

CONFERENCE PROGRAM

(Online Part)

Timezone is Botswana time (GMT+2)

December 5 th , 2024		
Time	HALL-A	HALL-B
09:00-11:00	Session A-I: Artificial Intelligence	Session B-I: Cryptography & Optimization
11:00-11:15	COFFEE BREAK	
11:15-13:15	Session A-II: Artificial Intelligence & IoT	Session B-II: Energy
13:15-13:45	LUNCH	
13:45-15:45	Session A-III: Machine Learning	Session B-III: Control & Robotics & Circ. and Sys.
15:45-16:00	COFFEE BREAK	
16:00-18:15	Session A-IV: Mixed - I	Session B-IV: Mixed - II

09:00-11:00

Session A-I: Artificial Intelligence
Chair: Ambrose Azeta

ID	Authors	Title
180	Parth Sharma, Yagya Dutt Sharma	Semantic Pagewise Augmented Knowledge Retrieval System : SPARKS
182	Yagya Dutt Sharma , Parth Sharma	Dynamic Thresholding in Document Indexing : An Adaptive Scoring approach for Retrieval Optimization
238	Taher M. Ghazal, Jamshaid Iqbal Janjua , Walid Abushiba, Munir Ahmad, Tahir Abbas, Karamath Ateeq	Cutting-Edge Predictive Methods for Enhancing Short-Term Load Prediction
281	Dekpeltakie Augustin Metouale Somda , Abdoulaye Sere, Jose Arthur Ouedraogo, Souleymane Kone	Combination of Deep Learning and Graph Theory to facilitate Traffic for Emergency Vehicles
316	Yasser Saeid , Thomas Kopinski	AgentFusion: A Multi-Agent Approach to Accurate Text Generation
351	Tanish Verma , Parimesh Panda, Parth Sharma, Yagya Dutt Sharma, Shivang Sharma	Retrieval-Augmented Generation for Autonomous SOP Creation: A Methodology for Document Synthesis Across Business Functions
183	Parth Sharma, Aman Kaif Mohammad	Dynamic Retriever Selection in RAG Systems: An RL Approach to User-Centric NLP
138	Ambrose A. Azeta , Abdulganiyu Awal, Joy I. Azeta, Suama L. Hamunyela, Albano Dos Santos	Designing a Code Obfuscation Scheme for Software Protection
368	Victor M. Tovar-Olvera , Francisco J. Ruiz-Sanchez	Bioinspired Cognitive System with Multilevel Task/Subtasks Structure for Autonomous Navigation in Unknown Environments

09:00-11:00

Session B-I: Cryptography & Optimization
Chair: Gibson Chengetanai

ID	Authors	Title
58	Oluwole Oguntoyinbo , Abel Ofori-Yeboah, Chukuemeka Ikenga-Metuh, Yogesh Ghimire, Efua Obode, Adrian Brissett	Enhancing the Security of Public Key Cryptography in Addressing Quantum Computing Threats
46	Grzegorz Tomasz Jucha , Abel Yeboah-Ofori	Evaluation of Security and Performance Impact of Cryptographic and Hashing Algorithms in Site-to-Site Virtual Private Networks
66	Rashika Singh , Abel Yeboah-Ofori, Saurabh Kumar, Aishat Ganiyu	Fortifying Cloud DevSecOps Security Using Terraform Infrastructure as Code Analysis Tools
152	Romarick Yatagha , Erkin Kirdan, Karl Waedt, Christoph Ruland	ML-based Synthetic OPC UA Traffic Generation fBootswarna Covert Channel Transmission

361	Yogesh Ghimire , Iman Darvishi, Abel Yeboah-Ofori, Waqar Asif, Oluwole Oguntoyinbo, Aden Hawsh	Cyberattack Pattern Analysis on Mobile Device Data Forensic Investigations
74	Oyetunji Oyelakin , Abel Ofori-Yeboah, Aishat Ganiyu, Oluwole Oguntoyinbo	Digital Forensics Investigations and Network Security Issues in Tracking the Trails of Cybercriminals
314	Lagouge Kwanda Tartibu , A. Mwesigye	Optimizing the performance of parabolic trough solar collectors using the grey wolf algorithm
323	Martin Sarap , Marcus Pärtel, Ants Kallaste, Hans Tiismus, Toomas Vaimann	Topology Optimization and Additive Manufacturing of a Loudspeaker Soft Magnetic Core
109	Li Kang , Qicong Su, Ruchen Huang, Hongwen He	Design and Dynamics Analysis of the Walking System for an Articulated Crawler Tractor

11:00-11:15

COFFEE BREAK

11:15-13:15

Session A-II: Artificial Intelligence & IoT

Chair: Francis Chikweto

ID	Authors	Title
108	Bôa Djavph Yoganguina , Camara Mamadou Samba	Impact of Loops on the Execution Time of Business Processes
133	Hector Rafael Morano-Okuno , Emmanuel Garcia-Moran, Guillermo Sandoval-Benitez, Rafael Caltenco-Castillo,	Bringing Mechatronic Engineers Closer to the Use of AI through Generative Design for Manual Power Tools
143	Anastassios Pouris , Androniki Thirion	The State of Artificial Intelligence Research in SADC region – A Scientometric Assessment
144	Al Aqmar Damana , Para Hitesh	Innovative Adapter-Based Fine-Tuning and Streamlined Training Strategies for Text Summarization
178	Rachel John Robinson , Viral Gorecha	AI Adoption patterns among major Original Equipment Manufacturers (OEMs) in automotive industry
89	Hameed Alzubair , Ahmed Jedidi, Hamed S. Al-Raweshidy	Elastic Blockchain Security Solution for Edge Computing Supporting Mobile IoT Devices
245	Thobeka Swane, Bongumsa Mendu , Bessie Baakanyang Monchusi	Applications in Smart Home Automation: Enhancing Security, Accessibility, and Efficiency through IoT and Microcontroller Integration
308	Mokhele Letsoara, Bongumsa Mendu , Bessie Baakanyang Monchusi	Application of IoT in Smart Metering: A Survey
342	Khumbulani Derrick Sithole , Tope Roseline Olorunfemi, Bessie Baakanyang Monchusi	Energy management systems enabled in IoT (Internet of Things) devices for climate control in greenhouse
135	Siddh Garg	Cardiovascular disease prediction using classical machine learning
165	Anirudh Sharma , Rahul Mandrai	A Comparative Study: Predicting Time Series Data with Quantum and Classical Machine Learning

11:15-13:15

Session B-II: Energy
Chair: Seyed Davood Mousavi

ID	Authors	Title
196	Zenzile Rasmeni , Daniel Madyira, Olatunji Obafemi, Olatunji Oladeke	Effects of Mechanical Pretreatment Exposure Time On Methane Production In Mono Digestion of WWS And BSY
198	Zelda Z. Rasmeni , Daniel M. Madyira, Antony N. Matheri, Obafemi O. Olatunji, Kehinde O. Olatunji,	Mechanical Pre-Treatment of Co-Digested Wastewater Sludge (WWS) and Brewery Spent Yeast (BSY) Under Anaerobic Condition
73	Chukwuemeka Emmanuel Okafor , Komla Folly, Azeez O. Olasoji, D.T.O Oyedokun	Deployment of Demand Response and Battery Energy Storage for Frequency Support in Power System Network with High penetration of Renewable Energy Sources
111	Moussa Gonda , Arouna Oloulade, Cossi Télesphore Nounangnonhou, Richard Gilles Agbokpanzo, Maurel Richy Aza-Gnandji, Hassane Ousseyni Ibrahim, François-Xavier Fifatin, Adolphe Moukengue Imano	Designing a parametric-analytical tool to predict voltage collapse and analyse malfunctions in an electricity transmission network
204	Innocent Mduuzi Gumede , Bongumsa Mendu, Bessie Baakanyang Monchusi	Advanced Energy Management and Optimization in Microgrid Systems
300	Moitheri Gladys Motaung , Bongumsa Mendu, Bessie Baakanyang Monchusi	Power Transformer Leakage Reactance Analysis: A Comprehensive Review
168	Takashi Yoshikawa	Fabrication and Verification Experiment of Solar Thermal Power Generation Device Aiming to Generate Power Exceeding 10mW
305	Sidi Mohamed Aly , Mouhamadou Falilou Ndiaye, Mamadou Lamine Ndiaye	Fuzzy Control of a Universal Power Conditioner (UPQC): Application to the Mauritanian Wind Power System
364	Alexis Arias-Hernandez , Jesus Lopez-Gomez, Tenoch Gonzalez-Sanchez, Erik Ramirez-Morales, Fermín Martínez-Solis, Jesus M. Hernandez-Ramos	Impact of cleaning and discontinuous cooling on photovoltaic panels
173	Alain Kakompe Mwebe , Bongumsa Mendu, Bessie Baakanyang Monchusi	Engineering and Data-Driven Approaches for Load Forecasting: A Review
244	Fortunate Thamsanqa Qxungu , Bongumsa Mendu, Bessie Baakanyang Monchusi	Optimization and Management of Residential Energy Systems: Forecasting Methods, Energy Efficiency Models, and Renewable Integration

13:15-13:45

LUNCH

13:45-15:45

Session A-III: Machine Learning
Chair: Ietezaz ul Hassan

ID	Authors	Title
295	Youssoupha Cisse , Ababacar Ndiaye, Adama Sarr	Modelling an autonomous PV system using Machine Learning: study of the contribution of different environmental parameters on power
13	Imran Qureshi , Zahra Nasser Hashil Alsiyabi, Burhanuddin Mohammad, S.G.M Shadab, Mohammed Irfan	Exploring Drug Recommendations Through Sentiment Analysis: A Machine Learning Perspective
148	Zareen Tasneem , Md. Shohrab Hossain	Machine Learning Based Early Sepsis Prediction For Diabetic Foot Patient

325	Ietezaz Ul Hassan , Krishna Panduru, Joseph Walsh	A Graph Based Framework for Removing Outliers in Time Series Boolean Signals: A Case study of an Automatic Door
301	Francis Chikweto , Muyanga Kampekete, Mubanga Boyd, Kalupa Conix, Munsanje Foster, Chilufya Queen	Toward the Development of a Low-Cost AI-enabled Digital Stethoscope
181	Rahul Priyadarshi , Ravi Ranjan Kumar, Tiansheng Yang, Rajkumar Singh Rathore	Machine Learning-Based Approaches for Predictive Node Placement in Wireless Sensor Networks
277	Muteb Aljasem, Mustafa Alhababi, Ali Javed , Zaid Aldoulah, Mohammed Abouheaf, Mohammad Mayyas, Wasseem Al-Rousan	Feature concatenation-based deep learning method for multiclass wound classification
107	Tarun Karanam, Juan Goiz-Maya , Rohollah Moghadam	Virtual Reality-driven Human Multi-Robot Formation using Machine Learning
270	Souleymane Kone , Abdoulaye Sere, Dekpeltakie Augustin M.S, Jose Arthur Ouedraogo	Automated and Accurate Counting of Growth Rings in Otoliths based on Hough Transform and Deep Learning

13:45-15:45

Session B-III: Control & Robotics & Circ. and Sys.

Chair: Kaya Kuru

ID	Authors	Title
365	A. Romo-Arroyo, F. J. Ruiz-Sanchez	Automatic Visual Inspection of Granular Biomaterial under Active Illumination for Accurate Detection of Micro Pollutants
343	Edwin Red Estofanero Larico , Andrei Araujo Felix, José Roberto Castilho Piqueira	Identification and H-Infinity Control for a pH Neutralization Process
348	Rodrigo Nobre Camargo Nascimento , Edwin Red Estofanero Larico, Claudio Garcia, José Roberto Castilho Piqueira, Fabio Cunha Lofrano	Robust Multivariable Controller Design for Oil Pipeline: Analysis and Synthesis of H_{∞} Controller
37	Alibek Batyrbek, Zoya Gelmanova, Abdul Walid Fayez Wazani	Measures and Procedure for Implementation of Digitalization of Production At Jsc «QARMET»
355	Kaya Kuru , Aadithya Sujit, Darren Ansell, John Michael Pinder, David Jones, Benjamin Watkinson, Ridha Hamila, Claire Tinker-Mill	Non-Invasive Detection of Landmines, Improvised Explosive Devices and Unexploded Ordnances Using Bespoke Unmanned Aerial Systems
253	Shubo Zhou , Dayong Tang, Linlong Ni, Guofeng Xu, Chuanchuan Cao, Junyi Yang, Daihong Hu	Study on trajectory planning and error analysis of automatic spraying robot on steel bridge deck
271	Junfeng Feng , Mingjie Guan, Qingyuan Zhu	Self-Oscillating IPT System Based on Phase Tracking Loop
290	Samuel E. De Lucena	A Dynamic Displacement Measurement Experiment Using Self-Mixing Laser Diode Interferometry
175	Abdullah M. Noman , Muteb Alanazi, Motab Almousa	Design, Simulation, and Experimental Implementation of an Electric Vehicle Based on Buck Converter
185	Bernard Tonderayi Mangara	EV battery modeling and optimisation for different drive cycles using MATLAB

15:45-16:00

COFFEE BREAK

16:00-18:15

Session A-IV: Mixed - I
Chair: Rahul Priyadarshi

ID	Authors	Title
25	Imad Buljic , Esad Kadusic, Elmin Marevac, Christoph Ruland, Natasa Zivic	A Comparative Study on the Disparities and Performance Metrics between NoSQL Graph and Relational Databases
289	Rui Gong , Jinwei Liu, Martin Q.Zhao	Comparison of Segregation Indexes and Residential Segregation for Mortality Analysis
184	Parth Sharma , Yagya Dutt Sharma, Bidisha Borkakaty	Simulating Scalable Architectures for Cloud based Systems: Identifying Bottlenecks and Optimal Design Strategies
124	Yasuko Kawahata , Hatadani Shunsuke	Socio-Physical Approach to Consensus Building and the Occurrence of Opinion Divisions Based on External Efficacy
31	Andrey I. Semenikhin, Diana V. Semenikhina , Yury V. Yukhanov	Wide-Angle Cancellation of Scattering from Hybrid PB-Metasurfaces with Anti-Phase Sub-Blocks with Generation of Various OAM-Modes
72	Faroq Razzaz	Design of Dual-Band Resistor-Loaded Metamaterial Absorber for ISM Bands Applications
255	Sizakele Ann Khumalo , Bongumsa Mendu, Bessie Monchusi	Fault Detection and Diagnosis Techniques for Power Cables: Methods, Applications, and Simulation-Based Validation
202	Álison C. Vasconcelos , José J. P. Z. S. Tavares	ESP32 Library Developed for Petri Net Embedded in RFID Database
179	Rahul Priyadarshi , Ravi Ranjan Kumar, Tiansheng Yang, Rajkumar Singh Rathore	Optimizing Quality of Service in WSNs through Adaptive Node Placement Strategies
296	Wandile Thabani Mnyandu , Alfredo Terzoli, Hlabishi Kobo	Digital Decision Support Tools In EdTech Testing And Evaluation For Developing Countries
155	Obafemi O. Olatunji, Paul A. Adedeji, Nkosinathi Madushele, Harvest Time Obadire, Sogo Mayokun Abolarin , Nickey Janse Van Rensburg	Design and simulation of hybrid microgrid for residential complex: a case study in South Africa

16:00-18:15

Session B-IV: Mixed - II
Chair: Bessie Baakanyang Monchusi

ID	Authors	Title
227	Sabelo Dlamini , Bongumsa Mendu, Bessie Monchusi	Control Strategies and Battery Management for Hybrid Energy Systems and Electric Vehicles
49	Sundas Zaman , Taha Elhag, Shereen Nassar	Analysing the existing state of BIM's implementation in Facilities Management in UAE
62	Franziska Heil , Andre Sekulla, Larissa Putzar	Enhancing User Experience for Data Visualization: An Analysis of File Format Performance
164	Kwazikwenkosi Sikhakhane, Suvendi Rimer, Mgd. Gololo, Adel M. Alimi	A Review of Generative Adversarial Networks algorithms For Ultrasound Image Denoising
242	Chang Ge , Jing Yang, Yuanle Zhang, Yanmin Xue, Hua Dong, Qing Ni	Research on the Indicators for Ageing Adaptation of Community Evaluation System under the Concept of Dementia Friendly
32	Nicolae Daniel Fita , Florin Gabriel Popescu, Sorina Daniela Stanila, Aurelian Nicola, Adrian Mihai Schiopu, Dana Mihaela Lang	Energy security analyses at the Black Sea in the new context of insecurity
237	Aya Ammar Majed , Ghaidaa A. Khalid, Abbas Fadhal Humadi	Portable Uroflowmetry System with Integrated Software for Home Urinary Monitoring

55	Ayokunle Ayeleso, Chukwuemeka Emmanuel Okafor , A.K. Raji, Azeez O. Olasoji	Investigation of Frequency Response of a Power Network under varying penetration levels of Renewable Energy Sources
122	Mxolisi Miller, Bessie Baakanyang Monchusi , Sumbwanyambe Mbuyu	The Development of a Community Microgrid Psychosocial Governance Framework
160	Mxolisi Miller, Bessie Baakanyang Monchusi , Sumbwanyambe Mbuyu	Network Governance Conceptual Framework for Community Microgrids: A Precursor to Operations and Management Interventions
157	Lucas Tivani , Terry Berman, Kwazikwenkosi Sikhakhane, Suvendi Rimer, Mariam Salifu, Thabo Mathonsi, Hassan Mohamed Abozaid, Muaaz Rawat	A review of biomedical circuit design for post-stroke rehabilitation of the human hand
161	Thabo Mathonsi, Hassan Mohamed Abozaid, Kwazikwenkosi Sikhakhane, Terry Berman, Suvendi Rimer, Mariam Salifu, Lucas Tivani , Muaaz Rawat	An overview of a robotic hand rehabilitation system
286	Sinenhlanhla Sipheshile Tembe, Monchusi Bessie Baakayang, Dion Njova	Simulation Of a Non-Linear Low Pass Filter, Compromising of an RF signal generator used as a Transmitter

ICECER 2025 will be in Madagascar.

Details are here: <https://www.icecer.com/2025>

