

INES 2023 preliminary program

July 26, Wednesday

Venue: Radisson Blu Hotel Nairobi Upper Hill, Room Kilimanjaro 3

9:00 – 17:00 Registration

9:30 – 10:00 Opening Ceremony

10:00 – 10:45 Plenary Talk I

Session chair: Levente Kovács

József Bokor

Geometric and Data-driven Solutions of Detection Problems in Dynamic Systems and Networks

10:45 – 11:00 Coffee break

11:00 – 11:45 Plenary Talk II

Session chair: Levente Kovács

Andrea De Gaetano

Mathematical Modelling and Trauma Survival

12:00 – 13:20 Lunch

in Larder Restaurant at the hotel

13:20 – 15:20 [W1] Session on Systems Engineering

Session chair: György Györök

25	Igor Skrjanc	Model Predictive Control for Unstable Processes - Application on Magnetic Suspension
10	György Györök, Olga Shvets and Margit Makó	Educational Universal Analog Circuit Measurement Laboratory with FPAA
13	Jere Grönman, Petri Rantanen and Mika Saari	Categorization of Digital Twins: A Literature Review of IoT and Industry
11	Judit Módné Takács and Monika Pogatsnik	A systematic review of Human Aspects in Industry 4.0 and 5.0: Cybersecurity Awareness and Soft Skills
52	László Horváth	Virtual and Physical Intelligent Engineering in Collaborative Space
9	Zoltán Farkas and György Györök	High-Power Battery Pack Load Test Methods



15:20 – 15:40 Coffee break

15:40 – 17:00 [W2] Session on Intelligent Mechatronics, Robotics Systems and Web Engineering

Session chair: Dániel András Drexler

22	Melánia Puskás, Borbála Gergics, Balázs Gombos, András Füredi, Gergely Szakács, Levente Kovács and Dániel András Drexler	Noise modeling of tumor size measurements from animal experiments for virtual patient generation
5	Petri Rantanen, Jari Soini, Jere Grönman and Mika Saari	Open Robotics - Anyone Interested?
12	Stephen Kimathi and Bela Lantos	PD Control and the unwinding effect in quaternion parameterized attitude control
1	Laurie Butgereit	Data Considerations for a Smart Fourth Party in an Online Dispute Resolution System

18:00 Welcome Reception

at Humidor Lounge at the hotel

July 27, Thursday

9:30 – 16:00 Registration

9:40 – 10:00 Coffee break

10:00 – 12:00 [T1] Session on Artificial Intelligence in Engineering

Session chair: György Molnár

4	Christian Brecher, Janis Ochel, Muhammad Mehmood Ahmed and Marcel Fey	Clustering of Milling Strategies Using Machine Internal Data
41	Donya Taheri, Ghazanfar Shahgholian, Mohammad Mehdi Mirtalaei, Amir Mosavi, Arman Fathollahi and Annamária R. Várkonyi-Kóczy	Design and Implementation of Charging Circuit for Energy Storage System in Non-Isolated Converter with Multiple Inputs
32	Enikő Nagy, Éva Karl and György Molnár	Adaptive ICT-based evaluation system in teaching and learning process
44	Amir Mosavi and Sina Ardabili	Machine Learning for Drought Prediction; Review, Bibliometric Analysis, and Models Evaluation --->moved to online session on Friday
34	Adrian-Ioan Argesanu and Gheorghe-Daniel Andreescu	Streamlining Machine Learning Workflows with CLIs and CI/CD pipelines

45	Md Abdul Kadir, Amir Mosavi and Daniel Sonntag	Assessing XAI: Unveiling Evaluation Metrics for Local Explanation, Taxonomies, Key Concepts, and Practical Applications --->moved to online session on Friday
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12:00 – 13:20 Lunch

in Larder Restaurant at the hotel

13:20 – 14:40 [T2] Session on Communications Software and Systems in Engineering

Session chair: Lawrence Mwenda Muriira

53	Moses Kibet Yegon Ngetich, Collins Otieno, Michael Kimwele and Stephen Gitahi	Advancements in Code Restructuring: Enhancing System Quality through Object-Oriented Coding Practices
8	Haya Altaieb and Zoltán Rajnai	Securing 5G Infrastructure From Cyber Risks
6	Amit Baghel, Abhinav Singh Parihar, Vimal Bhatia and Peter Brida	Impact of Imperfect SIC in NOMA Enabled Heterogeneous Cellular Network --->moved to online session on Friday
	Lawrence Mwenda Muriira	turboBurst: A High Dimensional Data Classification approach for identifying Bursty Links in a Highly Spatiotemporal Correlated Sensor Network

14:40 – 15:00 coffee break

15:00 – 16:20 [T3] Session on Manufacturing Systems and Man-Machine Systems

Session chair: Laurie Butgereit

14	Vladimir Modrak and Zuzana Soltysova	Influence of Manufacturing Process Modularity on Throughput Rate and Complexity
17	Éva Hajnal, Gergely Vakulya and Péter Udvardy	Heart Rate (HR) Detection by Cattle Rumen Bolus
39	Laurie Butgereit, Herman Martinus and Muna Abugosseisa	Prof Pi: Tutoring Mathematics in Arabic Language using GPT-4 and Whatsapp
40	Laurie Butgereit and Herman Martinus	Reigning in GPT-3 to Tutor Java Programming Pupils and Students Instead of just Providing Answer Algorithms – a Prototype

18:00 Banquet at the hotel

July 28, Friday

Online presentations only

Please join via Teams link: <https://bit.ly/3rFGxuT> (CEST time zone)

8:40 – 10:40 [F1] Session on Communications Software and Systems in Engineering

Session Chair: Esmeralda Kadena

6	Amit Baghel, Abhinav Singh Parihar, Vimal Bhatia and Peter Brida	Impact of Imperfect SIC in NOMA Enabled Heterogeneous Cellular Network
2	Eva Chovancova, Martin Chovanec, Norbert Ádám and Jan Hurtuk	Online voting management system based on Blockchain
20	Peter Pekarčík, Tatiana Kuchčáková and Dávid Vaľko	Increasing of security of an actual social networks
18	Norbert Ádám, Dávid Vaľko and Eva Chovancová	Using modern hardware and software solutions for mass casualty incident management
35	Endri Xhina, Orion Lici, Inva Bilo, Ana Ktona, Anila Paparisto and Esmeralda Kadena	Designing a software that will facilitate access to biodiversity data and its implementation for Odonata species and their habitats in Albania
24	Eva Chovancova, Martin Chovanec, Ján Hurtuk and Peter Pekarčík	Decentralized Social Network

10:50 – 12:10 [F2] Session on Computational Intelligence in Engineering and Artificial Intelligence in Engineering

Session Chair: Judit Lukács

19	Svetlana Zadedyurina and Ilya Makarov	Modeling of Immune Sequences from COVID-19 Infected Human Blood Samples with Variational Autoencoders
43	Ildar Z. Batyrshin, Angelica S. Klimova and Imre J. Rudas	Parametric Fuzzy Distribution Sets
36	Andrea Galloni, Lendák Imre and Tamás Horváth	Extending Synthetic Data Evaluation Metrics
37	Joanna Isabelle Olszewska	Markov-Chain-Based Musical Creative Intelligent Agent Passing Successfully the Turing Test

12:20 – 13:40 [F3] Session on Intelligent Mechatronics and Robotics Systems, Intelligent Manufacturing Systems, and Systems Engineering

Session Chair: Gábor Kertész

16	Brian Parkinson, Ádám Wolf, Péter Galambos and Károly Széll	Assessment of the Utilization of Quadruped Robots in Pharmaceutical Research and Development Laboratories
23	Döníz Borsos, Attila Fodor and Tamás Sándor	Challenges in Isokinetic Sampling for Gas and Particle Measurements: Testing Homogeneity and Handling Interruptions in Sampling

49	Mohammed Mudabbiruddin and Mosavi Amir	Machine Learning for Modeling Service Life: Comprehensive Review, Bibliometrics Analysis and Taxonomy
38	Fotis Koumboulis, Dimitrios Fragkoulis and Apostolos Palios	Supervisory Control of an LPWAN Technology

13:50 – 15:10 [F4] Session on Cyber-Medical Systems

Session chair: Miklós Kozlovsky

15	Marianna Dimitrova Kucarov, Bela Molnar and Miklos Kozlovsky	Teaching Machine Learning for Oncogenicity Prediction Based on NGS Genomic Metadata
26	Miklós Vincze, Abdallah Benhamida, Viktor Zoltan Jonas, Robert Paulik, Ender Gábor, Szántó Mária, Szócska Boldizsár, Anna Szandra Laczi and Miklos Kozlovsky	3D video streaming in digital pathology using virtual reality
44	Amir Mosavi and Sina Ardabili	Machine Learning for Drought Prediction; Review, Bibliometric Analysis, and Models Evaluation
45	Md Abdul Kadir , Amir Mosavi and Daniel Sonntag	Assessing XAI: Unveiling Evaluation Metrics for Local Explanation, Taxonomies, Key Concepts, and Practical Applications

For onsite participants: Nairobi National Park tour

18:00 Dinner

in Larder Restaurant at the hotel

End of the conference

Satellite Workshop in Nyeri

July 29, Saturday

9:00 Travelling to Nyeri by bus, check-in the hotel FK Resort and Spa

12:30 Lunch at the hotel

15:00 Bus leaves from the hotel to Dedan Kimathi University of Technology

Program:

- Visiting the coffee plantation
- Coffee shop introduction
- Dinner

Bus transportation back to the hotel.

July 30, Sunday

Venue: Conference room at hotel FK Resort and Spa

9:45 – 10:15 Coffee break

10:15 Opening Ceremony

10:40 – 12:20 Session on Cyber-Medical Systems

Session chairs: Andrea De Gaetano and Zsombor Zrubka

29	Andrea De Gaetano and Giulia Elena Aliffi	Parameter estimation and the space of random variables
30	Jan Hecko, Miroslav Hudec, Jan Chovancik, Otakar Jiravsky, Roman Miklik, Lukas Knybel and Marek Penhaker	Prediction of Left Atrial Appendage Occluder Size Based on a 3D Printed Model Method Design
50	Rituraj Rituraj, Varkonyi Daniel Tamas, Mosavi Amir and Varkonyi-Koczy Annamaria R.	5G for Smart Grids: Review, Taxonomy, Bibliometrics, Applications and Future Trends
27	Zsombor Zrubka , Áron Hölgyesi, Mehdi Neshat, Hossein Motahari Nezhad, Seyedali Mirjalili , Levente Kovács, Márta Péntek and László Gulácsi	Towards a single goodness metric of clinically relevant, accurate, fair and unbiased machine learning predictions of health-related quality of life
28	Borbála Gergics, Flóra Vajda, Melánia Puskás, András Füredi and Dániel András Drexler	Mathematical modeling of phototoxicity during fluorescent imaging of tumor spheroids

12:30 Lunch

14:00 Introducing Dedan Kimathi University of Technology

Dr. Moses A Ollengo PhD, PrChemSA,
Director Research, Innovation Management and Community Linkages,
Senior Lecturer Department of Chemistry,
Dedan Kimathi University of Technology

15:00

Presentation

GRAPHENE OXIDE/NANOCRYSTALLINE CELLULOSE COMPOSITE: A FACILE PHASE MODULATOR

Irene J. Ng'etich ^a, Elijah Mwangi ^b, Moses A. Ollengo ^a

^a Dedan Kimathi University of Technology Nyeri, Kenya.

^b University of Nairobi

18:00 Dinner

July 31, Monday

9:00 Bus leaves from the hotel FK Resort and Spa to Hotel Radisson Blu Nairobi Upper Hill, and to NBO airport

End of the workshop

Thank you for your contribution!

See you at INES 2024!