



04 - 06 November 2024, Maldives

ICECCME'24



## CONFERENCE PROGRAM

(Physical Part)

November 4 <sup>th</sup> , 2024			
Time	HALL-A	HALL-B	HALL-C
08:00-08:45	REGISTRATION		
08:45-09:30	Welcome Speech <i>Aishath Shehenaz Adam</i> ICECCME 2024 Conference Chair		
	Opening Speech <i>Mehmet Akif Senol</i> ICECCME 2024 Conference Chair		
	Keynote Speech <i>Prof. Dr. Dennis Nestrory Mwigusa</i> (Executive Director - Africa Research Institute For AI, ARIFA - IEEE Tanzania Chair) <b>Title:</b> The Synergy of AI and Mechatronics: Revolutionizing System Control and Automation		
09:30-10:00	COFFEE BREAK		
10:00-11:45	Session A-I: Artificial Intelligence - I	Session B-I: Energy	Session C-I: IoT & Machine Learning
11:45-13:15	Session A-II: Artificial Intelligence - II	Session B-II: Control & Robotics - I	Session C-II: Modelling & Neural Net.
13:15-14:30	LUNCH & Group Photo		
14:30-15:00	POSTER SESSION		
15:00-16:30	Session A - III Big Data & Data Science	Session B-III: Control & Robotics - II	Session C-III: Mixed - I
16:30-17:00	COFFEE BREAK		
17:00-18:30	Session A-IV: Electric Vehicles & Machines	Session B-IV: Deep Learning	Session C-IV: Mixed - II

08:00-08:45

**REGISTRATION**

Opening Speech  
**Aishath Shehenaz Adam**  
 ICECCME 2024 Conference Chair

08:45-09:30

Opening Speech  
**Mehmet Akif Senol**  
 ICECCME 2024 Conference Chair

Keynote Speech  
**Prof. Dr. Dennis Nestrory MWIGHUSA**  
 (Executive Director - Africa Research Institute For AI, ARIFA - IEEE Tanzania Chair)  
**Title:** The Synergy of AI and Mechatronics: Revolutionizing System Control and Automation

09:30-10:00

**COFFEE BREAK**

10:00-11:45

**Parallel Session A-I: Artificial Intelligence - I**  
 Chair: Federico Candela

ID	Authors	Title
74	Miriam Palmethofer, <b>David C. Schedl</b> , And Andreas Stöckl	Optimizing App Review Classification with Large Language Models: A Comparative Study of Prompting Techniques
107	<b>Heidrun Mühle, Daniel Danter</b> , Simone Sandler, Oliver Krauss, Andreas Stöckl	Process Mining-Driven Optimization of Digital Customer Journeys based on Audience Intervention Using the AI-DATA Model
153	Theodoros P. Vagenas, Konstantinos Georgas, <b>George K. Matsopoulos</b>	Mamba State Space Model (SSM) method for the automatic segmentation of Organs at Risk from Head and Neck CT images
238	<b>Samuel Züehlke</b> , Joel Nitu, Simone Sandler, Oliver Krauss, Andreas Stöckl	Self-repairing data scraping for websites
256	Anna Presciuttini, Alessandra Cantini, <b>Alberto Portioli-Staudacher</b>	From Explanations to Actions: Leveraging SHAP, LIME, and Counterfactual Analysis for Operational Excellence in Maintenance Decisions
267	Bartłomiej Grzelak, <b>Tomasz Górecki</b> , Krzysztof Dyczkowski	Team Strengths via Bayesian Modeling
355	Amitav Swapnil, Lasse Metso, Kameswara Satya Prakash Oruganti, <b>Ari Happonen</b>	Driving the Future: Utilizing Software Foundations to Improve Vehicles Functionalities

10:00-11:45

**Parallel Session B-I: Energy**

Chair: Mehmet Akif Senol

ID	Authors	Title
184	<b>D. Coiro</b> , G. Troise	A pivoting tensioned offshore wave energy converter with a motion rectifier system
195	<b>Chi Ho Li</b> , Tsun Sang David Lam, Chiu Kit Dickson Lo, Chun Wa Liu	Digital Twins: Adoption in Solar Panel System Construction
349	<b>Rasha Hasan</b> , Odorico Mendizabal, Fernando Dotti	Green Virtual Networks for Timely Hybrid Synchrony Distributed Systems
458	Lujayn Bassam Al-Khasawneh, <b>Moh'D Sami Ashhab</b>	Floating Photovoltaic System: Design and Simulation
620	Hidayet Yakupoglu, Haluk Gozde, M. Cengiz Taplamacioglu, <b>Mehmet Akif Senol</b> , Merve Demirci	Multi-Fault Classification of Unbalanced Wind Turbine Scada Data Using Stacking Classifier
584	Faraz Farhidi, Maxim Rusakov, <b>Yahia Baghzouz</b>	Electric Bill Comparison of Customers with Roof-Top PV under Different Electricity Rates
267	Tomasz Górecki, <b>Bartłomiej Grzelak</b> , Krzysztof Dyczkowski	Team Strengths via Bayesian Modeling

10:00-11:45

**Parallel Session C - I: IoT & Machine Learning**

Chair: Kingsley Okoye

ID	Authors	Title
77	<b>Norton H. Y. Yuen</b> , Fanny Tang, C. H. Li	Using Multiple Regression Model to Evaluate the Performance of Laboratory Information Management System: A Demonstrative Study
465	Jorge Ribeiro, <b>José Santos</b> , José Correia, João Lopes	Live and remote IoT data logging device for sensor data acquisition during shipment of fragile cargo
251	<b>Fadlallah Chbib</b> , Ali Mustafa, Rida Khatoun	Leveraging Machine Learning-Based PDF Malware Detection in Snort
272	Johannes Schönböck, <b>Christoph Gassner</b> , Mirjam Augstein, Ulrich Bodenhofer, Josef Altmann, Werner Retschitzegger, Wieland Schwinger, <b>Elisabeth Kapsammer</b> , Birgit Pröll, Marianne Lechner, Christoph Angster	Towards Goal-Oriented Volunteering LLMs to the Rescue?
462	<b>Salvatore Quattropani</b> , Marco Siino, Giovanni Mostile, Mario Zappia	From Motion to Cognition: Machine Learning Techniques for Parkinson's Disease Classification Using Multi-Source Data
496	<b>Thapelo Moseitlhe</b> , Adedayo Yusuff, Temitope Ayodele, Ayodeji Ogunjuyibe	Probabilistic forecasting of energy demand in a household
137	<b>Lyudmila D. Egorova</b> , Lev A. Kazakovtsev, Ivan P. Rozhnov, Tamara N. Savitskaya And Alena A. Stupina	Hybrid Stacking Model for Automatic Epileptic Seizure Detection Using Electroencephalogram Signals

11:45-13:15

**Parallel Session A-II: Artificial Intelligence - II**

Chair: Marco Siino

ID	Authors	Title
444	Isabela Dramnesc, Tudor Jebelean, <b>Sorin Stratulat</b>	Certification of Insert–Sort and Merge–Sort in Coq
452	<b>Marco Siino</b> , Fabrizio Giuliano, Ilenia Tinnirello	LLM Application for Knowledge Extraction from Networking Log Files
540	Rebecca Omowaiye, Ibrahim Ghafir, <b>Moemedi Lefoane</b> , Sohag Kabir, Amna Qureshi, Mohammed R. Daham	Artificial Intelligence and Big Data Analytics for the Detection of Fake News on Social Media
552	<b>Federico Briatore</b> , Matteo Lo Russo	Literature review on AI for energy forecasting
482	<b>Mayssa Bejaoui</b> , Fehmi Jaafar	FairDETOCS: An approach to detect and connect unfair models
596	Tariq Ahanger, <b>Abdullah Aljumah</b> , Imdad Ullah	Deep learning-based Intrusion Detection Technique for IoT Security

11:45-13:15

**Parallel Session B-II: Control & Robotics - I**

Chair: Lorant Szolga

ID	Authors	Title
53	<b>Eike Gassen</b> , Karsten Berns	Behavior-based Vehicle and Implement Control with Minimal Communication
81	<b>Robin Huwa</b> , Marcus Albrecht, Andreas Leinenbach, Johannes Schilp	Flexibility Dimensions in Cyber-Physical Production Systems
82	<b>Florian Pleier</b> , Johannes Schilp	Predictive-Reactive Scheduling to Increase Robustness of Production Systems
162	<b>Ioana Naşcu</b> , Ioan Naşcu, Zoltan K. Nagy	Application of Model Based Predictive Control for a Rotary Tablet Press
304	<b>Ioan Valentin Sita</b> , Paula-Ilinca Sucală, Vlad Mureşan	Design and realization of an industrial paper cutting machine
418	<b>Volodymyr Khilenko</b> , Andrii Zinchenko, Oleksii Stepanov, Ivan Kotuliak, Michal Ries	Application of parallel signal processing using reverse blockchain technology in conditions of network instability

11:45-13:15

**Parallel Session C - II: Modelling & Neural Networks**

Chair: António Pereira

ID	Authors	Title
221	<b>Syed Mohd Rizwan</b> , Satish Tanavade, Kajal Sachdeva, Syed Zegham Taj	Reliability Availability and Sensitivity Analysis of a Power distribution System
225	<b>Yi-Ren Wang</b> , Min-Xuan Gong	The Effects of Damping Rings on Vibration Reduction of 3D Beam Structures
207	Patrick Harris, Mia Gortney, Amr S. Abdelfattah, <b>Tomas Cerny</b> , Pablo Rivas	Designing a System-Centered View to Microservices Using Service Dependency Graphs: Elaborating on 2D and 3D visualization
593	<b>António B. Pereira</b> , Joana D. Batista, Nélia M. Silva, Bernardo Mascate	The Sealing of Copper Pipes by Ultrasonic Welding for Heat Pump Applications
129	<b>Lukáš Veverka</b>	Fourier-Enhanced Neural Networks: An Approach to Predicting Business Key Performance Indicators
160	Paolo Bouquet, <b>Andrea Molinari</b> , <b>Simone Sandri</b>	Challenges in Working with Unstructured Data in the LLM era: NER processes using Graph Neural Networks

13:15-14:30

**LUNCH & Group Photo**

ID	Authors	Title
68	<b>Tsveti Hranov</b> , Anton Dekov, Vladimir Dimitrov, Nikolay Hinov	Various peculiarities of automated test and measurements in power electronics
94	<b>Marius Misaros</b> , Dan Ioan Gota, Ovidiu-Petru Stan, Claudiu Domuta, Honoriu Valean, Liviu Miclea	Target object selection scenario classification in adaptive cruise control systems
95	Marius Misaros, <b>Dan Ioan Gota</b> , Daniela Florentina Niste, Anca Stan, Alexandru Ciobotaru, Liviu Miclea	Mastering Rocket League with Reinforcement Learning A Proximal Policy Optimization Approach
96	Dan Ioan Gota, Marius Misaros, <b>Daniela Florentina Niste</b> , Adela Pop, Alexandra Fanca, Liviu Miclea	Drone Controlled by Hand Gestures
163	<b>Sofia Borgosano</b> , Michela Longo, Wahiba Yaici	Optimizing the Location of Opportunity Chargers for Urban Buses Using a Multi-Criteria Decision-Making Approach
186	Jarosław Kozik, <b>Aleksander M. Nawrat</b> , Krzysztof Daniec	Development of a method for automatic identification of objects based on the analysis of images from a multispectral vision system
219	Harpreet Singh Sohal, <b>Panagiotis Eleftheriadis</b> , Sonia Leva, Emanuele Ogliari	Efficient Neural Network-Based State-of-Charge Estimation for Electric Vehicles through Transfer Learning
229	Emanuele Ogliari, <b>Roberto Sebastiano Faranda</b>	Overhead Transmission Line Temperature Estimation Based on Artificial Neural Networks
268	<b>Sofia Borgosano</b> , Roberto Rimoldi, Alessandro Saldarini, Michela Longo, Dario Zaninelli, Wahiba Yaici	EVs Performance and Charging Modelling: Comparison Between Simulation and Reality
293	<b>Higor Vendramini Rosse</b> , Caio Rafael Dias Camargo, Estefania Gonçalves, Khadija Sabiri, Joao Paulo Coelho	Chain of Trust: Integrating IoT and Blockchain to Certify Wild Mushroom Growth Quality
313	Manasa Hegde, Panagiotis Eleftheriadis, <b>Sonia Leva</b>	Enhancing State-of-Health Estimation for Electric Vehicles Using Transfer Learning Techniques
413	<b>Jay Cheng</b>	A New Upper Bound on the Buffer Sizes of SDL Constructions of Optical Priority Queues
414	<b>Kwangmin Kim</b> , Woncheol Park	Study on the safety and mechanical test method of Vehicle to Load(V2L) adapter
488	Wei Zhang, Mei Yu, Yeyao Chen, <b>Gangyi Jiang</b>	Single-Exposure HDR Light Field Imaging with Spatial-Angular Collaborative Learning
526	<b>Vahid Heydari</b> , Kofi Nyarko	Fairness in Machine Learning for Cybersecurity: Enhancing Trust through Feature Importance and SHAP Analysis
536	<b>Lukas Nagy</b> , Adam Hudec, Viera Stopjakova	Towards EKV3.0 Model for Bulk-Driven IC Design in 65 nm CMOS Technology
557	<b>Lorant Andras Szolga</b> , Serban Nicolae Meza, Eduard Calin Pop	Persistence of Vision Using Volumetric Display
569	<b>Taku Senoo</b> , Atsushi Konno, Yuuki Yamana, Idaku Ishii	High-speed Sheet Extraction Out of Paper Bundle Based on Probabilistic Approach Using Two Robot Fingers
599	Orazio Colucci, Gala Avvisati, <b>Enrica Marotta</b> , Camillo Mastracchio, Giovanni Torre	Management Systems to follow the evolution of natural disasters in real time. Case Study of environmental monitoring in Campania Region,Italy
601	Marius Misaros, Clément Robier, Ovidiu-Petru Stan, <b>Szilárd Enyedi</b> , Anca Stan, Dan Ioan Gota, Liviu Miclea	Case Study on an Experimental Autonomous Vehicle and Evaluation of Its System Reliability

15:00-16:30

**Parallel Session A-III: Big Data & Data Science**

Chair: Peter Baumann

ID	Authors	Title
84	<b>Peter J Bentley</b> , Soo Ling Lim, Rajat Mathur, Sid Narang	Automated Real-World Sustainability Data Generation from Images of Buildings
192	Bavneet Kaur, <b>Daqing Chen</b>	Measuring Public Perception of Depression on Twitter: A Sentiment Analysis Study
244	<b>Federico Candela</b> , Andrea Francesco Morabito, Francesco Carlo Morabito	Object Recognition in High-Resolution 360° Panoramic Images Using Spherical Grids
258	<b>Kingsley Okoye</b>	The impact of emotional valence on students learning performance and evaluation: A text mining of students' opinion data
262	<b>Peter Baumann</b>	Open Standards for Integrating Datacube Backend, Catalog, and Visualization Tools: A Case Study
376	<b>Tariq Jamil</b>	Design and Implementation of a Voice-activated search engine for the Holy Quran

15:00-16:30

**Parallel Session B-III: Control & Robotics - II**

Chair: Syed Mohammed Rizwan

ID	Authors	Title
480	<b>Masayuki Sato</b> , Noboru Sebe	Observer-Structured PID Controller: Flight Controller Design Examples
603	<b>Ioan Valentin Sita</b> , Bob David	Development and Implementation of a Comprehensive Smart Home Automation System Using Home Assistant and IoT Devices
241	<b>Johannes Metzler</b> , Paul Philipp Seiler, Till Haas, Dirk Reichelt	YuMi-Chess: Applying synthetic image generation in real world scenarios
525	Theodor-Radu Grumeza, Thomas-Andrei Lazar, <b>Isabela Dramnesc</b> , Gabor Kusper, Konstantinos Papadopoulos, Ioannis Lefkos, Nikolaos Fachantidis	A Case Study in Generating 3D Maps with Collaborative Robots
87	<b>Raoul Zebisch</b> , Johannes Schilp	A template for digital human representation in digital twin simulations of social human-robot interaction
131	<b>Charlotte Mokoatle</b> , Thabisile Mpfana	An overview of common computer vision-related symptoms and patterns amongst administrative staff of a university in South Africa

15:00-16:30

**Parallel Session C - III: Mixed - I**

Chair: Michela Longo

ID	Authors	Title
72	Martin Kyselak, <b>Jiri Vavra</b> , Zdenek Vylezich, David Grenar, Karel Slavicek	Tensile Testing Based on the Polarizationmaintaining Fiber Powered by an SM Optical Fibre
448	<b>Nor Paezah Abdullah</b> , Murizah Kassim, Sayang Mohd Deni	Bandwidth Utilization Analysis for TVET Education on Metro-E Campus Network

431	Ahmad Azhari Mohamad Nor, <b>Murizah Kassim</b> , Mohd Sabri Minhat, Norsuzila Ya'Acob, Ibnu Hajar, Intan Nabina Azmi	3D Augmented Reality on Nuclear Plant Water Coolant Process in RTP Malaysia
471	<b>Lara Schweickart</b> , Leona Uschakow, Julia Hofmann, Christoph Zimmermann, Astrid Schmieder, Wilhelm Stork	Potentials of a tactile interface for diagnostic support in dermatological telemedicine
497	<b>Lungile Nhlapo</b> , Thapelo Moseitlhe, Bessi B. Munchusi, Adedayo Yusuff	Design of a microgrid for a rural area: A Systematic Approach
149	<b>Kevin Sam Tharayil</b> , Panagiotis Kintis, <b>Angelos D. Keromytis</b>	Augmenting DNS-Based Security With NetFlow

16:30-17:00

**COFFEE BREAK**

17:00-18:30

**Parallel Session A-IV: Electric Vehicles & Machines**

Chair: Ali Özdil

ID	Authors	Title
243	<b>Timotej Gruden</b> , Grega Jakus	Exploring Driver Diversity in Post-Takeover Stabilization based on Demographic Data
280	<b>Hitoshi Washizu</b> , Yuya Okabe, Takayuki Tomokiyo, Yoshiki Ishii, Hiroshi Kinoshita, Ryuichi Okamoto	Computer Aided Design of Graphene Based Lubricants for Electric Vehicle
415	<b>Volodymyr Khilenko</b> , Serhii Denysiuk, Halyna Bielokha	Improving the quality of transactional management of electric vehicle charging in local electricity networks based on blockchain
461	Bom Yun, <b>Jong-Il Yoon</b> , Joonsoo Bae, Seongjun Yun	Analysis of Autonomous Vehicles Patent Trends between Korea and Overseas Using BERTopic
615	<b>Ari Happonen</b> , Lasse Metso, Victoria Hasheela-Mufeti, Imran Ali	Electric vehicle & batteries pre-emptive maintenance service support: Costs, sustainability and material recycling perspectives

17:00-18:30

**Parallel Session B-IV: Deep Learning**

Chair: Ken'ichi Yano

ID	Authors	Title
125	<b>Daichi Minamide</b> , <b>Ken'ichi Yano</b> , Pranata Dharma, Ryusei Kawatani, Masahiro Sano, Takahiro Aoki	Optimal Design Method for Control Panel Input Values Using Deep Learning and CFD
182	<b>Ting-Hsuan Chen</b>	Using deep learning to build prediction models of carbon emissions and leadership ethics for stock returns - based on BERT and LSTM models
337	<b>Abdullah Sheneamer</b>	A Similarity-based Stacked Deep Learning Architectures for Detection of Software Clones
573	<b>Vlad-Cristian Miclea</b> , Sergiu Nedevschi	SemanticAdaBins – Using Semantics to Improve Depth Estimation based on Adaptive Bins in Aerial Scenarios
290	<b>Inkee Jung</b> , Siu-Cheong Lau	Logifold: A Geometrical Foundation of Ensemble Machine Learning
71	Andreas Stöckl, <b>Johanna Anzenruber</b>	What motivates founders of sustainable companies?

17:00-18:30

**Parallel Session C - IV: Mixed - II**

Chair: Matthias Narroschke

ID	Authors	Title
433	Shuqin Gao, <b>Costas Courcoubetis</b> , Lingjie Duan	Dynamic Matching with Impatient Agents: A Study for Ride-Sharing Systems
586	Andreas Kah-Oberländer, Marcel-Dennis Boerzel, Wolfgang Ruppel, <b>Matthias Narroschke</b>	Quality-based bit rate ladder constraints for smartphones based on the VMAF metric
587	Andreas Kah-Oberländer, Marcel-Dennis Boerzel, Wolfgang Ruppel, <b>Matthias Narroschke</b>	VMAF score for subjectively lossless video quality on TVs, tablets and smartphones
582	<b>Petru Urs</b> , Vlad Muresan, Mihai Hulea, Valentin Sita	Enhancing Network Security for Automated Processes in Nuclear-Electric Power Plants
420	<b>Ainur Kairanbayeva</b> , Serik Nurakynov, Dina Panyukova	Formation of the database for creation of forecasting models for landslides processes and automobile roads' state
69	<b>Phoka Caiphus Rathebe</b> , Mota Xavier Kholopo	Extremely Low Frequency Electromagnetic Fields and Health: An Overview of Basic Concepts, Severe and Subjective Exposure Effects and Mechanism of Action

**Next conference (ICECCME 2025) will be in Zanzibar.**

Details can be seen here: <https://www.iceccme.com/2025>

