

ICCC 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/89085530624>

Time zone: GMT

July 6, 2022, Wednesday

9:00 – 9:20 Opening Ceremony

9:20 – 10:00 Plenary Talk I

Session chair: Levente Kovács

61	József Bokor	Parametrization and Identification of Dynamic Systems
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10:00 – 10:15 Coffee break

10:15 – 11:00 Plenary Talk II

Session chair: Imre J. Rudas

72	Mo Jamshidi	A System of Systems Framework for Intelligence in Autonomy, Big Data Analytic, and Applications
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11:00 – 11:40 Plenary Talk III

Session chair: Tamás Haidegger

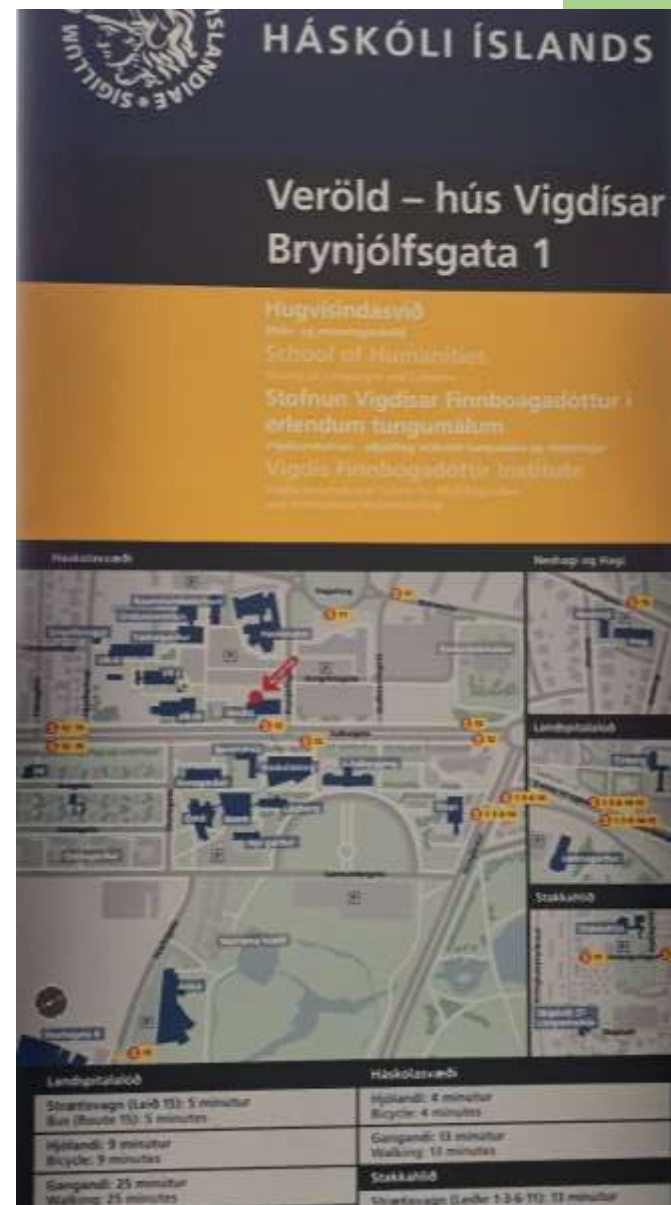
71	Oussama Khatib	The Era of Human-Robot Collaboration: Deep-Sea Robotic Exploration
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11:40 – 13:00 Lunch

Venue

VERÖLD – House of Vigdís,
University of Iceland

Address: Brynjólfsgata 1,
107 Reykjavík, Iceland



13:00 – 14:30 [W1] Session on Computer Science

Session chair: Dániel Kiss

3	Damian Kusnik and Bogdan Smolka	On the application of robust mean shift procedure for the enhancement of noisy color images.
19	Miklós Vincze, Abdallah Benhamida, Viktor Zoltan Jónás, Marianna Kucarov, Melvin Ogbolu, Róbert Paulik, Bence Biricz and Miklós Kozlovsky	Comparison of polygon and voxel-based visualization of microscopic serial sections
13	Renáta Nagyné Elek and Tamás Haidegger	Towards Autonomous Endoscopic Image-Based Surgical Skill Assessment: Articulated Tool Pose Estimation
22	Sándor Szénási, Miklós Sipos and Péter Mogyorósi	PSO based Optimization of DBSCAN Algorithm Parameters for Road Accident Blackspot Localization
8	Dóra Papp, Renáta Nagyné Elek and Tamás Haidegger	Surgical tool segmentation on the JIGSAWS dataset for autonomous image-based skill assessment
66	Dániel Kiss and Anna Lovrics	On-lattice approximation of a grid-free individual-based model of growing cell populations

14:30 – 15:45 [W2] Special Session on PhD Student Research

Organizer and Session chair: László Horváth

27	Artúr István Károly, Ármin Károly and Péter Galambos	Automatic Generation and Annotation of Object Segmentation Datasets Using Robotic Arm
32	Tamás Nagy and Tamás Haidegger	State of the Art in the Automation of the Peg Transfer Surgical Training Exercise
33	Lehel Dénes-Fazakas, György Eigner and László Szilágyi	Segmentation of 6-month infant brain tissues from multi-spectral MRI records using a U-Net neural network architecture
39	Attila Farkas, Krisztián Póra, Sándor Szénási, Gábor Kertész and Robert Lovas	Evaluation of a distributed deep learning framework as a reference architecture for a cloud environment
50	Suryakant Tyagi and Sándor Szénási	A Review and analysis of Emotion Based Harmful Speech Detection using machine and deep learning and Future direction

15:45 – 16:00 Coffee break

16:00 – 18:15 [W3] Special Session on Cybersecurity and 5G Cybersecurity

Organizers and Session chairs: Miklós Kozlovsky, Anna Bánáti, Zoltán Rajnai and László Nádaí

21	Lourdes Ruiz, Huu Phuoc Dai Nguyen and Rajnai Zoltan	The Mobile Ecosystem, 5G and NESAS
26	Malak Shatnawi, Haya Altaieb and Rajnai Zoltan	The Digital Revolution with NESAS Assessment and Evaluation
28	Yue Wu	New page of agriculture: on the view of 5G generation and GPS
29	Esmeralda Kadena and Silvana Qose	Blockchain in Social Media: Eliminating Centralized Control vs. Challenges
38	Rita Fleiner, Ruben Hubert, Anna Bánáti and László Erdődi	Security threats based on critical database system privileges
44	Máté Érsok, Ádám Balogh, László Erdődi, Miklós Kozlovsky, Eszter Kail and Anna Bánáti	Measuring Honeypots based on CTF game
47	Miklós Vilmos Kecskés, Eszter Kail, Miklós Orsós and Anna Bánáti	5G registration tracking based on logdata

63	Mera Saulaiman, Miklos Kozlovsky, Akos Csilling and Abdallah Benhamida	Overview of Attack Graph Generation For Automotive Systems
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Via Zoom:

25	Jozsef Beinschroth	Implementing an effective qualitative risk analysis
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18:30 Welcome Reception

July 7, 2022, Thursday

8:15 – 9:45 [T1] Session on Computational Intelligence-based Results of Information Technology and Control Theory, Mechanical Systems and Cyber-Medical Systems
Session chair: Dániel András Drexler

9	Sašo Pavlič, Nicholas Young and Sašo Karakatič	Predictive maintenance of pumping system bearings with evolved autoencoders
45	Gábor Kertész	Combining Negative Selection Techniques for Triplet Mining in Deep Metric Learning
41	Laura Gulyás Oldal and Gábor Kertész	Evaluation of Deep Learning-based Authorship Attribution Methods on Hungarian Texts
15	József Kuti and Péter Galambos	Analysis and Improvement of Multi-Scaled Unscented Kalman-filters to Increase Accuracy
46	Enikő Nagy and Ildikó Holik	Some aspects of the use of educational robotics in international and Hungarian contexts
24	Erzsébet Nagy, Bence Géza Czakó, Máté Siket, Balázs Gombos, András Füredi, Gergely Szakács, Levente Kovacs and Dániel András Drexler	Tracking parameter changes of an Impulsive Tumor Growth Model

9:45 – 10:00 Coffee break

10:00 – 11:00 [T2] Special Session on Mechatronics and Vehicle Engineering
Organizer and Session chair: Edit Laufer

42	László Juhász and László Pokorádi	Digitization experiences of large Hungarian companies in industrial maintenance
51	Edit Tóth-Laufer, Ildar Z. Batyrshin and Imre J. Rudas	Similarity Measures in Decision Making
53	Bence Varga, József Tar and Richárd Horváth	Tuning of Dynamic Model Parameters for Adaptive Control Using Particle Swarm Optimization
54	István Nagy and Bence Selmeçi	Artificial Error Map Simulation in Dynamic Environment on Multi-Agent Domain

11:00 – 12:45 [T3] Special Session on Food and Agricultural Robotics
Organizers and Session chairs: Tamás Haidegger and Alex Mason

6	Ian de Medeiros Esper, Dmytro Romanov, Olga Korostynska, Pál From and Alex Mason	Ex-vivo Porcine Model for Generating an Internal Surface in Biological Subjects using 3D-GAN
34	Takács Kristóf, Bence Takács, Imre Rudas, Péter Galambos and Tamás Haidegger	Analysis of Novel Force Control Methods for Red-Meat Gripping Applications
37	Michaela Pinčková, L. Eduardo Cordova-Lopez, Alex Mason and Olga Korostynska	Innovation in Holding Pluck of Pig Carcasses
48	Sándor Tarsoly, Artúr István Károly and Péter Galambos	Lessons Learnt with Traditional Image Processing Techniques for Mushroom Detection
62	Marta Alexy and Tamás Haidegger	Precision Solutions in Livestock Farming – feasibility and applicability of digital data collection
67	Rekha Raja, David Rapado Rincon, Frans Kemp, Gert Kootstra and Eldert Van Henten	PosePP: 6D Pose Estimation of Poultry Pieces in a Cluttered Bin

Via Zoom:

31	Maksym Manko, Oleh Smolkin, Ian de Medeiros Esper, Anton Popov and Alex Mason	Estimation of the pig's limb orientation and gripping points based on the pose estimation deep neural networks
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12:45 – 13:30 Lunch

13:30 – 14:15 [T4] Special Session on Digitalisation, Generation Research, Consumer Trends
Organizers and Session chairs: Mónika Garai-Fodor and Ágnes Csiszárík-Kocsir

36	Monika Garai-Fodor and Anett Popovics	Generational differences in the perception and purchase of Hungarian food products under the impact of the coronavirus
52	Ivan Aigner, Monika Garai-Fodor and Tibor P. Szemere	Singapore's Journey as a Digit-all-ized and Innovative Smart Nation Toward Sustainabilit
56	Monika Garai-Fodor and Patrik Viktor	IOT devices and 5G network security options from generation aspects

14:15 – 14:45 [T5P] E-poster Session on Digitalisation, Generation Research, Consumer Trends, and Computer Science
Organizers and Session chairs: Mónika Garai-Fodor and Ágnes Csiszárík-Kocsir

57	Aranka Baranyi, József Csernák and Ágnes Csiszárík-Kocsir	Assessing investment funds on the basis of their net asset value
58	István Márk Tóth and Ágnes Csiszárík-Kocsir	Teleworking and the home office – the digital possibilities in work organization
59	Csilla Mizser, Mónika Garai-Fodor and Ágnes Csiszárík-Kocsir	Key competences of young entrepreneurs in the world of digitalisation based on the results of a Hungarian questionnaire research
60	Ágnes Csiszárík-Kocsir, Mónika Garai-Fodor and János Varga	Preference system for the choice of savings in a generation-specific approach of the financial culture before and after the coronavirus pandemic

65	Ádám Mészáros and Ágnes Csiszárik-Kocsir	The difficulties of implementing Agile and within it the Scrum framework
14	Ján Perháč, Michal Ferencsik, Viktor Zhukovskyy, Nataliia Zhukovska and Serhii Shatnyi	Visualization of Syntax and Semantics for Simple Functional Language of Natural Numbers and~Boolean Values
69	György Eigner, Tünde Fatima Ács and Levente Kovács	Óbuda University Future Industrial Science and Innovation Park Zsámbék – progressive knowledge centre of a new innovation model
73	György Molnár, Beáta Orosz	The Economic and Educational Imprints of Digital Transformation - or the Evolution of Digitalisation

14:15 – 15:30 [T6] Session on Computer Science

only via Zoom

Session chair: Michal Kvet

49	Mirasbek Nurseit and Andrea Tick	Factors affecting SMEs' decision to acquire BI solutions
11	Michal Kvet	IMBD database performance analysis
1	Tamas Orosz	Model transition by means of Zachmann Enterprise Architecture Framework
55	Reza Hassanian, Morris Riedel and Lahcen Bouhlali	The Capability of Recurrent Neural Networks to Predict Turbulence Flow via Spatiotemporal Features
10	Michal Kvet and Marek Kvet	COVID 19 implementation of a partial database

15:30 – 16:15 [T7] Special Session on PhD Student Research

only via Zoom

Organizer and Session chair: László Horváth

23	Razvan Petcu and Gheorghe-Daniel Andreescu	Two-Wheeled Inverted-Pendulum Self-Balancing Robot with LQR or PID Control
40	Gabor Szedo Becker	Low-Cost Spatio-Temporal Algorithm for Defective Pixel Identification and Correction
64	Rituraj Rituraj	An Investigation into the Methods and Applications of Deep Learning in Smart Grid

16:15 – 18:00 [T8] Session on Computational Intelligence-based Results of Information Technology, Control Theory and Signal Processing, and Cyber-Medical Systems

only via Zoom

Session chair: Roohallah Alizadehsani

4	Mohamad Roshanzamir, Mohammad Ali Nematollahi, Mohammad Tayarani Darbandy, Mahdi Roshanzamir, Roohallah Alizadehsani, Afshin Shoeibi and Davood Ahmadian	Swarm Intelligence in IoT
70	László Horváth	Autonomous Model System for Lifecycle Contextual Research
5	Mohamad Roshanzamir, Mohammad Tayarani Darbandy, Mahdi Roshanzamir, Roohallah Alizadehsani, Afshin Shoeibi and Davood Ahmadian	Swarm Intelligence in Internet of Medical Things
16	Paulo A. Salgado and T-P Azevedo Perdicoulis	note on the assessment of a fuzzy derivatives' time-series predictor

18	Stephen Kimathi and Lantos Bela	Unmanned Aerial Vehicles Swarm Flocking architectures: An Overview
43	Awudu Atinga, Annamária R. Várkonyi-Kóczy and József K. Tar	Application of Abstract Rotations for Forecasting the Signals of Nonlinear Dynamic Systems
17	Mohammed Faeik Ruzaij Al-Okby, Thomas Roddelkopf, Sebastian Neubert, Heidi Fleischer and Kerstin Thurow	Robot-based Environmental Monitoring in Automated Life Science Laboratories

19:00 **Banquet**

Restaurant Fjallkonan (address: Hafnarstræti 1-3, 101 Reykjavík)

July 8, 2022, Friday

Bus tour

Thank you for your contribution!
See you next year at ICC 2023!