

CINTI 2023 Preliminary Program

November 20, Monday

Venue: **Bosch Kft.**

In order to get access to the building of Bosch, you are kindly asked to register at <https://forms.gle/3WeRGqpobmxUhxQB9> until November 12

8:30 – 8:50 **Opening Ceremony**

8:50 – 9:30 **Plenary Talk I**

Session chair: **László Gulácsi**

90	Amir H Gandomi	Evolutionary Computation for Intelligent Data Analytics
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9:30 – 10:10 **Plenary Talk II**

Session chair: **Tamás Haidegger**

92	József Solymosi	Graphs, Networks and Their Applications
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10:10 – 10:30 Coffee break

10:30 – 11:10 **Plenary Talk III**

Session chair: **Miklós Kozlovsky**

95	Ákos Csilling	Industrial Examples of Graph Applications
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11:10 – 11:20 Technical break

11:20 – 12:10 **Panel discussion: Future and Security - INFOLAB Cyber Research**

Moderator: **Anna Bánáti-Baumann**

12:10 – 13:30 Lunch

15:10 – 16:30 [M1a] Session on Applications I

Room F09

Session chair: **Dániel András Drexler**

61	Martin Ferenc Dömény, Tamás Dániel Szűcs, Dániel András Drexler and Levente Kovács	Mastering Control: A Digital Toolkit for Understanding PID Controllers
34	Daniel Dudiak, Martina Szaboova and Ján Magyar	Exploring Q-Learning in Social Robots for English-Slovak Vocabulary Learning
74	Miklós Sipos and Sándor Szénási	Lightweight blockchain simulation with transaction graph visualizer
63	Ryszard Klempous, Wojciech Bozejko, Mariusz Uchroński and Mieczysław Wodecki	Solving two-machine flow shop scheduling problem with total weighted number of on-time tasks maximization criterion on D-Wave quantum computer

15:10 – 16:30 [M1b] Special Session on Soft Computing-aided Information Systems

Room F08

Session chairs: **Edit Laufer and Ákos Odry**

2	László Pokorádi and Vera Stein	Fuzzy Rule-based Estimation of Students' Skills
17	Richard Pesti, Peter Sarcevic, Dominik Csík, Istvan Nagy and Akos Odry	Comparison of optimization algorithms for installation error calibration of accelerometer arrays
24	Dominik Csík, Ákos Odry, Richard Pesti and Peter Sarcevic	A novel WKNN algorithm for fingerprinting-based fusion of different radio communication technologies for indoor positioning
30	Massimo Stefanoni, Ákos Odry and Peter Sarcevic	A dipole model-based approach for magnetic disturbance compensation of mobile robots using magnetometer arrays.

16:30 – 17:30 [M2a] Session on Neural Networks

Room F09

Session chair: **József Solymosi**

5	László Schäffer, Zoltán Kincses and Szilveszter Pletl	Hyperparameter Optimisation of Reinforcement Learning Algorithms in Webots Simulation Environment
20	Bianca Badidová, Radoslav Forgáč, Miloš Očkay and Martin Javurek	A Contribution to DDoS Attack Detection Based on Deep Neural Networks
22	Sašo Pavlič, Iztok Fister Jr. and Sašo Karakatič	NiaNetAD: Autoencoder architecture search for tabular anomaly detection powered by HPC

16:30 – 17:50 [M2b] Session on Informatics and ApplicationsOnline link: [\[M2b\] Session on Informatics and Applications](#)

online only

Session chair: **Ladislav Hluchý**

36	Michal Staňo and Ladislav Hluchý	A State-of-the-Art Survey on Local Training Methods in Federated Learning
4	Jozef Vlcek and Martin Bobak	Synchronized Music Streaming Driven by Microservice Architecture
28	Ágnes Mester and Károly Szilák	A Dirichlet inclusion problem on Finsler manifolds
31	Ondrej Habala, Martin Bobak, Martin Šeleng, Viet Tran, Ladislav Hluchy and Lukáš Ivica	Architecture of a Serverless Cloud Application

17:00 MFT közgyűlés

Room F07

18:00 Welcome Reception

Aula

November 21, Tuesday**9:00 – 10:20 [T1a] Session on Applications II**

Room F09

Session chair: **Péter Galambos**

68	Fuat Kaan Mirza and Arif Selcuk Ogrenci	Using Hybrid Approaches for Credit Application Scoring
72	Dávid Maafi and Miklós Sipos	Enhancing huBERT model with additional convolutional and BiLSTM layers for Hungarian sentiment analysis
15	Noémi Piricz	How do Generation Z young people view academic ethics?
9	Bertalan Beszédes	Hybrid Battery Bank Application in Energy Storage System

9:20 – 10:20 [T1b] Session on Neural NetworksOnline link: [\[T1b\] Session on Neural Networks](#)

online only

Session chair: **Zrubka Zsombor**

Time zone: CET

16	Alexander Andreevskiy and Ilya Makarov	Complementing text embeddings with structural information
41	Alexander Panaetov and Ilya Makarov	Reparameterization for Improved Training and Weight Optimization in Single Image Super-Resolution Networks
43	Valentin Kopylov and Ilya Makarov	Natural Language Processing for Author Style Detection

10:20 – 10:40 Coffee break

10:40 – 11:40 [T2a] Special Session on the Legacy and Impact of John von Neumann**Room F09**Session chairs: **Gábor Kertész and Csaba Benedek**

38	Balint Domolki	The double life of John von Neumann
66	András Benczúr	From the appearance of "The Computer and the Brain" to the revolution of the infosphere
67	János Dr Végh	Why does von Neumann oppose deep learning?

10:45 – 11:30 [T2b] Online Session on PhD Student Workshop on Applied Informatics in Computational Intelligence**online only**Online link: [\[T2b\] Online Session on PhD Student Workshop on Applied Informatics in Computational Intelligence](#)Session chair: **László Horváth**

62	Meriem Fgaier and Zsombor Zrubka	Cross-country comparison and ranking: a scoping review of economic similarity indexes
12	Suryakant Tyagi and Sándor Szénási	Speech Emotion Recognition using AdaMax and Weighted Adam Optimizers
1	Ferenc Tolner, György Eigner and Balázs Barta	Regional Level Investigation of EU-Funded H2020 Collaborations via Social Network Analysis

12:00 – 13:30 Lunch

Aula

13:30 – 15:50 [T3a] Special session on Digitalisation, Generation Research, Consumer Trends**Room F09**Session chairs: **Mónika Garai-Fodor, Ágnes Csiszárík-Kocsir and János Varga**

29	Kornelia Lazanyi	Going online is a must
32	Rozalia Hanna Szatmary	For whom can a robot be a partner
39	Sára Szatmáry and Miklós Kozlovsky	What is the perception of the Hungarian quantum community regarding the future of quantum computing?
46	Lutock Liahuka and Noémi Piricz	Green Supply Chain Management and Sustainable Transportation for Retail Distribution in Angola
64	Jovana Dudukovic, Souliyany Gnotsyoudom, Oleksandra Tryzna, Yazan Mahmoud Qandeel and Andrea Tick	The Psychological Impact of Tiktok on Mental Health
69	Viktor Nagy	Application of a Knowledge Based System in the Real Estate Market
70	Győző A. Szilágyi	Modelling the user polarization of echo chambers, using network science methods

13:30 – 15:30 [T3b] Session on Applications III**Room F08**Session chair: **Sándor Szénási**

73	Szabolcs Róbert Bakos and Miklós Sipos	Analyzing training exercises with mathematical algorithms and convolutional neural network
6	Noémi Piricz	Managing smart grids – Experiences from Hungary
94	László Horváth	Model Mediated Research in Collaborative Space for Lifecycle on the Cloud
	József Kövecses	The Role of Reinforcement Learning in Robotic Contact
79	Richard William Polónyi and Sándor Szénási	Bacteria Colony Simulation
7	Nicoletta Saulig, Željka Tomasović, Siniša Miličić and Miloš Milovanović	Clustering features for TFDs structure analysis

13:30 – 14:30 [T3c] Session on Informatics, Neural Networks and Applications**e-poster**Session chair: **Miklós Mezei**

58	Anna Biceková, František Babič and Lenka Dobranská	Classification models comparison from the user's level of interpretability
37	Lenka Kališková and Peter Butka	Classification of Images with Linear Objects in All-Sky Astronomical Survey Data using Convolutional Neural Networks
11	Xinyan Jiang and István Bíró	Comparison of ground reaction force between novice and recreational runners during running
80	Norbert Neumann and Ádám Pintér	Solving ARC with non-procedural program induction
81	Alex Szabó and Ádám Pintér	Galaxy detection and classification in sky images with neural network
78	Bálint Klopp and Sándor Szénási	Simulation of Fluvial Erosion
25	Tomoya Nokura, Ryosuke Okada, Shinjiro Yamamasu, Shinsuke Yasukawa and Yuki Hayashida	Neuromorphic Spikes Generated by the Retinal Circuit Emulator for Training 3-Dimensional Convolutional Neural Networks to Reconstruct Natural Images

15:50 – 16:10 Coffee break

16:10 – 17:40 [T4a] Special Session on PhD Student Workshop on Applied Informatics in Computational Intelligence**Room F09**Session chair: **László Horváth**

60	Máté Siket, András Nándor Kis, Lehel Dénes-Fazakas, György Eigner and Levente Kovács	Database for storing and accessing diabetes related data in a standardized way
59	Borbála Gergics and Dániel András Drexler	Mathematical modeling of tumor based on in vitro and in vivo data, and in vitro to in vivo extrapolation and its challenges: a literature review
26	Attila Érchegyi and Ervin Racz	The effect of underfloor heating on the amount of polluting matter in the air
91	Alex Bárdi and Márta Takács	Integrating Technical Analysis and Neural Networks for Optimizing Algorithmic Trading
77	Barbara Simon, Ádám Hartveg, Lehel Dénes-Fazakas, György Eigner and László Szilágyi	Translating Hungarian language dialects using natural language processing models

14	Adam Gyula Nemes, Bence Tureczki, Katalin Szenes and György Eigner	Secure Storage and Access Control for Personal and EEG Data using Blockchain
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16:10 – 17:30 [T4b] Special Session on Motion Capture and Biomechanics and its Application

Room F08

Session chair: **Henriette Komorócki-Steiner**

82	Annamária Cserfalvi	Exploring the learning styles of hearing-impaired sign language users and non-sign language users
45	Gábor Gyarmati and Henriette Steiner	Issues of the changes in health financing
53	Gábor Gyarmati and Henriette Komorócki-Steiner	The importance of teleworking, home office, and education for people with disabilities
54	Gábor Gyarmati and Henriette Komorócki-Steiner	Analysis of factors affecting health care costs using statistical tools

16:10 – 17:00 [T4c] Special session on Digitalisation, Generation Research, Consumer Trends

e-poster

Session chairs: **Miklós Mezei, Mónika Garai-Fodor, Ágnes Csiszárík-Kocsir and János Varga**

75	Szilárd Berke and Balázs Dávid	Experiencing flow from a managerial perspective among different generations
85	Patrik Viktor	Analysis of information security among Hungarian technical higher education students
86	Patrik Viktor and Mónika Garai-Fodor	Choice Patterns for Self-Driving Vehicles in the 5th Generation Volkswagen Group
87	Patrik Viktor	Testing the acceptance of electric charges.
88	János Varga	SMEs as the innovation flagships - where are the real economic drivers?
89	Ádám Mészáros and Ágnes Csiszárík-Kocsir	Agile and communication within a team according to a primary research

18:00 Banquet

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November 22, Wednesday

9:00 – 9:40 Plenary Talk

Room F09

Session chair: **Levente Kovács**

93	Yo-Ping Huang	AI in Industry and Aquaculture
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9:40 – 10:00 Coffee break

10:00 – 11:00 [W1a] Session on Informatics**Room F09**Session chair: **Andrea De Gaetano**

56	Marcello Pompa, Simona Panunzi, Alessandro Borri and Andrea De Gaetano	An Agent-Based Model of Glioblastoma Infiltration
40	Andrea Pődör and Kristóf Kertész	Analysis of health data using geospatial methods in Székesfehérvár
27	Balazs Solymos, Tamas Nepusz and Laszlo Bacsardi	Routing the quantum internet in large LEO satellite constellations

10:00 – 11:20 [W1b] Session on Fuzzy Technology and Modeling Uncertainty**Room F08**Session chair: **Márta Takács**

52	Sundararajan Dhruva, Raghunathan Krishankumar, Ks Ravichandran and Amir H Gandomi	Fermatean fuzzy-based PCA CoCoSo framework to assess digital technologies in Health 4.0
57	Szilvia Nagy, Melinda Kovács, Ferenc Lilik and Laszlo T. Koczy	On the aggregation functions used in fuzzy signatures based medical image analysis
21	Peter Mogyrosi and Sandor Szenasi	Fuzzy-based Approach for Road Accident Risk Estimation on GPU
55	Jenő Fáró, József Dombi and Tamás Jónás	A Group Consensus Measure for Financial Investments

11:30

Lunch

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Thank you for your contribution!**Hope to see you next year again at CINTI 2024!**