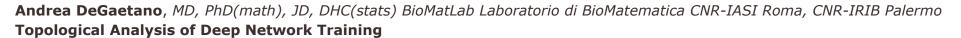# INES 2024 Preliminary Program

July 17, Wednesday

10:45 – 11:10   **Opening Ceremony**   Room Sidi Bou Said

11:10 – 11:50   **Plenary Talk I**   Room Sidi Bou Said

Session chair: Levente Kovács

Andrea DeGaetano, *MD, PhD(math), JD, DHC(stats) BioMatLab Laboratorio di BioMatematica CNR-IASI Roma, CNR-IRIB Palermo*
Topological Analysis of Deep Network Training

11:50 – 12:30   **Plenary Talk II**   Room Sidi Bou Said

Session chair: László Gulácsi

Habib Zaidi, *University of Geneva, Switzerland*
Adventures in Deep Learning-assisted Multimodality Medical Imaging Wonderland

12:30 – 13:30   Lunch   Restaurant (breakfast area)

13:30 – 15:10   **[W1] Session on Artificial Intelligence in Engineering I**   Room Sidi Bou Said

Session chair: Zsombor Zrubka

10	Laura D'Orsi, Elena Lo Presti, Giuseppe Giacopelli and Andrea De Gaetano	A predictive model of the distribution of T-cell phenotype variations
20	Oussama Ben Ali, Sondes Hammami and Fehmi H'Mida	Enhancing Industry 4.0 Maturity: Integrating Lean Practices as a Key Feature in Artificiel Intelligence-Driven Decision Support Model for Companies
46	Nour Ammar and László Kóczy	Fuzzy Linguistic Signatures and Their Applications
29	Tomislav Volaric, Zoran Tomić and Hrvoje Ljubić	Artificial Intelligence Tools for Public Relations Practitioners: An Overview
64	Mehran Amini and Laszlo Koczy	Comparative Analysis of Machine Learning Algorithms in Traffic Mainstream Control on Freeway Networks

15:10 – 15:30   Coffee break   Le Bistrot

15:30 – 17:30   **[W2a] Session on Systems Engineering**   Room Sidi Bou Said

Session chair: Judit Szűcs

8	Márta Péntek, Áron Hölgyesi, Zsombor Zrubka, Petra Baji, Judit Oszlánszky, Péter Hermann, Levente Kovacs and Laszlo Gulacsi	Subjective expectations on living with innovative digital implantable medical devices at older ages
11	Haya Altaleb, Zoltán Rajnai and Beatrix Fregan	Fortifying Decentralized Governance: Introducing Decentralized Autonomous Verification (DAVe) for Decentralized Autonomous Organization (DAOs) Security
18	Eva-Henrietta Dulf, Alexandru-George Berciu, Dénes-Fazakas Lehel and Levente Kovacs	Nature Inspired Optimization Algorithms in Fractional Order Controller Design
51	Krisztian Nemeth and Judit Szucs	Gaming Under Stress: Sensor-Monitored Physiological Responses to a Horror Gameplay
9	Peter Kadar	Universal settling model for energy communities
40	Bojan Kuljić and Peter Odry	Development of a high-noise Measurement Instrument in Civil Building Dynamics

15:30 – 17:15   **[W2b] Special Session on Recent PhD Emerging Excellence in Intelligent Engineering**   Room Valetta

Session organizer and chair: László Horváth

5	Miklós Vincze, Márta Takács and Miklos Kozlovszky	Fuzzy logic based quality of service calculation for real-time 3D video streaming
14	Marianna Dimitrova Kucarov, Annamária Csizmadia, Bela Molnar and Miklos Kozlovszky	FITC & TRITC Spot Detection and Analysis at BCL2 Gene Locus as Follicular Lymphoma Marker on 2D Digital Tissue Slides and 3D Serial Sections
22	Meriem Fgaier and Zsombor Zrubka	A scoping review of evaluation and acceptability criteria for the accuracy of cost estimates in health economic evaluations
38	Hana Al-Abdulkarim and Zsombor Zrubka	How Effective is Continuous Glucose Monitoring? Cumulative Meta-regression Analysis
55	Bence Varga, József Tar and Richárd Horváth	Robust Sliding Mode Control for a DC Motor with Low Resolution Encoder
53	Mera Abbassi, Miklós Vincze, Ákos Csilling and Miklos Kozlovszky	Securing Real-Time 3D Video Streaming in Digital Pathology: Challenges and Recommendations
49	Zsombor Zrubka Md Phd and Dóra Szerencsés	Mobile health applications used for health behaviour change in metabolic syndrome: protocol for a scoping review

19:00   Welcome Reception   Blue Top Hat

July 18, Thursday

10:10 – 10:50   **Keynote Talk**   **Cancelled**   Room Sidi Bou Said
Session chair: Habib Kammoun

Mounir Hamdi, *Hamad Bin Khalifa University, Doha, Qatar*
How AI is Transforming and Shaping the Future of Education

10:50 – 12:30   **[T1] Session on Communications Software and Systems in Engineering and Intelligent Manufacturing Systems**
Room Sidi Bou Said
Session chair: György Molnár

48	Emil Gatial, Zoltán Balogh and Sepideh Hassankhani Dolatabadi	Spatiotemporal Data Access for Map Services based on R-star tree index and LSM tree
68	László Horváth	Engineering Related Research in Collaborative Space Developing All-in-One Model
42	Oussema Triki and Raef Cherif	Automated Sound Intensity Measurement Using Doosan Robot: Off-Line Programming for Enhanced Accuracy
12	Thanh-Nhan Hoang and Chyi-Yeu Lin	Automated Trajectory Generation and Deep Learning Implementation for 6-DOF Robot Operated Autonomous Propeller Surfaces Grinding
54	András Nagy	CAN Bus Communication for Door Control in Cleanroom Environments

10:50 – 12:30   **E-poster session**   Session chairs: Andrea Tick and Gábor Molnár

15	Peter Sergeev, Dmitry Kiselev and Ilya Makarov	Graph Neural Networks for Complex Fluid Simulations
16	Nikita Pashkov and Ilya Makarov	News Sentiment and Company Reports Impact on Stock Returns
19	Artur Podtikhov and Ilya Makarov	RGBD Segmentation using Capsule Networks
39	Benjamín Bekiaris and Ján Perháč	Interactive Proof Assistant Based on Resolution Method in First Order Logic
43	Anni Dasho Sharko, Genci Sharko and Silvana Qose	Artificial Intelligence In Cybersecurity Applications
1	Peter Pekarcik, Eva Chovancova and Martin Chovanec and Martin Stancel	Application of Genetics Algorithms in Cryptography
3	Wai Hun Foo, Syaheerah Lebai Lutfi and Andrea Tick	Prediction of Trustworthiness from Human Demographic & Behavioral Information of An Audio-Visual Corpus
31	Isabella M Venter, Desireé J Cranfield, Rénette J Blignaut, Soha Achi and Andrea Tick	Conversational AI in Higher Education: Opportunities, Challenges, and Ethical Considerations

| 12:30 – 13:30 | Lunch | Restaurant (breakfast area) |

13:30 – 15:10　　　**[T2] Session on Computational Intelligence in Engineering and Man-Machine Systems**　　　Room Sidi Bou Said

Session chair: Domen Verber

6	Damijan Novak, Domen Verber, Iztok Fister and Iztok Jr. Fister	Association Rule Mining as Knowledge Infusion into the Mechanics of an eXtended Classifier System
7	Andrei Moraru, Eva-Henrietta Dulf, Lehel Denes-Fazakas and Levente Kovacs	Human Body Motion Tracking for Rehabilitation
47	Enikő Nagy, Tamás Szegedi, Tibor Wührl, Éva Karl and György Molnár	Development of an innovative, non-invasive IT solution for human monitoring and control of alcohol consumption
35	Sepideh Hassankhani Dolatabadi, Ivana Budinská, Emil Gatial and Zoltán Balogh	Integrating Human-Computer Interaction Principles in User-Centered Dashboard Design: Insights from Maintenance Management
37	Zaouia Siwar, Márk Domonkos and János Botzheim	Assessment of Visual Signals Properties for Human-Robot Interactions: Effect of the Signal's Background on Moving Animations

| 15:10 – 15:30 | Coffee break | Le Bistrot |

15:30 – 16:50　　　**[T3] Session on Artificial Intelligence in Engineering II**　　　Room Sidi Bou Said

Session chair: Zoltán Rajnai

28	Erarda Vuka, Lourdes Ruiz Salvador and Esmeralda Kadena	AI in Healthcare: Applications, Challenges and Opportunities
61	Homayoun Safarpour Motealegh Mahalegi, Amirfarhad Farhadi and Eniko Nagy	Generative Adversarial Networks for Heterogeneous Unsupervised Domain Adaptation Detection
45	Imen Zaghbani, Raja Jarray and Soufiene Bouallègue	Comparative Study of Q-Learning and SARSA Algorithms for UAV Path Planning in 3D Environments
27	Marwa Banawaz	AI Empowered Solar Energy: Reinforcement Learning and Comparative Analysis for Grid-Connected Photovoltaic Systems Optimization

| 19:30 | Banquet | Didon 3 |

July 19, Friday

One-day tour with English tour Guide, AC bus.

Departure time: 9 am

Details:

Visiting the **Bardo Museum** – this Museum is well known for its large collection of intricate mosaics and vestiges of the greatest civilisation known in Tunisian history.

Medina – exploring the Souk or traditional Markt. This Market is coloured by many products of skilled North African craftsman, such as copper, leather, and beautifully woven carpets.

Lunch

Visiting the ancient archegonial site of **Carthage**, once the largest city in North Africa. This site holds ruins from many eras of history, such as the Punic, Roman, Byzantine.

Sightseeing tour in **Sidi Bou Said**.

Arrival back to the hotel around 5:30 pm

Thank you for your contribution!

See you next year at INES 2025!