

TABLE OF CONTENTS

S. NO	PAPER TITLE WITH AUTHOR	PAGE NO
	CE	
01	Assessment of Meteorological Drought Scenarios for Ramanathapuram District <i>Sonu Shabir, Dr. V. Jaya and R. Lini Chandran</i>	01
02	Flood Susceptibility Assessment Under Changing Rainfall Scenarios <i>Sulekha Jessy, Dr. V. Jaya and R. Lini Chandran</i>	07
03	A Parametric Study on Lateral Torsional Buckling of I Section Beams with Warping Restraints <i>K.S. Gayathri and Dr. Rekha Ambi</i>	19
04	Sustainable Construction Supply Chain Modelling in Coastal Regions: Integrating Green Technologies for Enhanced Resilience <i>Shriharsha, B. Jagadeesha Pai and S. Sumukh Hungund</i>	24
05	Modelling and Analysis of Corrugated Hollow Steel Piles in Sandy Soil Using Finite Element <i>K. Tijo Robinson and S. Renjith Anand</i>	32
06	Ecological Examination of Polyethylene Removal from Freshwater <i>J. Najina Mophin, K. Kani and P.G. Reji</i>	41
07	Optimization Of Truck Routes for Waste Collection in Kollam City Using GIS <i>Bilal Ibin Nazeer, P.G. Reji, Mophin Kani Kani and Aran Castro</i>	46
08	Electrocoagulation For Treating Greywater in Urban Areas with the Goal of Removing Microplastics <i>Greashma Lawrance, K. Mophin Kani and P.G. Reji</i>	58
09	Optimization Of Electrochemical Oxidation Parameters for Efficient Degradation of Polyethylene Microplastic in Water <i>Lekshmi Sathyan, P.G. Reji and Mophin Kani</i>	62
10	Enhancing the Performance of cellular beam using sitffner reinforcement <i>S. Anand, Nandhana Manoj, Athul Chandran, Shiji Rehuman and Merin Christy</i>	67
11	Landslide Warning Alarm at Varkala Cliff <i>Athulya Raj, Ardra Sunny, Y.J. Nandhan, S.A. Sreenandhu and Prof. B. Megha Raj</i>	75
12	Leveraging BIM and Navisworks for Efficient Educational Building Construction <i>Gowri Unnikrishnan, Y. Hridya, Jithu Jayaraj, Muhammad Anzar and Prof. S. Rohith</i>	83
13	Subsoil Stabilisation Using Nano Chemicals <i>J.R. Unnikrishnan and Dr. V. Jaya</i>	99
14	Buckling performance enhancement of star- batteded angle columns using stiffened edge projections <i>Reshma Reghu, Dr. M. Althaf and A. Gazal Gafoor</i>	110

S. NO	PAPER TITLE WITH AUTHOR	PAGE NO
15	Structural Response of castellated steel beams under impact loading: A Parametric Study <i>A. Gazal Gafoor and Dr. M. Althaf</i>	118
16	Comparative Study on Stress Concentration in Tubular T-Joints with Casting and External Ring Under In-plane Bending <i>A.B. Shivani, V.S. Anupama and Dr. M. Althaf</i>	123
17	Study On Effect of Damages on Damage Index of a Cantilever Beam <i>S. Anusha Lal, Dr. Chinsu Mereena Joy and Dr. M. Althaf</i>	138
18	Towards A Sustainable Future: Engineered Nanomaterialsfor Carbon Capture and Storage <i>Abhi Harikrishnan, Dr. P.G. Reji and L. Amritha</i>	146
19	Comparative analysis of openings on the lateral load behaviour of GFRG panel infilled RC frames <i>V.S. Anupama, N. Thasleen and Dr. M. Althaf</i>	154
20	Clayey Soil Stabilization using Metakaolin and Bamboo Fibre <i>L.D. Aparna, Adithya Mohan, Rini Madhavan Rajeev, S.A. Anakha and M.E. Fathima</i>	169
21	Experimental Study on Rapid Sand Filter Using Activated Coconut Shell and Anthracite as Capping Material for Water Purification <i>S.G. Siyadas, S.P. Sooraj, S. Ansalna, Sanusha Babu and N.S. Althaf Muhammed</i>	179
22	Influence of Geofoams Density on Underground Pipes for Enhancing Stability in Kerala Road: Using PLAXIS 2D <i>A.R. Aathira Krishnan, J. Santhanu Nair, Sruthi Shobhan, Seena Irabin and Harish Sanjay</i>	189
23	Experimental and Numerical Study of Enhancing Flexural Behaviour of RC Beams Using Wire Mesh Reinforcement <i>M. Amaya, Nandana Rajeev, L.P. Abhijith Kurup, R. Yadhu Krishnan and S. Suja Nair</i>	209
24	Assessment of Salt Water Intrusion in Open Wells of Paravur Municipality <i>V.S. Varsha, N. Gowry Biju, Aswanth Jayan, E. Sabir and Dr. K. Mophin Kani</i>	216
25	Parametric Study on Timber-Filled CFRP-Coated Steel Tubes Under Axial Compression Using Finite Element Analysis <i>S. Arya, E. Sajjad, A. Hadiya, A. Anjali and S. Jithu Jose</i>	233
26	Sustainable Off-Grid Multistoried Building Using GFRG Panels <i>A.O. Abhinandu, N. Khadeeja, R. Revathy, Ejas Ahammed and Prof. Anju Sara Thomas</i>	243
27	Water Quality of Open Wells in Paravur Municipality, Kollam District, Kerala <i>K. Mophin Kani</i>	255

S. NO	PAPER TITLE WITH AUTHOR	PAGE NO
28	An Empirical Study on Assessing the Role of Plantation Activities in Telangana for Climate Change Mitigation <i>Nissy John, P.G Reji and Anuradha Palla</i>	259
29	Study on mechanical characteristics of concrete by replacing aggregates by reclaimed asphalt pavement aggregates <i>Seena Irabin</i>	272
	CSE	
30	Virtual Fashion Stylist Using Artificial Intelligence <i>C. Dinu Lakshmi, Esther Santhosh, Kavya Sivaram, Treesa Joy, Jasmy Davis, and Anly Antony</i>	279
31	Relative Age and Gender Position Learning for Face Based Estimation <i>Arpitha Renjan, and C.T. Lincy</i>	287
32	Powerlift-AI: An AI-Based Powerlifting Trainer for Enhanced Competition Readiness <i>Rosh Cherian, Dr. Subu Surendran, J. Liyana, and G. Venkateswar</i>	298
33	MedSentL: A Machine Learning Based Sentiment Analysis System for Healthcare Performance Evaluation <i>Sruthi Biju, Jeevan Prabhu and Dr.A.P Haripriya</i>	311
34	Blockchain-Based Object Tracking for Secure and Transparent Supply Chains <i>Gouri Ashok, Nanditha Sajeesh, V.A. Karthika, Sneha Alias and Sandeep Chandran</i>	323
35	Machine Learning Models for Gamma-Hadron Separation using the MAGIC Gamma Telescope Dataset <i>V.S. Megha Raj, Ganga R Nair, and Philomina Simon</i>	330
36	Self Billing and Checkout System Using AI <i>K.R. Kaveri, Liza Mary Kuriyan, P. Nikitha, Sharon Tarshi, A.S. Sabira and Dr.L.S. Jayanthi</i>	337
37	Blockchain Based Cloud Storage and File Sharing System <i>N. Afna, A. Areena, Samiya Khan, M.S. Sruthy, A.S. Sabira and Dr.P.Y Muhammed Anshad</i>	347
38	Real-Time Object Detection in Flood Scenarios using Multimedia Images and Machine Learning Techniques <i>A. Kalaivani, and Benisha Janice</i>	361
39	Automating Attendance with Mobile Cloud Computing: A Comprehensive Review and Proposed Enhancements <i>R.S. Surya Nath, B. Aswin, Avani Ajikumar, Devika S Nair and Gopika Ganesh</i>	372

S. NO	PAPER TITLE WITH AUTHOR	PAGE NO
40	Virtualfit AI: Revolutionizing Virtual Try-Ons <i>P.S. Sidharth, Sujith Thilakan, C.V. Ramya, E.R. Aswathy, and K.S. Devanandha</i>	385
41	Classification of Sleep Disorders using Machine Learning Algorithms <i>Breyolin A.S. Febi, and Herlin</i>	395
42	Parkinsonism Diagnosis through Voice using Enabled Machine Learning Algorithms <i>H.A. Aneesa, R. Hari Krishnan, and Philomina Simon</i>	408
43	Smart Classroom Monitoring: Real-Time Attendance and Emotion Analysis Using AI <i>S. Gokul Krishna, N. Reshma Pillai, and Philomina Simon</i>	414
44	Smart Online Voting System with Real-Time Face Recognition for User Authentication using Blockchain and Deep Learning <i>S. Parvathy, A. Ankita, S. Sooraj, Aswani S Anish, Deepa Merin Jose and Dr.P.Y. Muhammed Anshad</i>	424
45	Web Controlled Surveillance Robot for Rescue Operations <i>Aparnna Anilkumar Jyolsna, Chandana Nair, Dia R Pillai, S R. Nandana, Dr.P.Y. Muhammed Anshad and Dr.J.S. Jayanthi</i>	434
46	MONAI-Based Preprocessing Pipeline for Brain Tumor Segmentation from MRI Scans <i>Dr. P.Y. Muhammed Anshad, Dr. L.S. Jayanthi, Dr. Zina Ravindran, Dr. Nishi S Das, Al Ameena and A.S. Sabira</i>	446
47	Skin Lesion Segmentation for Dermoscopic Images using U-Net with VGG-16 Encoder <i>Al Ameena, Dr. P.Y. Muhammed Anshad, Gimy Joy, B. Preethi, Dr. L.S. Jayanthi, and Deepa Merin Jose</i>	453
48	Prediction of Liver Lesion using Deep Learning <i>Anchana Asok, Sruthy Ajith, Dr. P.Y. Muhammed Anshad, Dr. L.S. Jayanthi, F.R. Shafina, and A.S. Athira</i>	459
49	News Sphere: A Personalized News Discovery Platform <i>Dr. P.Y. Muhammed Anshad, Sunitha M Nair, Girishma G Girish, Meghana Sivan and A.R. Rudra</i>	469
50	Crime Investigation and Forensic Investigation using AI- Powered System <i>Adithya Jayan, S. Joyal, Salman Remili, Muhammed Ali Ansari, Anchana Asok and Dr. P.Y. Muhammed Anshad</i>	479
51	Eliot: Cybersecurity Focused Linux Distro and AI Pentesting Suite Tool <i>S.S. Bharath, H. Jishnu, S. Sabarinath, A. Rahul, R. Sivakumar, and P.Y. Muhammed Anshad</i>	486

S. NO	PAPER TITLE WITH AUTHOR	PAGE NO
52	Developing Image Classification Systems with Convolutional Neural Networks: A Python-Based Approach <i>A.S. Athira, P.Y. Muhammed Anshad, L.S. Jayanthi, F.R. Shafina, A.S. Sabira, and Ameena AI</i>	491
53	Advanced Digital Content Analyzer <i>N. Hilal Muhammed, V.S. Abhayan, D.S. Aswin, Aleesha Rahim, M. Sunitha Nair, and L.S. Jayanthi</i>	500

TABLE OF CONTENTS

S. NO	PAPER TITLE WITH AUTHOR	PAGE NO
	ECE	
1	NPK Finder <i>A.B. Abhiram, Vimal Victor, Vinu Joseph, J. Savin Kumar and Vinitha B Elza</i>	509
2	Intelligent Surveillance and Species Detection System for Crop Protection from Wild Animals <i>V.S. Aghil, T.S. Akshaya, K. Akshay Krishna, T.S. Athul and E.R. Aswathy</i>	517
3	Landslide Detection and Monitoring System using Satellite Images <i>S. Aneena Jenifer, G.S. Ahalya, Akhilesh S Aji, Abhirami Anil and Lekshmi P Govind</i>	528
4	Proposal for Sewage Treatment Plant with Provision for Septage Handling and SCADA Integration at Kureepuzha <i>A.S. Reshma Mohan and C.A. Anoop</i>	538
5	Deep Learning for Low Dose CT Denoising: A Review of Methodologies and Clinical Implications <i>Indu V Nair and S. Arya</i>	546
6	Techniques for Detecting Diabetic Retinopathy: A Review <i>Lekshmi P Govind and Jacob V Panicker</i>	552
7	PMD Equalization Using a Second-Order Optical FIR Filter in High Speed Fiber Optic Links <i>G.R. Sreeragi, N. Vijayakumar and R. Pradeep</i>	558
8	Advances in Breast Cancer Image Segmentation: A Review of Deep Learning, Transformers, and Emerging Technologies <i>S.S Anu, Dr. R. Neethuraj and Divya Madhu</i>	566
9	Enabling Sustainable IoT: A Review of Low-Power Smart Sensor Technologies and Applications <i>Neethu Susan Alex, Divya Madhu, Lijo V Jacob and S.S Anu</i>	572
10	An Intelligent CoAtNet Model for Chest X-Ray Based Multi-Class Lung Disease Detection <i>D.V. Abhilash and Subu Surendran</i>	582
11	Neuromorphic Computing for Energy-Efficient Edge AI applications –A Review <i>Divya Madhu, D.V. Abhilash, V. Sreeja and Neethu Susan Alex</i>	593
12	Neural Fuzzy Controller for Boost DC-DC Converters <i>R. NeethuRaj, P. Sreejaya, S.S. Anu and D.V. Abhilash</i>	601

S. NO	PAPER TITLE WITH AUTHOR	PAGE NO
	EEE	
13	BMS Connect: EV Battery Management Using IOT <i>A.S. Akhil, V.M. Vaishakh, P.S. Aswin, R. Abhirami and S. Sandeep</i>	613
14	Sun Sentary: Intelligent Solar Lumi Line System <i>S. R. Abin Chandran, Vismaya Vijayan, Abin Jacob, R. S. Rinku and Arathy Rajesh</i>	619
15	Flyback Converter Based BLDC Motor Closed-Loop Speed Control for Electric Vehicle Applications <i>P.S. Nivya, K. Arun Chandrakumar, V.M Sreekala, T.S Sangeeth and Dr. Honey Baby</i>	626
16	UMANO DETECTA: The Life Saver <i>S. Abhinav, G.S. Anamika, Deepika Das, Sneha Suresh and S. Shini</i>	635
17	Aerogen: Spinning a Greener Tomorrow <i>Alen Binu, S. Shabana, N. Anzil Muhammed, A.G. Akhil and S. Lekshmi</i>	644
18	A Revised PI Controller for High Current Density DC-DC Conversion Utilizing Six Switches to Improve EV Charging Efficiency <i>Aparna Pradeep, V.M. Sreekala, Honey baby and Aadhiya Majeed</i>	653
19	Intelli Safe: Safety Sphere <i>J. Jesna, L. Vipitha, A. Aromal Krishna, M. Anamika Aneesh and Vidya Surendran</i>	662
20	Coast-Cleaner Bot <i>Mohammed Hussain, J. Angel Rose, Bebin Lisbo Bony, Jobina Jose and K.M. Sreedivya</i>	669
21	Smart Sentinel: Envision a Greener World, One Watt at a Time <i>A. Aadil Gaafoor, S. J. Athul Krishna, Bhadra Sasankan, V. Midhun Kumar and A. G. Akhil</i>	676
22	Advanced Navigation for Wheelchairs <i>Sandra Santhosh, A. Adithyan, Santhipriya, J. Arif, and Rakhi Das</i>	686
23	Power Conversion with Transformer less Boost Inverter for Stand -Alone Photovoltaic System <i>T. S. Sangeetha, Shoma Mani and P. S. Nivya</i>	699
24	Oxylive <i>H. Abhijith, Abhishek Aravind, Akshay T S, Rahul R and Sudheep S Pillai</i>	711
25	Artificial Intelligence: Revolutionizing Electrical and Electronics Engineering <i>Chinmay Krishna S and Dr. Nisha. G. K</i>	716
26	Multifunctional Non-Isolated Converter for Electric Vehicle Applications <i>Aadhiya Majeed, Aparna Pradeep, Arun Chandrakumar and V.M. Sreekala</i>	725

S. NO	PAPER TITLE WITH AUTHOR	PAGE NO
27	Review on Torque Ripple Mitigation Strategies and Fault Tolerant Control Techniques for Switched Reluctance Motor Drives <i>R.S. Rinku, G.K. Nisha and A. Sheryl Arulini</i>	733
28	Mitigating Risks in EV Wireless Power Transmission Through Foreign Object Detection <i>P. Sandhya, Dr. G. K. Nisha and S.S. Aishwarya,</i>	744
29	Echo View: Sound Meets Sight <i>Avinash P, Nitin S, Vishnu B, Athira Chandran and D. Mohammad Sha</i>	752
30	Advanced Navigation for Wheelchairs <i>Sandra Santhosh, J. Arif, A. Adithyan, Rakhi Das and Santhipriya</i>	758
31	Enhancing Renewable Energy Integration through Floating Solar Photovoltaic Systems: Energy Management and Smart Grid Solutions <i>Aymen Mohammed Haneef, M.K. Nesihath, K. Shanid, K.V. Smitha, Della David, H. Haseena, K. Nafeesa, C. Shabil Mohammed Ismail, Aans Kunjumammed and Omar Rashid Abid</i>	765
	ME	
32	Advanced Desiccant Composites: Efficient Moisture Control material for Adsorption based Cold Storage <i>Ajmi Midhlaj, V. Baiju, Angel Eby, J. Parthiv Prasad, John Joy, G. Ajayakumar, B. Jinu Varghese, R.S. Manas Krishnan, R. Pranav and Akshay Aneesh</i>	772
33	A Comparative Analysis of the Turbulent Kinetic Energy of the Convergent-Divergent Nozzles with and without Corrugation <i>K. G. Kriparaj, P. S. Tide and N. Biju,</i>	779
34	Numerical investigation on the thermal performance of a finned Shell and Tube Latent Heat Thermal Storage System <i>M. Harikrishnan, P. S. Tide and N. Biju</i>	783
35	Numerical Analysis of the Development of Thermal Plumes on a Horizontal Plate <i>G. Anantha Krishnan, P. J. Joshy and P. S. Tide</i>	787
36	A Review on Ablative Thermal Protection System <i>P. Anoop, P. S. Tide and N. Biju</i>	792
37	Natures Guardian Eco Friendly Lake Restoration and Waste Collector <i>Ashita Narayana Murthy, H.V. Sanketh, M. B. Donvi Dechamma, Dr B. Manjunatha and P. N. Kavery</i>	800

S. NO	PAPER TITLE WITH AUTHOR	PAGE NO
38	Optimizing Silicagel-Banana Peel Based Composite Adsorbents for Sustainable Water Treatment Solutions Using Numerical Analysis <i>Ashna Maria Martin, M. D. Revathy, S. Sandeep, V. Baiju, S.M. Aby, K. Meera Krishna, Aneesh G Nath, Aparna R Pillai and M. Nandana</i>	807
39	Detachable Electric Wheelchair <i>C. Sowmya, T. M. Ganavi, K. V. Akshatha, M. Harshitha and P.S. Deepika.</i>	816
40	Empowering farming communities through digital innovation: a sustainable MILP-based web system for Sugarcane supply chain optimization in rural agricultural development <i>K. Sagar, M. Benakaraj Nayaka, M. C. Rakshith Gowda, R. ManojKumar, Dr. B. Manjunatha and A. S. Bindhu</i>	823
41	Sugar Cane Harvesting Machine Tool Design and Fabrication <i>A.S. Bindhu, Dr. B. Manjunatha, F. Salman, N. Kiran, J. Chandan and Roshan singh</i>	31
42	Review on the Thermal Performance and Fluid Flow Characteristics of Nano-Fluid and Nano-PCM Based Cooling in Mini/Microchannel Heat Sinks <i>V. Emlin and P. S. Tide</i>	841
43	Experimental Investigation on Mechanical, Electrical and Acoustical Properties of Lignocellulosic Bio fiber reinforced Green Epoxy Composites <i>L. Prabhu, S. Gokul Kumar, S. Dharani Kumar and A.G. Karthikeyan</i>	847
	OTH	
44	Advanced Brain Tumor Segmentation in Medical Images Using T-Membership Function and Hypergraph Clustering Technique based on normalized cuts <i>P. Vinoth and P. Karthick</i>	863
45	Spectral Analysis on the Energy of Maximal Planar Graphs: Eigenvalue Bounds and Structural Insights <i>G. Anilkumar and Dr. R. Binthiya</i>	882
	CSE	
46	Hybrid Approach to Deepfake Video Detection for Enhanced Security <i>H. Ansar, Dr. Mathusoothana S. Kumar and Dr.L.S. Jayanthi,</i>	888