

## CINTI-MACRo 2022 preliminary program

Since it is a hybrid event, onsite and online participants are welcome.

Please click the link below to join online:  
<https://us06web.zoom.us/j/81422580296>

Time zone: CET

## November 21, Monday

9:00 – 9:15 Opening Ceremony

9:15 – 9:50 Plenary Talk I

Session chair: Imre J. Rudas

7581	<b>Naoyuki Kubota</b>	Multiscopic Topological Twin in Trailer Living Laboratory
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9:50 – 10:25 Plenary Talk II

Session chair: Imre J. Rudas

9623	<b>Gábor Szederkényi</b>	Dynamical Analysis and Control of Compartmental Models with Applications
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10:25 – 10:45 Coffee break

10:45 – 11:20 Plenary Talk III

Session chair: József K. Tar

9020	<b>Laszlo B Kish</b>	Noise-based Logic versus Quantum Supremacy
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11:20 – 11:55 Plenary Talk IV

Session chair: László Gulácsi

6886	<b>József Solymosi</b>	Structure and Randomness
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12:00 – 13:00 Lunch

Bridge / 1st floor

13:00 – 14:30 [M1] Session on Informatics I

Session chair: Márta Takács

1781	Suryakant Tyagi, Annamaria R. Varkonyi, Takács Márta and Sándor Szénási	A Review on Emotion Based Harmful Speech Detection Using Machine Learning
5191	Walelign Sewunetie and Kovács László	Comparison of Automatic Question Generation Techniques



VENUE: Óbuda University (Bécsi út 96/b, H-1034 Budapest)

Room F05

965	Marianna Dimitrova Kucarov, Mátyás Takács, Béla Molnár and Miklos Kozlovsky	Transparent Slide Detection and Gripper Design for Slide Transport by Robotic Arm
1456	Omid Hazbeh, Milad Shayanmanesh, Hamzeh Ghorbani, Sahar Lajmorak and Omid Molaei	Proposing a New Model for Estimation of Oil Rate Passing Through Wellhead Chokes in an Iranian Heavy Oil Field
2210	Miklos Vincze, Abdallah Benhamida, Viktor Zoltan Jonas, Marianna Kucarov, Melvin Ogbolu, Róbert Paulik, Bence Biricz and Miklos Kozlovsky	Real-time multi-user 3D visualization softwares in medicine
7302	Fikri Aydemir and Fatih Başçıftçı	Application of HATEOAS Principle in RESTful API Design

14:00 – 15:00 [M2] Session on Mechatronics, Automation, Computer Science and Robotics

Venue: Sapientia University, Tîrgu Mureş, Romania

Session chair: József Domokos

426	Attila Gergely, Rudolf László Farnos, József Kántor, Andrea Éva Kántor and Norbert Hodgyai	Recycled PET nanofiber membranes for air filtration
438	Gábor Kónya, Zsolt. F Kovács and Eszter Kókai	Milling of Nickel-based superalloy by trochoidal strategies
2108	Márton Máté, Ferenc Tolvaly-Roşca, Norbert Hodgyai and Mircea Viorel Drăgoi	An Approach of the Gear Hob's Rake Face Grinding Wheel Profile
2368	Jozsef Kantor, Attila Gergely, Rudolf Farnos and Norbert Hodgyai	Poly(styrene-b-isobutylene-b-styrene) Triblock Copolymer Fiber Generation with Centrifugal Spinning, and its Potential Application in Oil Collection
3594	Adrienn Deák, Zoltán Szántó, Áron Fehér and Lőrinc Márton	Smartphone-controlled industrial robots: Design and user performance evaluation
4928	Sándor Tihamér Brassai, András Németh, Szabolcs László Gábor and Attila Hammas	Deep learning based object detection for agricultural machinery
5253	Katalin Ferencz, Domokos Jozsef and Levente Kovacs	Analysis of time series data for anomaly detection
6633	Paulo Salgado and T-P Azevedo Perdicoulis	Energy optimisation of a robotic arm

14:30 – 15:15 [M3] Session on Hybrid Systems and Modeling uncertainty

Session chair: József K. Tar

1306	Mădălin-Dorin Pop, Octavian Proştean and Mihai V. Micea	Evaluation of the Use of an Intelligent System in the Calibration of a Refined Car-Following Model
3539	Peter Sarcevic, Dominik Csík, Jozsef Sarosi and Ákos Odry	Inertial sensor-based movement classification with dimension reduction based on feature aggregation
4490	Awudu Atinga, János F. Bitó and József K.Tar	On the Simulation of Lower Order Control Strategies for Higher Order Systems

15:15 – 15:30 Coffee break

15:30 – 17:00 [M4] Session on Applications I

Session chair: Ádám Csapó

572	László Horváth	Integrated Autonomous Model System as Research Media
2176	I Made Putrama and Peter Martinek	An Automated Graph Construction Approach from Relational Databases to Neo4j
2713	Takenori Obo and Noyuki Kubota	Topological Structured Learning for Assessment of Unilateral Spatial Neglect
3400	György Persa and Adam Csapo	A Fuzzy Driven Framework for the Cognitive Modeling and Quantitative Analysis of Aggregated Avatars
2751	Agustin Spahn, Enrique Marcelo Albornoz and César Martínez	Augmented and virtual reality mirror therapy system for hand rehabilitation in stroke patients
6548	Gyula Simon	Acoustic Moving Source Localization using Sparse Time Difference of Arrival Measurements

17:00 – 17:45 [M5] Special Session on Digitalisation, Generation Research, Consumer Trends

via Zoom

Organizers and Session chairs: Mónika Garai-Fodor, Ágnes Csiszárik-Kocsir and János Varga

1719	Anett Popovics and Valéria Szekeres	Analysis of social responsibility and consumer activity through primary research
2784	Mónika Garai-Fodor and Katalin Jaeckel	Motivational tools and incentives: different generations, different needs at work
5138	Katalin Jaeckel and Monika Garai-Fodor	Intergenerational cooperation and generational differences at work

17:00 MFT közgyűlés

Room F07

18:00 Welcome reception

NIK aula / 1st floor

## November 22, Tuesday

8:30 – 9:05 Plenary Talk V

Room F09

Session chair: Levente Kovács

9824	Andrea DeGaetano	Modeling Cerebro-Vascular Autoregulation after Postural Change Perturbations
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9:10 – 10:25 [T1] Session on Informatics II

Session chair: Balázs Villányi

2635	Behnaz Motamedi and Balázs Villányi	Design of a Smart Irrigation using wireless communication protocols in Greenhouse
5037	Bálint Krisztián	Data Security Structure of a Students' Attendance Register Based on Security Cameras and Blockchain Technology
7413	Matus Vidiecan and Martin Bobak	Container-based Video Streaming Service
4118	Andrea Pődör and Gergely Huszár	Detecting light pollution with UAV, a Hungarian case study
6809	Joanna Isabelle Olszewska	Cross-Platform Mobile Application Development for Smart Services

10:25 – 10:45 Coffee break

10:45 – 12:00 [T2] Session on Applications II

Session chair: Dániel András Drexler

6235	Balázs Varga	Learn to climb: teaching a reinforcement learning agent the single rope ascending technique
1660	Ágnes Szeghegyi and Patrik Viktor	Impact of the Energy Crisis on Demand for Plug-in Hybrid Vehicles
5028	Enikő Nagy and Ildiko Holik	Examining negative attitudes towards teaching robots among teachers
5829	Erzsébet Nagy and Dániel András Drexler	The effect of the choice of initial estimation for a tumor model parameter estimation problem

10:45 – 12:00 [T3] e-poster Session on Neural Networks and Applications

Session chair: Tamás Nógrádi

5057	Michal Kolárik, Martin Sarnovsky, Jan Paralic and Peter Butka	Explainability of deep learning models in medical image classification
2934	Catalin Vladu, Lucian Prodan and Alexandru Iovanovici	Resource Constrained, Fast Convergence Training for Violence Detection in Video Streams

12:00 – 13:00 Lunch

Bridge / 1st floor

12:30 – 14:00 [T4] Session on Applications III

via Zoom

Session chair: Enikő Nagy

3113	Fahime Khozeimeh, Mohamad Roshanzamir, Afshin Shoeibi, Mohammad Tayarani Darbandy, Roohallah Alizadehsani, Hamid Alinejad-Rokny, Davood Ahmadian, Abbas Khosravi and Saeid Nahavandi	Importance of Wearable Health Monitoring Systems Using IoMT; Requirements, Advantages, Disadvantages and Challenges
5454	Dacian Avramoni, Roxana Virlan, Alexandru Iovanovici and Lucian Prodan	Detection of Pill Intake Associated Gestures using Smart Wearables and Machine Learning
6096	Anastasia Yaschenko and Ilya Makarov	Knowledge Retrieval and Relation Mining from Tolkien's History of Middle Earth
6534	Saba Danaei, Seyed Vahid Moravvej, Roohallah Alizadehsani, Afshin Shoeibi, Hamid Alinejad-Rokny and Saeid Nahavandi	Myocarditis Diagnosis: A Method using Mutual Learning-Based ABC and Reinforcement Learning
7117	Mohamad Roshanzamir, Mahdi Roshanzamir, Abdolreza Mirzaei, Mohammad Tayarani Darbandy, Afshin Shoeibi, Roohallah Alizadehsani, Fahime Khozeimeh and Abbas Khosravi	Automatic facial expression recognition in an image sequence using conditional random field
9837	Konstantin Shmyrev and Ilya Makarov	Neural Drug Discovery

14:00 – 15:00 [T5] PhD Student Workshop on Applied Informatics in Computational Intelligence

Organizer and Session chair: László Horváth

6654	Kamilla Novák, Máté Siket, Levente Kovács, Dániel András Drexler and György Eigner	Glycemic control metrics for in silico testing of artificial pancreas systems
7613	Zsolt Krutilla and Attila Kővári	The origin and primary areas of application of natural language processing

7265	Katalin Ferencz and Ernő Rigó	Analysis of network-based data collection mechanisms applicable in securing critical infrastructures
9087	Meriem Fgaier and Zsombor Zrubka	Cost-effectiveness of using chatbots in healthcare: a systematic review

14:00 – 15:00 [T6] e-poster Special Session on Motion Capture and Biomechanics and its Application

Organizers and Session chairs: Miklós Tóth, Imre Bojtár and Henriette Komoróczy-Steiner

3072	Anna Lantzky, Daniel Joo and Csenge Andrea Molnár	Parametric Study of Human Balancing on Rolling Balance Board
3573	Anna Lantzky and Daniel Joo	Bodymodel testing for biomechanical motion studies - Pilot Study
4370	Kludia Kaszala and György Fekete	Examination of Movement in Young Gymnasts with Special Reference to Knee Angles

15:00 – 15:45 [T7] Special Session on Motion Capture and Biomechanics and its Application

Organizers and Session chairs: Miklós Tóth, Imre Bojtár and Henriette Komoróczy-Steiner

1049	Bence Tureczki, Henriette Steiner-Komoróczy and Katalin Szenes	A blockchain-based dynamic support of kinematic testing
9111	György Fekete and András Molnár	Scalar attributes and time series combining patterns for multivariate time series classification
9901	Gábor Gyarmati	The potentials of movement labs in healthcare

15:00 – 15:45 [T8] e-poster PhD Student Workshop on Applied Informatics in Computational Intelligence

Organizers and Session chair: László Horváth

9933	Kristóf Takács, Renáta Nagyné Elek and Tamás Haidegger	Image-Processing Based Methods to Improve the Robustness of Robotic Gripping
6735	Keyvan Rahimi, Rituraj Rituraj and Diana Ecker	Deep Learning For Diabetic Retinopathy In Fundus Images
9301	Rituraj Rituraj and Diana Ecker	A Comprehensive Investigation into the Application of Convolutional Neural Networks (ConvNet/CNN) in Smart Grids

15:45 – 16:00 Coffee break

16:00 – 17:15 [T9] Session on Neural Networks

Session chair: Péter Galambos

3816	Grega Vrbančič, Rok Kukovec, Iztok Fister, Vili Podgorelec, Sancho Salcedo-Sanz and Iztok Fister Jr.	Profiling the Arion rufus snails with computer vision
5294	Győző Attila Szilágyi	Neural network modelling of information propagation in social networks
7071	Csaba Márton Köllöd, Nikomidisz Jorgosz Eftimiu, Gergely Márton and István Ulbert	Classification of semi-automated labeled MindRove Armband recorded EMG data
7311	Artúr István Károly, Sebestyén Tirczka, Tamás Piricz and Péter Galambos	Robotic Manipulation of Pathological Slides Powered by Deep Learning and Classical Image Processing
4645	Mikhail Ermakov and Ilya Makarov	Few-shot Logo Recognition in the Wild

17:15 – 18:00 [T10] Session on Genetic algorithms and Fuzzy technology

Session chair: Balázs Varga

879	Anna Ibolya Pózna	A Genetic Algorithm Based Solution of Hungarian Team Orienteering Competitions
6595	Attila Widner, Balázs Varga, Dániel Medgyesi and Tamás Tettamanti	Validation of a two-wheel vehicle model using Genetic Algorithm
4435	Ilona Tompa, Péter Bakucz and Gábor Kiss	DETERMINING TRAFFIC NODE RELIABILITY BY FUZZY FAULT TREE ANALYSIS AND SMALL-SCALED MODEL

18:00 Banquet

NIK Aula / 1st floor