1st National Conference on

CLIMATE RESILIENCE AND ENVIRONMENTALLY SUSTAINABLE TECHNOLOGIES

NITK-CREST 2025

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FEBRUARY 27-MARCH 01, 2025

VENUE: LHC–C, NITK SURATHKAL

PROGRAM SCHEDULE

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1st National Conference on Climate Resilience and Environmentally Sustainable Technologies (NITK-CREST 2025) 27th February – 1st March 2025	
National Institute of Technology, Karnataka	
Overall Schedule	
Day 1, 27th February	
Time	**Event**
08.00 - 09.00	Registration
09.00 - 10.10	Inauguration
10.10 - 10.30	Tea Break & Photo Session
10.30 - 11.00	Keynote: Microwave Assisted Material Processing: Sustainability and Energy Efficiency Prof. Tanmay Basak, IIT Madras
11:00 - 11.30	Keynote: India's Commitment to Climate Actions (SDG-13) Prof. P.C Abhilash, IIT BHU Varanasi
11.30 - 13.00	Technical Session-1A, Technical Session-1B
13.00 - 14.00	Lunch Break
14.00 - 14.30	Keynote: Role of Environmentally Sustainable Technologies and Products in Energy Transition Dr. T.C.S.M. Gupta, Apar Industries Limited Mumbai.
14.30 -15.30	Technical Session-2A, Technical Session-2B,
15.30 - 16.00	Tea Break & Poster Session
16.00 - 16.30	Keynote: Climate-Smart Water Use and Management Dr. Manoj P. Samuel, CWRDM, Kozhikode
16.30 -18.00	Technical Session-3A, Technical Session-3B
Day 2, 28th February	
08.00 - 09.00	Registration
09.00 -09.30	Keynote: Riding the CREST with the Power of AI2

	Shri. Padmanand Warrior, Founder, Warrier H.E.A.R.T
09.30 -11.00	Technical Session-4A, Technical Session-4B
11.00 - 11.30	Tea Break & Poster Session
11.30 -12.00	Keynote: Lignin Valorization for Circular Economy Prof. Ravikrishnan Vinu, IIT Madras
12.00 - 12.20	Invited Talk: Role of Additive Manufacturing in Sustainable Development Dr. Jitendra Kumar Katiyar, Centre for Research Impact & Outcome, Chitkara University
12.20 – 13.00	Sponsors Talk
13.00 -14.00	Lunch Break
14.00 - 14.30	Keynote: Wide bandgap semiconductors for renewable energy systems- challenges and opportunities Dr. Venkata Vanukuru, Global Foundries
14.30 -15.30	Technical Session-5A, Technical Session-5B
15.30 - 16.00	Tea Break & Poster Session
16.00 - 16.30	Keynote: Recycling of NdFeB rare earth magnets Dr. Chenna Borra, IIT Kharagpur
16.30 -18.00	Technical Session-6
Day 3, 1st March	
08.30 -09.00	Registration
09.00 - 09.30	Keynote: Practical efficiency limits of Solar cells and LEDs Prof. Pradeep R Nair, IIT Bombay
09.30 -11.00	Technical Session-7
11.00 - 11.30	Tea Break & Poster Session
11.30 -12.00	Keynote: Energy-Efficient Bio-Inspired Textured Tools for Sustainable Machining

	Prof. Somashekhar S Hiremath, IIT Madras
12.00 - 13.00	Technical Session-8
13.00 - 14.00	Lunch Break
14.00 - 14.30	Keynote: Peeking into Computational Aspects of Deep Learning - Sustainability Implications in GenAI Era Shri. Dilip Kumar Dalei, DRDO
14.30 - 15.30	Technical Session-9
15.30 - 16.00	Keynote: Smart Foundry for Sustainable Manufacturing Dr. Savithri Sivaraman, CSIR-NIIST, Thiruvananthapuram
16.00 -16.30	Keynote: Solid waste management Dr. H. Lakshmi Kantha, KSPCB
16.30 - 17.00	Valedictory
17.00 - 17.15	High Tea

Detailed Schedule	
Day 01, 27th February	
Technical Session-1A (11.30 -13.00) – LHC-C Seminar Hall	
FIRE *Chair: Prof. Tanmay Basak | Co-chair: Prof. P. S. Suvin*	
Paper ID	**Title and Authors**
88	**Synthesis of high voltage NASICON for Sodium-ion battery** Rajashekhara S, Madhu Chennabasappa, Prathik P Nandagavi, Ananya P Kumar, Shobha K
48	**A Systematic Literature Review on energy policy and its Impact on solar power generation** N. Vinay Krishna
29	**A custom-made ternary Deep Eutectic Solvent for leaching active cathode material from spent mobile Lithium-ion batteries** Nidhi G Raichur, P Hemanth, V M Aravind, Raju Kumar Gupta, Sudhir H Ranganath
9	**A Comprehensive Analysis of Solar Power in West Bengal** Surjendu Manna, Binoy Krishna Roy
167	**MARX: A Live Interactive Virtual Assistant with Object Detection Capabilities** Praharsha Surampudi, Suhani M Swamy, Sushant PH, Dimple R

69	**Exploring the Triboelectric Potential of Electrospun PVDF/Si-HBP (GEN-2) Blends for Energy-Harvesting Applications** Niranjana V S, Anand Prabu Arun
160	**Self-Charging System for Vehicles Using Wheel Rotation** Monika Maruthi Ogirala, Dharani Buddha, Anil Yaragorla, Nagalakshmi Yaragarla, Ramya Sree Thanneeru, Likitha Cheepuru, Shaik Shoyab
152	**Sustainable Production of Second-Generation Bio-Oil from Biomass (Sterculia foetida) Using Pyrolysis and Its Upgradation** Kaviyaa B, Tharnika S, Nirmala G S, Sivagami K
118	**A Comprehensive Approach to Bio-Sludge Pyrolysis: Kinetic Modeling, Thermodynamic Analysis, and Machine Learning Predictions** Ritisha Kale, Chinta Sankar Rao

Technical Session-1B (11.30 - 13.00) – LHC-C Senate Hall

SPACE

Chair: Prof. P C Abhilash | Co-chair: Dr Nabanita Naskar

Paper ID	Title and Authors
149	**Experimental and Numerical Investigation on PCM-Integrated Concrete Blocks for Reducing Global Carbon Footprint** Nitin Gotiya
57	**Milk as a Source of Per- and Polyfluoroalkyl Substances (PFAS): Exposure and Its Related Health Concerns**

	R. Nadaf, R. Arulvel
15	**Analysing Temperature Extreme over India** Amal Krishna J S, V. Agilan
54	**Importance of three "S": Sample, Site and Spectrometric Technique in Reconstructing the Past** Nabanita Naskar, Kaushik Gangopadhyay, Susanta Lahiri, Chandrima Shaha
204	**Effective Thermal Management in Electronics for Sustainable Environment Using Multi Criteria Decision Making Methods** Aditya Narkhede, N Gnanasekaran, Ajay Kumar Yadav, Parthasarathy P
80	**Impacts of Seasonal Climate Variability on Cyclone Activity over the Arabian Sea** Pragnya Pradhan, Vittal H.
16	**Mapping agricultural vulnerability to foods in Alappuzha district** Preethi A, Punithraj G
210	**Stability analysis of metro tunnel against settlement and deformation characteristics for various loading conditions** Abhish M S, Dr. Prashanth M H, Dr. Sandi Kumar Reddy
86	**Machine Learning and Space Technology Solutions for Climate Change Adaptation** C J Jagadeesha
Technical Session-2A (14.30 -15.30) – LHC-C Seminar Hall	
AIR	

Chair: Dr. Rajasekhar Busigari | Co-chair: Dr. Jitendra Kumar Katiyar	
Paper ID	**Title and authors**
6	**Performance Evaluation of Ferrofluids in Enhancing Post-Combustion CO_2 Capture Efficiency** Smita Mondal, Jitendra Sangwai
64	**A Techno-economic assessment and emission control strategies for CO_2 capture plant process at fertilizer production plants in India** Chaitanya Babu Boddu, Koteswara Rao Putta, Purvil Khakhariya, Hemanth Kumar Tanneru
27	**Synthesis of Dust Suppressant using Lignin from Industrial Waste** Dr. Sreelakshmi Diddi, Piyush Kumar, Mayura Shetty, Khushi Singh, P Mohammed Rafi
50	**Enhanced PM2.5 Estimation Using AOD and Meteorological Parameters: A Case Study of Plamoodu, Trivandrum** Athira T and Dr. Agilan V
55	**Evaluation of ambient air quality in heavy traffic localities like Mysore road** Jnanashree C, Raghunandan P, Madhukumar
78	**Silver Modified Metal-Organic Framework Derived Fe_2O_3 for Diesel Soot Oxidation** Nithya R, Dr. Harshini Dasari, Dr. Nethaji S

Technical Session-2B (14.30 -15.30) – LHC-C Senate Hall	
WATER *Chair: Dr. Gangamma | Co-chair: Dr. Poornima G. Hiremath*	
Paper ID	**Title and authors**
62	**The Impact of Sewage Discharge on Groundwater Quality in the Vicinity of the Municipal Sewage Treatment Plant in HBR Layout, Hunnur, Bengaluru.** Deepthi S, Ruthvik B.N, Priyanka R
155	**Drought Vulnerability Assessment in the Coastal District of Karnataka** Rishikesh S N, Kashish Prajapati, Afraz Siddiqui, Swathi Shetty, Pruthviraj Umesh
114	**Assessment and Mitigation of Urban Flooding: A Case Study of a subcatchment in Mangalore** Samanyu Rai, Dhanush Devadiga, Pruthviraj Umesh
25	**Performance of MoS2-doped PVDF-HFP Nanofiber-based Triboelectric Nanogenerator for Smart City Sensing** Amrutha B, Anand Prabu Arun
129	**A review on- Effects of slurry impregnation technique on strength of recycled coarse aggregate concrete.** Neha S.N, Prashanth M.H, Basavaraju Manu
Technical Session-3A (16.30 - 18.00) – LHC-C Seminar Hall	
FIRE (ENERGY) *Chair: Prof. Darshak Trivedi | Co-chair: Dr. Anand Prabu*	

Paper ID	Title and authors
47	**Microwave Heating to Produce Carbon Nanomaterials from Coal and Biomass** Rajasekhar Reddy Busigari, Shravani Burada
71	**Influence of Aliphatic HBP (GEN-1) on the Tribonegative Performance of PVDF and its Energy-Harvesting Applications** Mohan Nalini Bai, Arun Anand Prabu
94	**Evaluation of PCM-Silica Hybrid Materials for Improved Solar Heat Storage Performance** Seshaiah Tuaka, Yerumbu Nandakishora, Marthu Naga Vinay, Mothibeli Pita
82	**The suitability of Nickel foam as a current collector in supercapacitor applications** Parvathy Purushothaman, Prof. Hari Prasad Dasari
95	**Design and development of solar air heater for drying clothes using analytical method** Dr. Rawal Diganjit, Dr. N Gnanasekaran
115	**Evaluation of Bio-Based Waxes and Additives in Phase Change Material for Sustainable Energy Storage applications: A Review** Sakthiuma K, Rakshitha TSK, Sandhya P, Ponnusami V, Kalaichelvi P
106	**Co-pelletization of coal and torrefied de-oiled cashewnut shell cake using potato starch as binder**

	Subraja Suriyakumar, Dr. Ruben Sudhakar D, Dr. Hari Mahalingam
171	**TRI-ASSIST: An AI-Powered Virtual Companion for Daily Life** D. Vidyanadha Babu , Kandimalla Lakshmi Sruthi Laya, Katuri Sai Keerthi, Katuri Ramya Sri, J.Hemanjali
119	**Thermal Decomposition and Kinetic Modeling of Medical Plastic Waste Using TGA and Machine Learning** Malavika P V, Dr. Chinta Sankar Rao
Technical Session-3B (16.30 - 18.00) – LHC-C Senate Hall	
WATER *Chair: Prof. G. N. Kumar | Co-chair: Dr. Ishwar Chandra*	
Paper ID	**Title and Authors**
154	**Automated Water Monitoring System for Efficient Water Management in Households** Lavanya Podili, Shaik Kalesha Gari Ameer Basha, Dharani Buddha, Tirumala Teja Gollu, Bhargav Ram Atluri, Ramesh Babu Kataru, Venkata Siva Putchalapalli
169	**Artificial Intelligence Innovations for Real-Time Water Quality Monitoring and Predictive Management** Kireet Muppavaram, G.Lakshmi Vara Prasad, T.Murali Krishna, A.Haripriya, Shaik Mohammad Elias Basha, Rajesh Gundla
158	**Advanced Deep Learning Approach for Multivariate time series forecasting of influent quality parameters of Wastewater treatment plants** Srinivas Tenneti, Prof. Seshagiri Rao Ambati

18	**Sustainable approach for the synthesis of copper oxide-modified TiO_2 for photocatalytic degradation of Tetracycline** Mrudul Dhakate, Vidya Shetty K
110	**Engineered $NiFe_2O_4$ / g-C3N4 Nanocomposite for Superior Photocatalytic Methylene Blue Dye Degradation** Dr. Poornima G. Hiremath, Dr. G. Nagaraju, Sanjana
26	**SAAN Driven Crop Suitability Analysis for Sustainable Production** Mansoor P E, Vinay S, Vinuta M
34	**Machine learning- and computational thermodynamics-based design of Deep Eutectic Solvents for extracting Lithium from low-concentration sources** Vishnu Iyer, Shrihari M S, Nidhi G Raichur, Anjan H, Skanda Bhargav B N, Sudhir H Ranganath
188	**Water Quality Assessment of Chikkabanavara Lake, Bengaluru** Nandini I V, Dr. Vaishakh Nair
40	**Optimization of water flux of MWCNT incorporated desalination membrane using RSM** Megha Mohan, Dr. S. K Pramada
Day 02, 28th February	
Technical Session-4A (09.30 -11.00) – LHC-C Seminar Hall	
ARTIFICIAL INTELLIGENCE	

Chair: Dr. Hemanth Kumar Tanneru | Co-chair: Prof. B. R. Chandavarkar	
Paper ID	**Title and authors**
49	**Integrating AI and IoT for Solid Waste Management: A Comprehensive Review** Aditya Karle, Tejas Pagare, Prathmesh Tarapurkar, Mohammed Ashaz Arkati
148	**Performance Assessment of Machine Learning Techniques for Nethravati River Streamflow Forecasting** Hari Sharan, Himanshu Das, Aryaman Arya, Swathi Shetty, Pruthviraj Umesh
143	**AI-driven Crop Yield Prediction** R. Gayathri, Ch.Akash, M. Anil, D.Sharada Mani, V.Srilatha, D.Rama, Lingeshwar Reddy
198	**Machine Learning Models to Design Efficient Compact Heat Exchangers** Kiran Kumar Kambala, N. Gnanasekaran
116	**Real-Time Monitoring and Predicting PM (Particulate Matter) Levels Using IoT Integrating With Machine Learning Models** Sowjanya Kumari Yallanti, Akshara Durga Yamparala, Kavitha Bantupalli, Veeranjaneyulu Eraganaboyina
190	**AI-Driven Microcontroller-Based Smart Direction Valve for Sustainable Solar Water Management in Multi-Story Buildings**

	Aprameya C R, Dontharaboina Saikanth, Sharnappa Joladarashi, Ramesh M R
35	**Machine Learning for Fungal Pectinase Classification: A Sustainable Approach to Enzyme Discovery** V. Prasanna, T. P. Krishna Murthy, G. Divyashri
121	**Artificial Chemosensory System using MOX Sensors** Vivek, Prithivirajan, Nirmala GS
144	**Crime Analysis and Prediction Using Machine Learning and Deep Learning** Dr Sharada Mani Dalu, P Dhanjay Sah, K Srinivas, Y Divya Lekhana, V Pradeep Raj
Technical Session-4B (09.30 -11.00) – LHC-C Senate Hall	
WATER *Chair:* Prof. Vidya Shetty K. | *Co-chair: Dr. Meera Bai. S*	
Paper ID	**Title and authors**
203	**Analysis of Sewage Treatment Performance and the Viability of Treated Effluent for Irrigation** Bhagyashree H N, Dr. D P Nagarajappa, Dr. P Shiva Keshava Kumar
104	**Lanthanum doped Banana peel Biochar: A novel approach for efficient fluoride removal from water** Poornima G Hiremath, Tejaswini T D, Sakshi S, Aryan C R, Rajashekhara S

103	**A Smart Water Distribution Framework: Cyber-Physical Testbed for Industry 4.0 Automation and Resilient Network Operations** Prof. Venkata Reddy Palleti, AKHIL ARAVA
159	**Synthesis, Characterization and Adsorption Properties of Black Cotton Soil, Sand Particles and Sugarcane Bagasse for Environmental Applications** Ishwar Chandra, N Ramesh and Anima Upadhyay
77	**Photocatalytic Degradation of Emerging Pollutants Using Morphology-Dependent Spinel Ferrite Nanostructures** Anusha D Shetty, Harshini Dasari, Nethaji S
178	**Assessing the Feasibility of Rooftop Rainwater Harvesting: A Sustainable solution for water conservation and Urban Resilience in a University Campus** Kiranpreethi B, Nesara C P, Indumathi Shivamallappa, Jayanth M, Sanjith S. Anchan
114	**Assessment and Mitigation of Urban Flooding: A Case Study of a Subcatchment in Mangalore** Samanyu P Rai
113	**Urban Flood Modelling: A Case Study in Mangalore Subcatchment** Dhanush Devadiga
196	**Comparative Study on Compressive Strength of M25 PEG Self-Cured Concrete with Conventionally Cured Concrete** D. Deepshitha, Dr. V. Jaganathan
	Sponsor Talk (12.00-12.30)

Technical Session-5A (14.30-15.30) – LHC-C Seminar Hall	
FIRE *Chair: Prof. Ravikrishnan Vinu | Co-chair: Dr. Jagannathan T. K.*	
Paper ID	**Title and Authors**
173	**Machine Learning Model Development of Ceria doped RE Nanomaterials in Supercapacitors: Enhancing Performance Prediction.** Nikhil Siringi, Chinta Sankar Rao, Hari Prasad Dasari
128	**Machine learning modeling in nanocomposite synthesis using carbon nanotube embedded with polypyrrole for supercapacitor application.** Abhishek S., Lekshmi S.B., Anushka Mishra, Imamhusen Konasagar, Bhimaraya R Biradar, Partha Pratim Das, Mohan Lal Meena
197	**Advancing Renewables with Sustainable Phase Change Materials for Energy Storage Applications** Aditya Narkhede, Vikas D Nayak, N Gnanasekaran, Kumar G N, Arumuga Perumal D
174	**Analysis of Novel Drain Extended Junctionless FinFET for low power applications** Ashwini Nanjunda, KrishnaNadar Savitry Nikhil
214	**Thermal Performance of PCM Based Energy Storage Systems Using Novel Fins for Sustainable Energy Applications** Lakshmana Naik, Veershetty Gumtapure

42	**Investigation of CO_2 removal from calcination reaction using microwave-assisted co-pyrolysis of lime and agricultural waste** Karri Naveen Kumar and Dr. Hemanth Kumar Tanneru
Technical Session-5B (14.30 - 15.30) – LHC-C Senate Hall	
EARTH (MATERIALS) *Chair: Dr. Venkata Vanukuru | Co-chair: Dr. Suresha B L*	
Paper ID	**Title and Authors**
10	**Automated fruit-plucking drone** Vadiraja G Prasad, Krishna. K
22	**Tech-Driven Harvester** Krishna k, Vadiraja G Prasad, Shreyas Moudgalya km
206	**Circular economy and waste management** Prasanna Kumar T.
126	**Incorporation of steel fibers to enhance the performance of crumb rubber-based cement mortar** Shubham Parmar
75	**Modeling Soil Moisture and Hydraulic Conductivity in Goan Iron Ore Mines with GeoStudio** Rammohan Perumalla, Sandi Kumar Reddy, Mandela Govindaraj
98	**FTIR-GIRAS as an Effective Tool for Measuring Crystalline Phase Transitions in PVDF As-cast and Spin-cast Samples** ANAND PRABU
Technical Session-6 (16.30 -18.00) – LHC-C Seminar Hall	

EARTH (MATERIALS) *Chair: Prof. Hari Prasad Dasari | Co-chair: Dr. Rajesh Gratian D Souza*	
Paper ID	**Title and Authors**
193	**Enhanced Antibacterial and Photocatalytic Activities of Nickel Oxide Nanoparticles** Rudranaik, Sumantha H S, Suresha B L
45	**Photo-catalytic degradation of methylene blue using glass beads coated with vanadium-doped black TiO_2 nanoparticles** Harish Phattepur
140	**Synthesis and characterization of Borosilicate nanoparticles using ES-μ-ECDM system** Bhargav V J K, Ranjeet Kumar Sahu, Tejanshu Sekhar Sahu
124	**Characterization, Photocatalytic and supercapacitor studies of Ag-MgO nanocomposites** H. S. Sumantha and B. L. Suresha
146	**Sound alarm-enhanced fencing for Wildlife and Human safety** Govardhana Marthala, Dharani Buddha, Anusha Paladugu, Chaitanya Krishna Gummalla, Nagarjuna Reddy Reddem, Yesuraju Velpula, Phanindra Kalam
123	**Influence of Granulated blast furnace slag as a replacement to fine aggregate in cement mortar** Debia Khinam, Debia Lollin and Santosh Kumar C.

87	**Enhancement of mechanical and chemical characteristics of pond ash using lime kiln dust** Vilasini PP, Nivetha G
207	**Impact of Surcharge Loading on Mine Slope Stability and optimal safe distance for External Dumps: A Review** S. K. Reddy, D. Guglavath
125	**Natural composites for non-structural / packaging applications** Vikas B. G., Anil Chandra A. R., Bharathi V.

Day 03, 1st March

Technical Session-7 (09.30 - 11.00) – LHC-C Seminar Hall

EARTH

Chair: Prof. Pradeep R Nair | Co-chair: Prof. Saumen Mandal

Paper ID	Title and Authors
73	**$CoFe_2O_4$/PVDF nanofiber mats as flexible triboelectric sensors for healthcare and polysomnographic monitoring** V. Hema Malini, A. Anand Prabu
194	**Optimization of HVAF process parameters for Inconel 718 coatings** Narendra Babu, Charan, Rakshith, Sumanth G
3	**Chemical analysis of air and soil contaminated with menstrual hygiene products**

	Pavithra G S, Rashmi Shenoy, Sangeeta A, Savithri Bhat
19	**Green synthesis and optimization of silver nanoparticles in a stirred tank reactor based on their water disinfection activity** Shraddha Pai, Vidya Shetty K
14	**Soil Physical Quality of Mulberry Crop Evaluated with Use of Penetrometer** Chuncha Laxmi Prasanna, D. V. Naveen
46	**Characterization of polypropylene pyrolysis oil (PPO) obtained by high-temperature pyrolysis of end-of-life polypropylene** T. Gopikrishnan Kailas, Saikat Dutta, Vasudeva Madav
166	**Sustainable Microstructuring of Nickel Using EDM: Process Optimization, Characterization, and Environmental Impact** Rishi Dhar Gandhi, Somashekhar S. Hiremath
109	**Engineered Nanoparticles for Enhanced Antibacterial Activity Against Drug-Resistant** Ayush Kumar, Dr. Mohan Lal Meena, and Dr. Keyur Raval
142	**A novel performance metrics decomposition method for modeling the coconut yield using sum of sines** Ashwini S Koute, Dr K S Nikhil
Technical Session-8 (12.00 - 13.00) – LHC-C Seminar Hall	
MISCELLANEOUS *Chair: Prof. Somashekhar S Hiremath | Co-chair: Prof. Shyam Lal*	

Paper ID	Title and Authors
65	**Design of Plate type heat exchangers for Absorption based carbon capture plants for Indian power plants** Ishita Mandal, Karan Singh, Dharmana Chanikya, Hemanth Kumar Tanneru, Koteswara Rao Putta
211	**Development and optimization of fuel pellets from coal fines, Phosphate sludge, and ETP sludge.** Rubesh R, Sumathi G, Ruben Sudhakar D
74	**Enhancing Concrete Performance with Industrial Residues: Advancing Sustainable Civil Engineering** R G D Souza
122	**Solar-Power Grass Trimmer** Ch. Bakki Reddy, Y.Ravi Shankar, A.Alekhya
209	**Mineralogical comparative study on sedimentary rocks of Rama Gundam, Godavari basin and Manuguru** P. Varalakshmi, S. K. Reddy, Ch. S. N. Murthy
Technical Session-9 (14.30 - 15.30) – LHC-C Seminar Hall	
ARTIFICIAL INTELLIGENCE *Chair: Prof. Ananthanarayana V. S | Co-chair: Dr. Ganesh R. Chate*	
Paper ID	**Title and Authors**
135	**Skin Disease Detection Using a Hybrid Deep Learning Model** M.Anil, R.Gayathri, D.Sharada mani, Ch.Akash, V.Mounika

	V. Mounesh
112	**Automated Detection, Segmentation, and Classification of Colon Polyps Using Enhanced Deep Learning Approaches** Sam Chaudhary, Anagha P, Preethi G M, Yuktha S, Aparna N S, Pushphavathi T P
20	**AI-Enhanced Sustainable Foundry Management: A Dual-Mode System for Intelligent Manufacturing** N.P. Vernekar, L.V. Bidari, P.P. Jadhav, G.R. Chate, A.N. Kallol
201	**Modeling of Threshold Voltage in β-Ga_2O_3 Dual-Layer Channel Junctionless Field-Effect Transistor** Manukrishna V R, Nikhil K S
163	**Machine Learning-Based Optimization for Hydrogen Production from Pyrolysis of low-rank coal** Hemant Kumar Bajaj, Aditya Girase, Haridarshan N, Chinta Sankar Rao
107	**A Systematic Framework for Enhancing Anomaly Detection Efficiency in Traffic Based Trajectory Analysis** Kapilamithran S, Priya L

POSTER PRESENTATIONS	
Paper ID	**Abstract Title and Authors**
36	**Optimization of Chitosan-Neem Gum Based Biodegradable Edible Film Production Parameters Using Response Surface Methodology** Vishnu Soman, Maneesh Kumar Poddar
43	**A review on hemicellulose-based hydrogel and its application in the adsorptive removal of emerging organic pollutants from wastewater** Keshava Prajwal P, K U S S Abhinav, Binay Kumar Tripathy
52	**Nanobubble based dissolved air flotation for wastewater treatment – A Review** Shama Sharal D Cunha, Ramananda Bhat
53	**Silver incorporated ZIF-8 supported on reduced graphene oxide for photocatalytic CO2 reduction** Dilip Rao, Mavin Jason Pinto, Thillai lakshmi, Ramyashree M. S, S.Shanmuga Priya, SVSR Krishna Bandaru
58	**Addressing Key Challenges in Sustainable Energy: Battery Recycling and Hybrid Energy Storage Systems for Microgrids** Supraj S, Varshini G.C and Dr. Roopa D N

60	**Biochar Derived from Ulva fasciata Marine Algae: A Novel Approach for Dye Contaminant Mitigation** Meera Bai. S, Vismaya. P.S, Andreana Robin, Anjali Raj, Chris Mary Sam, Sebin Sibi and Vanavil Balakrishnan.
68	**Design of Amine-Based Carbon Capture Plants for Indian Natural Gas and Coal Fired Power Plants** Chanikya Dharmana, Dr. Hemanth Kumar Tanneru, Dr. Venkata Reddy Palleti and Dr. Koteswara Rao Putta
70	**Valorization of Water Hyacinth for Xylitol and Lipid Accumulation Using Meyerozyma guilliermondii** Anbunithi K, Ashish A Prabhu
90	**Mineral Processing of Graphite Ore** Meenakshi Mattathil Sathish, Satakshi Porwal, Dr. Gnanasundaram Nirmala, Dr. V Bhadra Rao Koruprolu
96	**Synthesis of an Aliphatic Hyperbrached Polyester – Reaction** **Kinetics studied using FTIR Spectral Analysis** Nedumthuruthiyil, Akash Philip
97	**Aromatic Hyperbranched Polyester Reaction Kinetics studied using FTIR-ATR Spectral Analysis** Dyuti Dutta
99	**Spectral Analysis of Silane-based Aromatic Hyperbranched Polyester (Gen-1) Reaction Kinetics** Praveen R
100	**Impact of End-capping on Aliphatic Hyperbranched Polyester (Gen – 1) Reaction Kinetics**

	Sarath M
108	**Soil and Crop Nutrient Analysis, Moisture Prediction Using KNN** J.Yedukondalu, T. Sindhu, K. Dhanusha, G.Lokesh, G.Vasudha, T.Sushit Naga Teja, M.Vijaya Sai
111	**Real Time Weather Driven Soil Moisture Forecasting Using Combined LSTM and Gradient Boosting for Sustainable Farming Practices** Muthamizh Selvam.M , Varaprasad G L, Kishore Babu K, Aluri Lakshmi Tejaswini , Male Aswini , Muvvala Sanjana
117	**Estimation of biomass and carbon sequestration by trees in Yenepoya (Deemed to be University) campus** Bhagya B Sharma, Swathi Gunagi, Pratheeksha Shekar, Vinayaka Bhatta
130	**Smart Environmental Control System For Buffalo Farm With Solar Powered Cooling** R. Sri Vardhan, A. Ramu, B. Harika, N. Sai Saranya, T. Ramya, K. Sushma
162	**Development of Zn-Cu MOF for the controlled delivery of Doxorubicin and generation of ROS for antibacterial application** Harmeet Singh, Rashmi Murthy, Dr PE Jagadeesh Babu

164	**Smart Cattle Health Monitoring System Using IoT and Machine Learning** Sailaja Duddela, Dharani Buddha , Venkata Maneesha Baireddy , Saraswathi Kongaleeti, Sasi Kiran Tumati
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