things like a tree, sun, bird; unless it doesn’t create any sort of feelings to them. They simply leave it in the place, where they have watched and spend their time. But Bond differs among from the people and who observes everything, even the minute things and wrote it with more exaggerated feelings that it creates in him and it is the one which makes him to become a very-talented writer in the field of Indian Literature. This paper presents his talent as a “**Green Panther**” and his carving for describing nature.

**ICASST2: OPPORTUNITIES AND CHALLENGES OF DIGITAL TRANSFORMATION
IN SMALL BUSINESS**

Mr. A. Ayyanar¹

*¹Assistant Professor, Department of Business Administration,
Pandian Saraswathi Yadav Arts and Science College, Sivagangai*

Abstract – Digital business is the technique of applying digital technology to re-invent business models and transform a company's products and customer experience innovating products that create value and connecting people with things perceptions and experience. Digitization is the process of converting analog information into digital form using an analog-to-digital converter, such as in an image scanner or for digital audio recordings. As usage of the internet has increased since the 1990s, the usage of digitization has also increased. Digital transformation entails considering how products, processes and organizations can be changed through the use of new, digital technologies. over 90 percentage of business organization to change some form of digital initiative like four path of digital changes innovation, digitization, digitalization, digital transformation.

**ICASST3: ENTREPRENEURIAL ATTITUDE AMONG COLLEGE STUDENTS WITH
SPECIAL REFERENCE SIVAGANGAI AND RAMANATHAPURAM DISTRICTS**

Mr. M.Thangapandy¹

*¹Assistant Professor, Department of Commerce &CA,
Pandian Saraswathi Yadav Arts and Science College, Sivagangai*

Abstract – Attitude can be understood as a subjective feeling one individual has towards persons, thing or an activity Attitude can also be defined as the extent or level to which an individual like or dislike towards something. Attitude is defined as the tendency to act in response in a favorable or unfavorable behavior with respect to a place, persons or an activity (Ajzen 1987). According to All port an attitude is a psychological neural state of readiness that is pre-arranged through familiarity put forth a dynamic influence upon the individual's response to a place, persons or an activity. Simpson and Oliver (1990) defined attitude as emotional inclination in reaction to interaction, persons, place, events or thoughts. According to Hawkins (1983) Entrepreneurship has got hold of an extraordinary implication in the background of economic and industrial development in the swiftly changing economic and cultural environment in developing countries like India. (K. D. Balaji, Dr. V. M. Shengaraman, 2013). As we all known that India is a labour concentrated country, where the supply of labour is more than the demand of labour. The entrepreneur can use this as the strength and cab start his business that can pave way for solving the unemployment problem and in turn would direct the economy for sustainable development of the country. In spite of the intensification of various financial support provided by the financial institution and government schemes, the present future generation does not desire to use these opportunities to become entrepreneur. (Samuel Thavaraj). Hence an attempt was taken by the researcher to identify the level of entrepreneurial attitude among the college students. In sivagangai and Ramanathapuram districts, for disicipline were randomly chosen for the study through lot and the final year students studying Arts, Science, the population of the study. Structured questionnaire was used to collect primary data. The findings of the study reveal that the male students are having more penchants towards starting their own business when compared with the female students of business studies.

ICASST4: CLOUD COMPUTING

Mr. G.Jacob Britto¹

¹Assistant Professor

Pandian Saraswathi Yadav Arts and Science College, Sivagangai

Abstract – Cloud Computing Abstract Cloud computing has come of age since Amazon rollout of the first of its kind of cloud services in 2006. It is particularly relevant to Hong Kong because of the tremendous amounts of data that are being processed here daily in various sectors, and there are signs that subscription to cloud services by the local companies will soon be on a skyrocket course, despite a slow start in previous years. As a research theme, cloud computing now easily tops any list of topics in computer science because of its far-reaching implications in many areas in computing, especially big data which without cloud computing is at best a concept. Alibaba's jump in 2014 FQ on the bandwagon (www.aliyun.com), as well as the recent establishment of one of its datacenters in Hong Kong, signified the beginning of a new era in cloud computing where not just the scale, but also every other single aspect in a cloud service will meet with much elevated complexities. Hong Kong is poised to play a role in the advancement of cloud computing technologies because of its track record in networking, and recently cloud, research. The recent establishment of a major cloud R&D center in Hong Kong by Lenovo (January 2015) attests to this fact. Researchers in various local institutions already have an active agenda of important and significant problems for which they would like to seek the best and optimized solutions. We believe solving these problems will create a spot for Hong Kong in the world map of cloud computing research. The results will also benefit Hong Kong as the reliance on cloud computing services is rapidly increasing. This brief talk will outline some of the concerns pertaining to the further development of cloud computing into a mature technology that meets its original goals.

ICASST5: ARTIFICIAL INTELLIGENCE USING FACE RECOGNITION BASED ATTENDANCE MANAGEMENT SYSTEM

Mr. B. Prasanna¹

¹Assistant Professor, Department of Computer Science,

Pandian Saraswathi Yadav Arts and Science College, Sivagangai

Abstract – In this digital period, face recognition system plays a crucial role in almost every division. Face recognition is one of the frequently used biometrics. It can be used for security, verification, recognition, and has got many more compensations. Despite of having low precision when compared to iris recognition and fingerprint recognition, it is being usually used due to its contactless and non-invasive process. Moreover, face recognition structure can also be used for attendance marking in schools, colleges etc. This system aims to make a class attendance system which uses the idea of face recognition as existing handbook attendance system is time consuming and bulky to maintain. And there may be chances of alternative attendance. Thus, the need for this system increases. This method consists of four phases- database creation, face identification, face finding, attendance updating. Database is created by the images of the students in department. Face finding and identification is performed using Haar-Cascade classifier and Local Binary Pattern Histogram algorithm respectively. Faces are detected and recognized from live streaming video of the classroom. Attendance will be mailed to the respective faculty at the end of the session.