International Conference on Artificial Intelligence, Computer, Data Sciences and Applications

(ACDSA 2024)

CONFERENCE PROGRAM

(Physical Part)

Time: Seychelles (GMT+4)

February 2nd, 2024		
Time	**HALL-A**	**HALL-B**
08:45-09:00	**Opening Speech** **Dr. Justin Zelime** (University of Seychelles, SEYCHELLES)	
09:00-09:30	**Keynote Speech** **Dr. Mahendra Gooroochurn** (University of Mauritius, MAURITIUS) **Title**: Developing AI-predictive models for supporting climate mitigation and adaptation solutions for the built environment	
09:30-11:30	Session A-I: Artificial Intelligence	Session B-I: Big Data & Data Science
11:30-11:45	**COFFEE BREAK**	
11:45-13:30	Session A-II: Machine Learning & Deep Learning	Session B-II: Embedded Systems & Robotics
13:30-14:15	**GROUP PHOTO & LUNCH**	
14:15-16:00	Session A-III Neural Networks	Session B-III: Modelling & Control Systems
16:00-16:15	**COFFEE BREAK**	
16:15-17:30	Session A-IV: Mixed -1	Session B-IV: Mixed - 2

Conference Venue

University of Seychelles

(https://maps.app.goo.gl/v4MXserjYpkqpbB78)

CONFERENCE PROGRAM

(Physical Part)

February 2nd, 2024

08:45-09:00 **OPENING SPEECH**

Dr. Justin Zelime
(University of Seychelles, SEYCHELLES)

09:00-09:30 **KEYNOTE SPEECH**

Dr. Mahendra Gooroochurn
(University of Mauritius, MAURITIUS)
Title: Developing AI-predictive models for supporting climate mitigation and adaptation solutions for the built environment

09:30-11:30 **Parallel Session A-I: Artificial Intelligence**
Chair: **Dumisani Ndhlovu**

ID	Authors	Title
26	**Laurie Butgereit**, Muna Abugosseisa, Mohammed Elbashir	Dynamic Reconfiguring of GPT-4 Based Tutors to Become GPT-4 Based Teachers in Underserved Areas in Africa and the Environs
30	Andrej Thurzo, Petra Jungová, **Ľuboš Danišovič**	AI-Powered Segmentation Revolutionizes Scaffold Design in Regenerative Dentistry
104	Martin Strunga, Dominika Sónak Ballová, Juraj Tomášik, Ľubica Oravcová, Ľuboš Danišovič, **Andrej Thurzo**	AI-automated Cephalometric Tracing: A New Normal in Orthodontics?
159	**Dumisani Ndhlovu**, Kondwani Munthali	Prediction of Antiretroviral Therapy Treatment Failure in Malawi using a Soft Computing Modelling approach
204	**Mikko Rask**, Koki Shimizu	Beyond the Average: Exploring the Potential and Challenges of Large Language Models in Social Science Research
401	**Elisa Rojas**, David Carrascal, Diego Lopez-Pajares, Nicolas Manso, Jose M. Arco	Towards AI-enabled Cloud Continuum for IIoT: Challenges and Opportunities
175	Teodora Markovic, **Slavica Cicvaric Kostic**, Marko Mihic, Dejan Petrovic, Zorica Mitrovic, Sinisa Arsic	Crafting Startup Brand Identity and Positioning in the Information Technology Arena

09:30-11:30 **Parallel Session B-I: Big Data & Data Science**
Chair: **Moses Ashawa**

ID	Authors	Title
45	**Stuart J. Barnes**	Understanding Diversity and Sustainability Performance via a Novel Data Analytics Approach
152	**Bruno Carpentieri**	Data Compression in Massive Data Storage Systems
237	Luca Cirillo, **Adriana Greco**, Claudia Masselli	Optimised Design of a Rotary elastoCaloric Heat Pump Using Thermofluid-dynamic Analysis
179	**Peter Baumann**	On Openness in Service Stacks
230	**Leonidas Anthopoulos**, Maria Mitsiou	Data analysis and triangulation for problem source elimination in smart cities: the societal city
374	**Marco Pollanen**	Exploring an AI Data Dredging Birthday Paradox
109	**Moses Ashawa**, Nsikak Pius Owoh, Jackie Riley, Jude Osamor, Salaheddin Hosseinzadeh	An exploration of shared code execution for malware analysis

11:30-11:45 **COFFEE BREAK**

11:45-13:30

Parallel Session A-II: Machine Learning & Deep Learning
Chair: **Henrique De Carvalho Pinheiro**

ID	Authors	Title
52	**Calimanut-Ionut Cira**, Miguel-Ángel Manso-Callejo, José-Juan Arranz-Justel, Mircea-Emil Nap, Elemer-Emanuel Șuba, Tudor Sălăgean	Evaluation of Multiclass Extraction of Representative Road Lines Found on Highway Pavement Using Supervised Semantic Segmentation Techniques and Aerial Imagery
73	**Daniel Einarson**	Studies on Augmented Data and Time Performance to Approach Crack Detection in Concrete
81	**Daniel Einarson**, Dawit Mengistu	Concrete Crack Detection Using Multi-Source Data Augmentation in Deep Learning Models
173	**Abdalla Shahin**	Error Compensation of Inkjet-printed Electronics using Incremental Learning and Knowledge Distillation
353	**Henrique De Carvalho Pinheiro**, Massimiliana Carello	Reinforcement learning based control for torque allocation in electric vehicles: a preliminary analysis
84	Shubhashisa Sahoo, Mayank Sharma, **Aniket Yadish**, Sawan Kumar	Analysis of Machine Learning-based Human Activity Prediction Model for Assistive Exoskeleton
211	**Miriana Corsaro**, Simone Palazzo, Concetto Spampinato, Flavio Cannavo	Continual Learning for Anomaly Detection in Volcano Unrest Detection: A Case Study

11:45-13:30

Parallel Session B-II: Embedded Systems & Robotics
Chair: **Adriana Greco**

ID	Authors	Title
369	**Ran Guo**, Eric Dekneuvel, Gilles Jacquemod, Pascal Henry Biwole	Real-time PTV system implementation on multi-SoC architecture accelerated by OpenCL
394	**Alessio Bucaioni**, Saad Mubeen	Evolution of an Automotive Modelling Language for Enhanced Support of Diverse Network Interface Controllers
319	**Federico Ciccozzi**	Towards accessible software engineering for heterogeneous hardware
460	**Saad Mubeen**, Alessio Bucaioni, Sissi Wilander, Sandra Eriksen	Jitter Analysis Framework for Controller Area Network in Vehicular Embedded Systems
70	**Juan P. Ramírez**	Simple and Linear Fast Adder of Multiple Inputs and Its Implementation in a Compute-In-Memory Architecture
71	Loic Fredric Fernau, **Tessa T. Taef**	On the Precision of Single-Receiver Ultra-Wideband Tracking using Combined Distance and Angle of Arrival Measurement
457	**Alexander N. Karkishchenko**, Vyacheslav Kh. Pshikhopov	Gradient control of a group of robots based on probabilistic functional under active interference

13:30-14:15

GROUP PHOTO & LUNCH

14:15-16:00

Parallel Session A-III: Neural Networks
Chair: **Daniel Einarson**

ID	Authors	Title
10	**Lala Rajaoarisoa**, Raubertin Randrianandraina, Moamar Sayed-Mouchaweh	Predictive maintenance model-based on multi-stage neural network systems for wind turbines
53	**Philip Kenneweg**, Tristan Kenneweg, Barbara Hammer	Improving Line Search Methods for Large Scale Neural Network Training
176	**Simon Friedrich**, Arjun Sivasankar, Emil Matúš, Gerhard Fettweis	Enlarging the Time Budget for Neural Network Based Predictors for Access Interval Prediction
417	Ermanno Cardelli, Fabio Crescimbini, Francesco Riganti Fulginei, Michele Quercio, **Lorenzo Sabino**	State-of-Charge assessment of Li-ion battery using Genetic Algorithm-Neural Network (GANN)
456	**Robert Frouin**, Jing Tan, Shuo Liu	A Convolutional Neural Network to Reconstruct Satellited-Derived Global Time Series of PAR at the Ocean Surface from Physical Predictor Variables
31	Yoann Charlon, **Gilles Jacquemod**, Hassan Jouni, Adnan Harb	New implementation of analog artificial neural network for breast cancer classification
59	**Tristan Kenneweg**, Philip Kenneweg, Barbara Hammer	Foundation Model Vision Transformers are Great Tracking Backbones

14:15-16:00

Parallel Session B-III: Modelling & Control Systems
Chair: **Massimiliana Carello**

ID	Authors	Title
14	**Chiang Kao**	Linear programming with fuzzy parameters: An alpha-cut approach
453	**Dario Ogrizovic**	Computer simulation of a marine engine room using fully immersive and interactive virtual reality
167	**Tatsuhiko Matsumoto**, Yutaka Kano	Structural Equation Modeling Based Longitudinal Analysis of Gender Differences in Lower Limb Muscle Activity via Ankle Tendon Signals
383	Matteo De Carlo, Emanuele Simeone, Luigi Radano, **Massimiliana Carello**	A telemetry-driven architecture for the development of data-intensive race strategies
248	Makope Tshehla-Nkuna, N. Sukdeo, Sambil Mukwakungu, **Charles Mbohwa**	Exploring the Impact of Advanced Manufacturing Technologies in South Africa's Pharmaceutical Industry
478	Anup Pradhan, Asser Tau, **Charles Mbohwa**, Emmanuel Innocents Edoun	Modelling and Simulation of Cross-Border Operations: A Case of Phase II Lesotho Highlands Water Project

16:00-16:15

COFFEE BREAK

16:15-17:30

Parallel Session A-IV: Mixed - 1
Chair: **Lorant Andras Szolga**

ID	Authors	Title
215	**Tessa T. Taef**, Marc Roswag, Gerald Peklar	Wingbeat Over Wind Turbines: Autonomous Drones for Acoustic Bat Detection in Operational Wind Farms
407	**Abdullah Shams**, Dimas Fajrian Nugroho, Maximilian Hummel, Bastian Quattelbaum, Christof Breckenfelder	5GARderobe: A Scalable Real-Time Virtual Try-On Wardrobe Solution in the Digital Age
223	**Lorant Andras Szolga**	Salivary Glucose Prediction System
174	**Said Nassar**, Tina Yaacoub	Why Bitcoin is so original, and why its copies are doomed to fail?
85	Bohdan Ivaniuk-Skulskyi, Nadiya Shvai, Arcadi Llanza, **Amir Nakib**	Towards Lightweight Transformer Architecture: an Analysis on Semantic Segmentation
135	**Lebohang Ralikalakala**, Maletsie Mojela	Standstill Impedance Variation Test For Inverter-fed Induction Motor with Broken Rotor Bar Fault

16:15-17:30

Parallel Session B-IV: Mixed - 2
Chair: **John Magnus Roos**

ID	Authors	Title
124	**John Magnus Roos**	Is car sharing driven by digital technology?
120	**Daniel A. Amoshie**, Munashe D. Nyazenga, Elena V. Rosca	Automated Black Soldier Fly Incubator using Internet-of-Things and Computer Vision
265	A.K. Sahoo, **G.M. Wu**	Preparation and characterization of high quality zinc oxide thin film transistors for optoelectronic applications
474	Christabel Madzinga, Tawanda Mushiri, Talon Garikayi, **Charles Mbohwa**	An Expert System for Diagnosis of Cancer Diseases
235	**Martin Ujakpa**, Noosrat Aziz–Niyi, Thomas Henaku, Laiza Mutasa	Automated Toll Payment App (DrivePay)
236	**Martin Ujakpa**, Sócrates Paulo, Alveen Singh, Edward Boahen, Israel Edem Agbehadji, Ahmed Antwi-Boampong	Awareness, Perception and Use of Open Educational Resources (OERs) among Undergraduate Students in Namibia