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1st International Conference on Advanced Innovations in Engineering, Science and Technology (AIEST-2024)



28th – 29th October, 2024

Organized by

Abacus Institute of Engineering and Management (AIEM)

Mogra, Hooghly, West Bengal – 712148

Technical Sponsor

**IEEE
ComSoc**
IEEE Communications Society

Kolkata
Chapter

Program Schedule

Day 1 ----- 28.10.2024

Time	(Session Coordinators: Prof. Titas Bhaumik & Prof. Basudha Chowdhury)
Event Link: https://meet.google.com/udy-juga-oay	
(10:00 –10:05) am	Prof. (Dr.) Jinia Datta, Principal, AIEM
(10:05 –10:10) am	Lamp Lighting & Inaugural Ceremony
(10:10 – 10:20) am	Dr. Jyoti Sekhar Banerjee, HoD, AI-ML, Bengal Institute of Technology, General Chair, AIEST
(10:20 –10:30) am	Prof. (Dr.) Debashis De. Professor, MAKAUT, General Chair, AIEST
(10:30 –10:40) am	Prof. Dr. Samarjit Sengupta, Professor, University of Calcutta
(10:40 –10:50) am	Prof. Dr. Jitendra Nath Bera, Professor, University of Calcutta, Plenary Speaker, AIEST
(10:50 –11:00) am	Snehasis Banerjee, TCS Research & Innovation, Industry Chair, AIEST
(11:00 – 11:10) am	Prof. (Dr.) Krishnendu Chakrabarty, Principal, Government College of Engineering & Ceramic Technology

HIGH-TEA: 11:10 AM – 11:30 AM

Online Invited Talk Session Session Chair: Dr. Jyoti Sekhar Banerjee

Event Link: <https://meet.google.com/vnm-www-ppt>

(11:30 am - 12:00 pm)	Dr. Muhammad Mujtaba Asad Lead Researcher, Educational Technologies and TVET Research Group at Sukkur IBA University	Title: Audio-Visual Flipped Classrooms: A Pathway to Improved Self-Regulated Learning
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Plenary Talk Session Session Chair: Prof. (Dr.) Samarjit Sengupta

Event Link: <https://meet.google.com/udy-juga-oay>

(12:00 pm - 01:30 pm)	Prof. Dr. Jitendra Nath Bera Electrical Engineering Section, Department of Applied Physics, University of Calcutta, Kolkata, India	Title: Demand Side Management and EV Operation Coordination in SMART Grid Systems
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LUNCH: 1:30 PM – 2:30 PM

International Conference On Advanced Innovations In Engineering, Science And Technology (AIEST-2024)

Day - 1

Date: 28/10/2024

Time: 3.00 pm - 5.20 pm

Track: Electronics & Communication Engineering (Track 1)

Room: CSE Lab 1 (Block A)

Chair: Prof. (Dr.) Monojit Mitra, Professor, IIST-Shibpur

Chair: Prof. (Dr.) Partha Pratim Sarkar, Professor, University of Kalyani

Chair: Prof. (Dr.) Biswarup Neogi, Professor, JIS College of Engineering

Session Co-Ordinator: Prof. Sudeshna Das & Prof. Subrata Gorai

Link: <https://meet.google.com/vnm-www-ppt>

Sl. No.	Paper ID	PAPER TITLE	AUTHORS
1	12	Photoplethysmograph (PPG) Based Biomedical Signal Analysis Using Machine Learning And Vital Sign Monitoring Using A Web Application	Soumyadip Jana
2	61	Performance Analysis Of Nine Level- Inverter Under Different Level Shift Modulation Technique With Variable Frequency	Sagnik Lodh
3	87	A Liquid Level Transmitter Using Force Resistive Sensor And Regression Technique Of Machine Learning	Anindya Ghosh
4	99	Realization Of An Innovative High Efficiency N-Type Topcon Solar Cell Using A Lower Band Gap Dielectric Oxide	Shiladitya Acharyya
5	104	Investigating The Photovoltaic Performance And Thermal Stability Of AZO/Si Hetero-Junction Solar Cells With An Analytical Approach	Senjuti Das
6	105	Safe Terrestrial Route Recommendation System Using Geographical Information System	Shuvodeep Debnath
7	157	Electromagnetic Imaging System for Monitoring Hip Stem Micromovements	Saurav Kumar Roy
8	76	Analysis Of Inductor Topologies Experimentally: A Modification Of Triangular Model	Soumyendu Bhattacharjee
9	48	Optoelectronic Characteristics Of Exotic Gan/Algan Based Avalanche Photodetector	Debraj Modak

International Conference On Advanced Innovations In Engineering, Science And Technology (AIEST-2024)

Day - 1

Date: 28/10/2024

Time: 3.00 pm - 5.20 pm

Track: Electrical Engineering (Track 2)

Room: Seminar Hall (Block C)

Chair: Prof. (Dr.) Samarjit Sengupta, Professor, University of Calcutta

Chair: Prof. (Dr.) Krishnendu Chakrabarty, Principal, Government College of Engineering & Ceramic Technology

Chair: Prof. (Dr.) Chandan Kumar Chanda, Professor, IEST-Shibpur

Session Co-Ordinator: Prof. Basudha Chowdhury & Prof. Sourav Mitra

Link	https://meet.google.com/udy-juga-oay		
Sl. No.	Paper ID	PAPER TITLE	AUTHORS
1	16	Demand-driven Automatic Soil Cleaning for PR Enhancement of a Roof-top Solar PV Power Plant	Saheli Sengupta
2	19	Application of artificial neural networking for the estimation of illuminance and energy efficiency parameters of public road lighting systems	Sourin Bhattacharya
3	26	LED Based Energy Efficient Lighting Design in a Metro Railway System	Ankit Ghosh
4	36	FFT based Comparative Performance Study of Electric Vehicle Charging System	Sudarshan Das
5	50	Real time detection and classification of dust and shading on solar panels using Multi Agent System and hybrid Machine Learning	Samrat Hazra
6	9	Evolution of Linear Electrical Model of Non-Branded White LEDs and its Application in the Field of Dimmable Driver Design	Khushi Rao
7	79	A Stochastic Approach for Optimal Scheduling in Mixed Generation	Bishaljit Paul
8	98	Development of Accurate Fault Diagnosis System for Electric Vehicle Pertained Lithium-Ion Batteries Using Deep Neural Network	Titas Bhaumik
9	125	Comparative Performance Analysis of Novel Hybrid Approach in Sustainable PV MPPT Architecture	Debabrata Mazumdar
10	115	Development Of Sensor-Less Speed Estimation Method Of IFOC Based IM Drive Using Genetic Algorithm	Sumangal Bhaumik

International Conference On Advanced Innovations In Engineering, Science And Technology (AIEST-2024)

Day - 1

Date: 28/10/2024

Time: 3.00 pm - 5.20 pm

Track: Mechanical Engineering (Track 3)

Room: C 212 (Block C)

Chair: Prof. (Dr.) Debashis Roy, Professor, Jadavpur University

Chair: Prof. (Dr.) Bijan Kumar Mandal, Professor, IEST-Shibpur

Chair: Prof. (Dr.) Santanu Das, Professor, Kalyani Government Engineering College

Session Co-Ordinator: Prof. Shankha Subhra Goswami & Dr. Soumya Bhowal

Link <https://meet.google.com/uds-vqvx-nsk>

Sl. No.	Paper ID	PAPER TITLE	AUTHORS
1	110	Thermal Behavior of a 3D Printing Nozzle	Debangana Bhattacharya
2	114	Mechanical Properties and Rheological Investigation of Aluminum A356 Dual Approach through Experimental and Numerical Simulations	Somnath Mitra
3	135	Numerical modeling of thermal phenomena and optimization of process parameters in friction stir welding of ZE42 magnesium plates	Sayon Dey
4	136	Heat Transfer and Failure Analysis in a Ti-6Al-4V Gas Turbine Compressor Stator Blade	Nityanando Mahato
5	148	Optimizing fluid delivery technique for enhanced grinding of titanium grade 5: a multi-criteria decision-making approach using combined AHP-TOPSIS method	Sourav Adhikary
6	150	Study on Abrasive jet drilling of Soda-lime Glass under Varying Abrasive Jet with SiC Abrasive at 4 kg/cm ² System Pressure	Deb Kumar Adak

International Conference On Advanced Innovations In Engineering, Science And Technology (AIEST-2024)

Day - 1

Date: 28/10/2024

Time: 3.00pm - 5.20pm

TRACK: Computer Science & Engineering & Interdisciplinary Areas (Track 4)

Room: Language Lab (BLOCK C)

Chair: Prof. (Dr.) Abhijit Das, Professor, RCC Institute of Information Technology

Chair: Snehasish Banerjee, Lead Research Scientist, TCS Research

Session Coo-Ordinator: Dr. Bishal Dey & Prof. Himanish De

Link <https://meet.google.com/ckr-wnaq-ifz>

Sl. No.	Paper ID	PAPER TITLE	AUTHORS	MODE
1	33	Campus Connect: Multi-modal Admission Assistant	Avishek Gupta	Offline
2	92	Waste to Wealth: Development of Building Block using Plastic Medical Waste and Straw-Enhanced Clay	Sucharita Bhattacharyya	Offline
3	47	Geospatially Augmented Flood Risk Assessment Incorporating Machine Learning Approaches: A Case Study in the Teesta River Basin	Deepanjan Sen	Offline
4	93	Advancing Software Quality Assurance: Methods, Security, and AI Impact	Siddhi Jain	Online
5	20	Applicability of Big Data in Automation Industries- Intellectual Property Management	Aranya Nath	Online
6	14	Machine Learning based Rainfall Prediction for Weather Forecasting: A Comparative Approach	Ankita Mandal	Online
7	113	The Impact of Regularization on Financial Forecasting Models	Khoa Thanh Bui	Online
8	46	Predicting Bike Sharing Demand: Analyzing Weather, Time, and Seasonal Influences	Hirak Sarkar	Online

End of Day 1

Program Schedule

Day 2 ----- 29.10.2024

Time	Online Invited Lecture Session Session Chair: Dr. Jyoti Sekhar Benerjee (Session Coordinators: Prof. Sohini Banerjee)
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Event Link: <https://meet.google.com/udy-juga-oay>

(10:00 –11:00) am	Prof. (Dr.) Siddhartha Bhattacharya VSB Technical University, Ostrava, Czech Republic & Algebra University College, Zagreb, Croatia, General Chair, AEST Title: Quantum Neural Network
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Time	Online Keynote Speech Session Session Chair: Dr. Bishaljit Paul (Session Coordinators: Prof. Debraj Modak)
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Event Link: <https://meet.google.com/udy-juga-oay>

(11:00am – 12:00pm)	Prof. (Dr.) Valliappan Raju Director Research Management Center Perdana University, Malaysia Title: Innovative research methodologies in the digital age: leveraging computational advances using AI tools.
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Time	Keynote Talk Session (Session Chair: Dr. Chiranjit Sain) (Session Coordinator: Prof. Debabrata Mazumder)
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Event Link: <https://meet.google.com/udy-juga-oay>

(12:00 –01:00) pm	Prof. (Dr.) Jerzy Ryszard Szymanski Professor University of Technology and Humanities in Radom, Poland Title: The Industrial scenario of heavy electric vehicles development in smart cities. Main idea: Discussion of the new multifaceted function of using the AC drives as EV charger also.
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LUNCH: 1:00 PM – 1:30 PM

International Conference On Advanced Innovations In Engineering, Science And Technology (AIEST-2024)

Day - 2

Date: 29/10/2024

Time: 2.00pm - 3.00pm

Track: Electronics & Communication Engineering (Track 1)

Room: Online

Chair: Prof. (Dr.) Monojit Mitra, Professor, IEST-Shibpur

Chair: Prof. (Dr.) Partha Pratim Sarkar, Professor, University of Kalyani

Chair: Prof. (Dr.) Biswarup Neogi, Professor, JIS College of Engineering

Coordinator: Dr. Soumya Bhowal

Link <https://meet.google.com/vnm-www-ppt>

Sl. No.	Paper ID	PAPER TITLE	AUTHORS
1	161	Prediction of External Quantum Efficiency for Organic Tin Based Perovskites	Saurabh Basak
2	86	Beyond Sight: ML Techniques for Image Classification	Preeti V Savanur

International Conference On Advanced Innovations In Engineering, Science And Technology (AIEST-2024)

Day - 2

Date: 29/10/2024

Time: 02.00pm - 03.00pm

TRACK: Mechanical Engineering (Track 3)

Room: Online

Chair: Prof. (Dr.) Debashis Roy, Professor, Jadavpur University

Chair: Prof. (Dr.) Bijan Kumar Mandal, Professor, IEST-Shibpur

Chair: Prof. (Dr.) Santanu Das, Professor, Kalyani Government Engineering College

Coordinator: Prof. Shankha Shubhra Goswami

Link <https://meet.google.com/uds-vqvx-nsk>

Sl. No.	Paper ID	PAPER TITLE	AUTHORS
1	13	Experimental investigation on high-speed orthopedic bone drilling aiming for force and temperature minimization	Srija Sarkar
2	1	Indigenization for Indian Defense Forces: Opportunities & Challenges of Smart Materials	Ashok Kumar Panda
3	23	Comparative Analysis of Genetic Algorithms and CDS for Optimizing Flow Shop Scheduling Under Industrial Constraints.	Nameet Kumar Sethy

International Conference On Advanced Innovations In Engineering, Science And Technology (AIEST-2024)

Day - 2

Date: 29/10/2024

Time: 2.00pm - 4.30pm

Track: Electrical Engineering (Track 2)

Room: Online

Chair: Prof. (Dr.) Samarjit Sengupta, Professor, University of Calcutta

Chair: Prof. (Dr.) Krishnendu Chakrabarty, Principal, Government College of Engineering & Ceramic Technology

Chair: Prof. (Dr.) Chandan Kumar Chanda, Professor, IEST-Shibpur

Coordinator: Dr. Monalisa Halder

Link: <https://meet.google.com/udy-juga-oay>

Sl. No.	Paper ID	PAPER TITLE	AUTHORS
1	118	Comprehensive Study of Encryption Algorithms for Obtaining Privacy Protection in Smart Grids	Rakhi Gupta
2	120	Optimal Design Parameters of A Single-Phase Small Transformer By Different Optimization Techniques	Prithish Kumar Ghosh
3	121	Torque ripple control using hybrid converter in light weight Electric Vehicle	Sunam Saha
4	151	Optimizing Electric Vehicle Performance by using MATLAB for NEDC Urban and Suburban Drive cycle	Soujannya Ballav
5	159	Safeguarding Mechanisms Against Cyberattacks in Smart Grids Employing Grid Forming Inverters: Ensuring Stability and Resilience	Taha Selim Ustun
6	160	Techno-Economic Analysis of Off-Grid PV Systems and Batteries vs. Diesel Generators: Life Span and Cost-Effectiveness	Taha Selim Ustun
7	25	Transforming Waste into Energy through a Prototype Model for Sustainable and Future-Oriented Solutions	Avoy Ghosh
8	115	Development Of Sensor-Less Speed Estimation Method Of IFOC Based IM Drive Using Genetic Algorithm	Tista Banerjee

International Conference On Advanced Innovations In Engineering, Science And Technology (AIEST-2024)

Day - 2

Date: 29/10/2024

Time: 2.00pm - 3.00pm

Track: Computer Science & Engineering & Interdisciplinary Areas

Room: Online

Chair: Prof. (Dr.) Abhijit Das, Professor, RCC Institute of Information Technology

Chair: Snehasish Banerjee, Lead Research Scientist, TCS Research

Chair: Dr. Mahua Nandy Pal, Assistant Professor, MCKV Institute of Engineering

Chair: Dr. Mauparna Nandan, Associate Professor, Techno Main Saltlake

Coordinator: Prof. Avishek Gupta

Link <https://meet.google.com/ckr-wnaq-ifz>

Sl. No.	Paper ID	PAPER TITLE	AUTHORS
1	89	Study on engine performance using various blends of jatropha and lemon peel oil biodiesel with diesel	Kalyan Mukherjee
2	111	The Impact of Crude Oil Prices on Exchange Rates: An Econometric Analysis	Khoa Thanh Bui
3	123	Structural Behavior and Ductility Variations in Multi-Story RC Frames Under Seismic Loading	Suvendu Kar

Plenary Talk Session
Session Chair: Dr. Debasis Mitra

(Coordinator: Prof. Dr. Bishal Dey)

Event Link: <https://meet.google.com/vnm-wwwu-ppt>

(03:00 pm - 04:30 pm)

Prof. Robin Augustine

Professor
Upsala University, Sweden

Title: Fat- Intraday Communication (Fat-IBC) Technology.

Valedictory Session

(Coordinator: Subhra Barai)

Event Link: <https://meet.google.com/udy-juga-oay>

(04:30 pm - 04:40 pm)

Prof. Devmalya Banerjee
Co-Patron, AIEST

(04:40 pm - 04:50 pm)

Dr. Jyoti Sekhar Banerjee
General Chair, AIEST

(04:50 pm - 05:00 pm)

Dr. Goutam Kumar Das
Convener, AIEST

AIEST
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Organized by

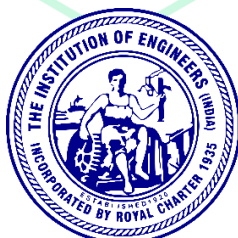
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