**Program**

**Day 1 – Monday, 5 February 2024 @ room TBA**

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| 08:40 - 08:50 | Opening of the Faculty Event |
| 08:50 – 09:00 | Opening of the Mini-Symposium |
|  | **Session 1 - Chair:** |
| 09:00 - 09:20 | **Kristóf Horváth and Balázs** **Bank** Numerical noise in Kautz filters |
| 09:20 - 09:40 | **András Palkó and László Sujbert** Recursive Compressive Sensing of Streaming Signals |
| 09:40 - 10:00 | **Bence Ország and László Sujbert** Lifting the Biorthogonality Condition on Observer Based Transforms |
| 10:00 - 10:20 | **András Wiesner and Tamás Kovácsházy** Methods of Peripheral Synchronization in Real-Time Cyber-Physical Systems |
| 10:20 - 10:40 | **Lóránt Csőke, László Domján and Zsolt Kollár** Redesign of the CCM system for accuracy improvement |
| 10:40 - 11:00 | **Break** |
|  | **Session 2 - Chair:** |
| 11:00 - 11:20 | **Márk Marosi and Péter Sárközy** Investigating the natural product subspace within the Transformer-VAE foundation model’s drug-like molecule space |
| 11:20 - 11:40 | **Dániel Sándor and Péter Antal** Systematic evaluation of continuous optimization approaches for causal discovery of gene regulatory networks |
| 11:40 - 12:00 | **Levente Alekszejenkó and Tadeusz P. Dobrowiecki** Adversarial Localization Algorithms in Indirect Vehicle-to-Vehicle Communication |
| 12:00 - 12:20 | **Gábor Révy, Anna Bodnár, Dániel Hadházi and Gábor Hullám** Towards pulmonary vessel separation |
| 12:20 - 12:40 | **Mihály Vetró and Gábor Hullám** Nonparametric statistical testing of functional connectivity in EEG data |
| 12:40 - 13:40 | **Lunch break** |
| 13:40 – 14:40 | **IMSc poster session** |
| 14:40 – 15:00 | **Break** |
|  | **Session 4 - Chair:** |
| 15:00 - 15:20 | **Hussein Al-Rikabi and Balázs Renczes** Floating-Point Quantization Analysis of Multi-Layer Perceptron Artificial Neural Networks |
| 15:20 – 15:40 | **Monther Alrwashdeh, Barna Csuka, Zsolt Kollár** Quantization noise analysis in FBMC receivers and its effect on the BER performance |
| 15:40 – 16:00 | **Máté Tóth and Péter Fiala** Independent Component Analysis based Microphone Array Source Separation |
| 16:00 - 16:20 | **Sharba Mohammad and Balázs Renczes** Robust implementation of non-linear frequency domain system identification methods |
| 16:20 - 16:40 | **Zahraa Tagelsir and Zsolt Kollár** Novel approach for PAPR reduction in FBMC-OQAM using enlipping |
| 16:40 - 17:00 | **Ákos Ferenc Hegedüs and Tamás Dabóczi** Design Optimization of a Current Sensing Trace with respect to Skin Effect by FEM Simulations |
| 17:00 | **Closing words** |

**Day 2 – Tuesday, 6 February 2024 @ room TBA**

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|  | **Session 1 - Chair:** |
| 09:00 - 09:20 | **Zsófia Ádám, Dirk Beyer, Po-Chun Chien, Nian-Ze Lee and Nils Sirrenberg** Btor2-Cert: A Certifying Hardware-Verification Framework Using Software Analyzers |
| 09:20 - 09:40 | **Attila Ficsor and Oszkár Semeráth** Analyzing the Effects of Simulation Quality on the Performance of Semantic Segmentation |
| 09:40 - 10:00 | **Dóra Cziborová and Richárd Szabó**Modeling of Time-Dependent Behavior in Fault-Tolerant Systems |
| 10:00 - 10:20 | **Levente Bajczi, Zsófia Ádám and Zoltán Micskei** ConcurrentWitness2Test: Test-Harnessing the Power of Concurrency |
| 10:20 - 10:40 | **Mihály Dobos-Kovács and András Vörös** Combining CEGAR and Lazy Abstraction for Verifying Timed Systems |
| 10:40 – 11:00 | **Break** |
|  | **Session 2 - Chair:** |
| 11:00 - 11:20 | **Simon Nagy and András Vörös** Dominant failure analysis using importance measures in an automotive case-study |
| 11:20 - 11:40 | **Márton Elekes, Vince Molnár and Zoltán Micskei** To Do or Not to Do: Semantics and Patterns for Do Activities in UML PSSM State Machines |
| 11:40 - 12:00 | **Bertalan Zoltán Péter and Imre Kocsis** Landmark Estimation for Qualitative Diagnosis Over Distributed Traces |
| 12:00 - 12:20 | **Damaris Kangogo and Imre Kocsis** Requirement-based, structural design for confidentiality in Hyperledger Fabric |
| 12:20 - 12:40 | **Imre Kocsis and Noor Algburi** Towards the Requirement-Driven Generation and Evaluation of Hyperledger Fabric Network Designs |
| 12:40 – 13:40 | **Lunch Break** |

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|  | **Session 3 - Chair:** |
| 13:40 - 14:00 | **Rebeka Farkas** Towards Diversity Metrics for Timed Automata |
| 14:00 - 14:20 | **Ármin Zavada and Vince Molnár** From Hard-Coded to Modeled: Towards Making Semantic-Preserving Model Transformations More Flexible |
| 14:20 - 14:40 | **Milán Mondok and Vince Molnár** Efficient Manipulation of Logical Formulas as Decision Diagrams |
| 14:40 - 15:00 | **Nada Akel and László Gönczy**: Using fault tolerant design patterns to assure data veracity |
| 15:00 - 15:20 | **Richárd Szabó, Dániel Szekeres, Simon József Nagy, Zoltán Thimár, István Majzik and Zoltán Micskei**Iterative Exploration of Distinct Requirement Violation Scenarios for Fault-tolerant Architectures | |
| 15:20 - 15:40 | **András Földvári, Francesco Brancati and András Pataricza** Preliminary Risk and Mitigation Assessment in Cyber-Physical Systems |
| 15:40 – 16:00 | **Break** |

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|  | **Session 4 - Chair:** |
| 16:00 - 16:20 | **Ádám Tumay and Dániel Hadházi** Nodule segmentation on PA chest x-ray images |
| 16:20 - 16:40 | **Dániel Szarvas and Domonkos Pogány** Conditional Molecule Generation with 2D Latent Diffusion |
| 16:40 - 17:00 | **Domonkos Pogány and Péter Antal** Hyperbolic Drug-Target Interaction Prediction Utilizing Differential Expression Signatures |
| 17:00 - 17:20 | **Plusz előadás 1** |
| 17:20 – 17:40 | **Plusz előadás 1** |
| 17:40 | **Closing words** |