

# 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	<b>Amir H Gandomi</b>	Evolutionary Computation for Intelligent Data Analytics
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**9:30 – 10:10**    **Plenary Talk II**

Session chair: **Tamás Haidegger**

92	<b>József Solymosi</b>	Graphs, Networks and Their Applications
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10:10 – 10:30    Coffee break

**10:30 – 11:10**    **Plenary Talk III**

Session chair:

11:10 – 11:20    Technical break

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

Moderator: **György Eigner**

12:10 – 13:30    Lunch

Venue: Óbuda University

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

**Room F09**

Session chair: **Dániel András Drexler**

61	<b>Martin Ferenc Dömény, Tamás Dániel Szűcs, Dániel András Drexler and Levente Kovács</b>	Mastering Control: A Digital Toolkit for Understanding PID Controllers
34	<b>Daniel Dudiak, Martina Szaboova and Ján Magyar</b>	Exploring Q-Learning in Social Robots for English-Slovak Vocabulary Learning
74	<b>Miklós Sipos and Sándor Szénási</b>	Lightweight blockchain simulation with transaction graph visualizer
63	<b>Ryszard Klempous, Wojciech Bozejko, Mariusz Uchronski and Mieczysław Wodecki</b>	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	<b>László Pokorádi and Vera Stein</b>	Fuzzy Rule-based Estimation of Students' Skills
17	<b>Richard Pesti, Peter Sarcevic, Dominik Csík, Istvan Nagy and Akos Odry</b>	Comparison of optimization algorithms for installation error calibration of accelerometer arrays
24	<b>Dominik Csík, Ákos Odry, Richard Pesti and Peter Sarcevic</b>	A novel WKNN algorithm for fingerprinting-based fusion of different radio communication technologies for indoor positioning
30	<b>Massimo Stefanoni, Ákos Odry and Peter Sarcevic</b>	A dipole model-based approach for magnetic disturbance compensation of mobile robots using magnetometer arrays.

**16:30 – 17:50 [M2a] Session on Neural Networks**

**Room F09**

Session chair: **Amir H. Gandomi**

5	<b>László Schäffer, Zoltán Kincses and Szilveszter Pletl</b>	Hyperparameter Optimisation of Reinforcement Learning Algorithms in Webots Simulation Environment
25	<b>Tomoya Nokura, Ryosuke Okada, Shinjiro Yamamasu, Shinsuke Yasukawa and Yuki Hayashida</b>	Neuromorphic Spikes Generated by the Retinal Circuit Emulator for Training 3-Dimensional Convolutional Neural Networks to Reconstruct Natural Images
20	<b>Bianca Badidová, Radoslav Forgáč, Miloš Očkay and Martin Javurek</b>	A Contribution to DDoS Attack Detection Based on Deep Neural Networks
22	<b>Sašo Pavlič, Iztok Fister Jr. and Sašo Karakatič</b>	NiaNetAD: Autoencoder architecture search for tabular anomaly detection powered by HPC

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

online only

Session chair: **Ladislav Hluchý**

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

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

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

online only

Session chair: **Zrubka Zsombor**

Time zone: CET

16	<b>Alexander Andreevskiy and Ilya Makarov</b>	Complementing text embeddings with structural information
41	<b>Alexander Panaetov and Ilya Makarov</b>	Reparameterization for Improved Training and Weight Optimization in Single Image Super-Resolution Networks
43	<b>Valentin Kopylov and Ilya Makarov</b>	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	<b>Balint Domolki</b>	The double life of John von Neumann
66	<b>András Benczúr</b>	From the appearance of "The Computer and the Brain" to the revolution of the infosphere
67	<b>János Dr Végh</b>	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	<b>Meriem Fgaier and Zsombor Zrubka</b>	Cross-country comparison and ranking: a scoping review of economic similarity indexes
12	<b>Suryakant Tyagi and Sándor Szénási</b>	Speech Emotion Recognition using AdaMax and Weighted Adam Optimizers
1	<b>Ferenc Tolner, György Eigner and Balázs Barta</b>	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 Csizsárik-Kocsir and János Varga**

29	<b>Kornelia Lazanyi</b>	Going online is a must
32	<b>Rozalia Hanna Szatmary</b>	For whom can a robot be a partner
39	<b>Sára Szatmáry and Miklós Kozlovsky</b>	What is the perception of the Hungarian quantum community regarding the future of quantum computing?
46	<b>Lutock Liahuka and Noémi Piricz</b>	Green Supply Chain Management and Sustainable Transportation for Retail Distribution in Angola
64	<b>Jovana Dudukovic, Souliyany Gnotsyoudom, Oleksandra Tryzna, Yazan Mahmoud Qandeel and Andrea Tick</b>	The Psychological Impact of Tiktok on Mental Health
69	<b>Viktor Nagy</b>	Application of a Knowledge Based System in the Real Estate Market
70	<b>Győző A. Szilágyi</b>	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	<b>Szabolcs Róbert Bakos and Miklós Sipos</b>	Analyzing training exercises with mathematical algorithms and convolutional neural network
6	<b>Noémi Piricz</b>	Managing smart grids – Experiences from Hungary
94	<b>László Horváth</b>	Model Mediated Research in Collaborative Space for Lifecycle on the Cloud
	<b>József Kövecses</b>	The Role of Reinforcement Learning in Robotic Contact
79	<b>Richard William Polónyi and Sándor Szénási</b>	Bacteria Colony Simulation
7	<b>Nicoletta Saulig, Željka Tomasović, Siniša Miličić and Miloš Milovanović</b>	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	<b>Anna Biceková, František Babič and Lenka Dobranská</b>	Classification models comparison from the user's level of interpretability
37	<b>Lenka Kališková and Peter Butka</b>	Classification of Images with Linear Objects in All-Sky Astronomical Survey Data using Convolutional Neural Networks
11	<b>Xinyan Jiang and István Bíró</b>	Comparison of ground reaction force between novice and recreational runners during running
80	<b>Norbert Neumann and Ádám Pintér</b>	Solving ARC with non-procedural program induction
81	<b>Alex Szabó and Ádám Pintér</b>	Galaxy detection and classification in sky images with neural network
78	<b>Bálint Klopp and Sándor Szénási</b>	Simulation of Fluvial Erosion

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	<b>Máté Siket, András Nándor Kis, Lehel Dénes-Fazakas, György Eigner and Levente Kovács</b>	Database for storing and accessing diabetes related data in a standardized way
59	<b>Borbála Gergics and Dániel András Drexler</b>	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	<b>Attila Érchegyi and Ervin Racz</b>	The effect of underfloor heating on the amount of polluting matter in the air
91	<b>Alex Bárdi and Márta Takács</b>	Integrating Technical Analysis and Neural Networks for Optimizing Algorithmic Trading
77	<b>Barbara Simon, Ádám Hartveg, Lehel Dénes-Fazakas, György Eigner and László Szilágyi</b>	Translating Hungarian language dialects using natural language processing models
14	<b>Adam Gyula Nemes, Bence Tureczki, Katalin Szenes and György Eigner</b>	Secure Storage and Access Control for Personal and EEG Data using Blockchain

**16:10 – 17:30 [T4b] Special Session on Motion Capture and Biomechanics and its Application****Room F08**Session chair: **Henriette Komorócki-Steiner**

82	<b>Annamária Cserfalvi</b>	Exploring the learning styles of hearing-impaired sign language users and non-sign language users
45	<b>Gábor Gyarmati and Henriette Steiner</b>	Issues of the changes in health financing
53	<b>Gábor Gyarmati and Henriette Komorócki-Steiner</b>	The importance of teleworking, home office, and education for people with disabilities
54	<b>Gábor Gyarmati and Henriette Komorócki-Steiner</b>	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	<b>Szilárd Berke and Balázs Dávid</b>	Experiencing flow from a managerial perspective among different generations
85	<b>Patrik Viktor</b>	Analysis of information security among Hungarian technical higher education students
86	<b>Patrik Viktor and Mónika Garai-Fodor</b>	Choice Patterns for Self-Driving Vehicles in the 5th Generation Volkswagen Group
87	<b>Patrik Viktor</b>	Testing the acceptance of electric charges.
88	<b>János Varga</b>	SMEs as the innovation flagships - where are the real economic drivers?
89	<b>Ádám Mészáros and Ágnes Csiszárík-Kocsir</b>	Agile and communication within a team according to a primary research

18:00 Banquet

Aula

**November 22, Wednesday****9:00 – 9:40 Plenary Talk****Room F09**Session chair: **Levente Kovács**

93	<b>Yo-Ping Huang</b>	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	<b>Marcello Pompa, Simona Panunzi, Alessandro Borri and Andrea De Gaetano</b>	An Agent-Based Model of Glioblastoma Infiltration
40	<b>Andrea Pődör and Kristóf Kertész</b>	Analysis of health data using geospatial methods in Székesfehérvár
27	<b>Balazs Solymos, Tamas Nepusz and Laszlo Bacsardi</b>	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	<b>Sundararajan Dhruva, Raghunathan Krishankumar, Ks Ravichandran and Amir H Gandomi</b>	Fermatean fuzzy-based PCA CoCoSo framework to assess digital technologies in Health 4.0
57	<b>Szilvia Nagy, Melinda Kovács, Ferenc Lilik and Laszlo T. Koczy</b>	On the aggregation functions used in fuzzy signatures based medical image analysis
21	<b>Peter Mogyrosi and Sandor Szenasi</b>	Fuzzy-based Approach for Road Accident Risk Estimation on GPU
55	<b>Jenő Fáró, József Dombi and Tamás Jónás</b>	A Group Consensus Measure for Financial Investments

11:30

Lunch

Aula

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