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The 2024 IEEE 3rd Conference on Information Technology and Data Science

Preliminary Book of Abstracts (/sites/default/files/upload_documents/abstracts_citds_2024.pdf)

Information for authors:

The conference will start on the 26th of August 2024 at 9 a.m. and will continue on the 27th of August 2024 from 9.00 a.m. to 17.10 p.m. UTC+2. There will be two plenary lectures on each conference day and two parallel sessions will take place. The authors have a 15 minute talk to present their research and plus 5 minutes for questions and answers. The plenary and keynote lectures will be 30-minute talks. Please prepare your conference presentation in advance according to these time limits. The CISCO Webex online platform will be used for the conference.

The conference venue:

will be the building of the Faculty of Informatics, University of Debrecen, Hungary.

Detailed information about the location. (<https://inf.unideb.hu/en/address>)

How can we connect to an online session?

Connecting from browser (/sites/default/files/upload_documents/citds2024_connecting_online.pptx)
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26th Aug, MONDAY

09:00 - 09:10	Conference Opening - Room: IF01 (https://unideb.webex.com/unideb-hu/j.php?MTID=m2704545cb22779aeb6710c782493c32f) (https://unideb.webex.com/unideb-hu/j.php?MTID=m2704545cb22779aeb6710c782493c32f) General Chair of CITDS2024: András Hajdu (https://unideb.webex.com/unideb-hu/j.php?MTID=m2704545cb22779aeb6710c782493c32f)
09:10 - 09:40 Plenary Talk	AI Ethics: What Is the Real Question? <i>Viktor Dörfler</i> Chair: András Hajdu (https://unideb.webex.com/unideb-hu/j.php?MTID=m2704545cb22779aeb6710c782493c32f) Room: IF01
09:40 - 10:00	Coffee Break

	Session A - Room: IF01 Artificial Intelligence and its Applications Chair: András Hajdu (https://unideb.webex.com/unideb-hu/j.php?MTID=m2704545cb22779aeb6710c782493c32f)	Session B - Room: IF02 Temporal Data Science with Applications Chair: Márton Ispány (https://unideb.webex.com/unideb-hu/j.php?MTID=m8f51187fb970a4001170b8e87a5bccb9) Stochastic models in Data Science Chair: István Fazekas (https://unideb.webex.com/unideb-hu/j.php?MTID=m8f51187fb970a4001170b8e87a5bccb9)
10:00 - 10:20	Automatic Analysis of Thermal Images to Detect Hot Spot Regions <i>Norbert Serbán and Balázs Harangi</i>	SAWE: Signature-based Aggregated Window Embedding for Unsupervised Time Series Segment Clustering <i>Marcell Németh and Gábor Szűcs</i>
10:20 - 10:40	Model-based neural networks for thermographic image reconstruction - online <i>Gergő Galiger, Nazila Azadi, Bernhard Lehner, Mario Huemer and Péter Kovács</i>	Requirement Specification of an Information Bank <i>Gábor Kusper, Gyula Erdei and Attila Szekeres</i>
10:40 - 11:00	A comparative study of pre-trained models in breast ultrasound image segmentation <i>Dhafer G. Honi, Mohammed Nsaif, Szathmáry László and Szeghalmy Szilvia</i>	TimeTune: Personalized Study Plans Generation with Google Calendar Integration <i>Chevon Fernando and Banuka Athuraliya</i>
11:00 - 11:20	Coffee Break	
11:20 - 11:40	Towards machine learning based text categorization in the financial domain <i>Frederic Voigt, Jose Alcarez Calero, Keshav Dahal, Qi Wang, Kai von Luck and Peer Stelldinger</i>	Applying Hybrid Forecasting Model SARIMA–SVR for Daily Energy Consumption Data <i>Herry Kartika Gandhi</i>
11:40 - 12:00	Harnessing Large Language Models: Fine-tuned BERT for Detecting Charismatic Leadership Tactics in Natural Language - online <i>Felix Neubürger, Yasser Saeid, Thomas Kopinski, Stefanie Krügl, Helena Hüster and Ralf Lanwehr</i>	Yule-Walker estimation of periodic INAR signals <i>Márton Ispány</i>

12:00 - 12:20	Designing prompts and creating cleaned scientific data for Retrieval Augmented Generation for more precise responses from generative large language models - online <i>Róbert Lakatos, Eszter Klára Urbán, Zoltán János Szabó, János Pozsga, Eszter Csernai and András Hajdu</i>	Valid Decoding in Gaussian Mixture Models <i>Branislav Rudic, Markus Pichler-Scheder and Dmitry Efrosinin</i>
12:20 - 14:00	Lunch Break	
14:00 - 14:30 Plenary Talk	Novel Challenges and Opportunities for Improving the Collaborative Efficiency of Teams Using Speech Data-based Machine Learning Models for Understanding Human Behavior <i>Alex Doboli</i> Chair: Zoltán Gál (https://unideb.webex.com/unideb-hu/j.php?MTID=m2704545cb22779aeb6710c782493c32f) Room: IF01	
14:30 - 14:50	Coffee Break	
	Session A - Room: IF01 Internet of Things, Operational Technology and Networking Chair: Zoltán Gál (https://unideb.webex.com/unideb-hu/j.php?MTID=m2704545cb22779aeb6710c782493c32f)	Session B - Room: IF02 Stochastic models in Data Science Chair: István Fazekas (https://unideb.webex.com/unideb-hu/j.php?MTID=m8f51187fb970a4001170b8e87a5bccb9)
		Optimization and Decision Support Chair: Anett Rácz (https://unideb.webex.com/unideb-hu/j.php?MTID=m8f51187fb970a4001170b8e87a5bccb9)
14:50 - 15:10	Using Speech Data to Automatically Characterize Team Effectiveness to Optimize Power Distribution in Internet-of-Things Applications <i>Gnaneswar Villuri and Alex Doboli</i>	Modelling and visualization of spatial data: A case study of COVID-19 data in Maine, USA. - online <i>Ismail H. Abdi</i>
15:10 - 15:30	A Framework and a Theoretical Model to Integrate Internet-of-Things with Human Behavior in Teams <i>Alex Doboli</i>	A family of random graph evolution models with moderate density <i>István Fazekas and László Fórián</i>

15:30 - 15:50	Evaluating RNN Models for Multi-Step Traffic Matrix Prediction <i>Mohammed Nsaif, Gergely Kovásznai, Hasanein D. Rjeib, Ali Malik and Ruairí de Fréin</i>	Investigating the influence of hyperparameters on the optimal time-series prediction ability of generative large language models - online <i>Árpád Pándy, Róbert Lakatos, Péter Pollner, Eszter Csernai and András Hajdu</i>
15:50 - 16:10	Coffee Break	
16:10 - 16:30	Analysis of different Indoor Environment for the Terahertz propagation - online <i>Nagma Elburki and Sofiene Affes</i>	Smart RANSAC: A Robust Approach - online <i>Vinayak Raju and Chetana Pujari</i>
16:30 - 16:50	Impact of Random Number Generation Methods Usage on Swarm Intelligence Algorithms for Energy Optimization in Wireless Sensor Networks <i>Levente Filep and Zoltán Gál</i>	Purpose of mobility data usage and risk assessment: POSMO ethical data market case <i>Olena Yatsenko</i>
16:50 - 17:10	Design of the Simulation Analysis Tool for Wireless Sensor Network - online <i>Péter Polgár, Levente Filep and Zoltán Gál</i>	Application of different option numbers in Thurstone motivated models <i>László Gyarmati, Csaba Mihálykó and Éva Orbán-Mihálykó</i>
17:10 - 17:30	ECG Data Classification With Privacy Preservation in the IoT Context <i>Codruta Maria Serban, Gheorghe Sebestyen and Anca Hangan</i>	Consistency and inconsistency in the case of a stochastic paired comparison model <i>Csaba Mihálykó, Éva Orbán-Mihálykó and László Gyarmati</i>

27th Aug, TUESDAY

09:00 - 09:30 Plenary Talk	Decidability, Interpolation, Amalgamation - A Case Study from Algebra through Logic to Computer Science <i>Sándor Jenei</i> Chair: György Vaszil (https://unideb.webex.com/unideb-hu/j.php?MTID=m7068bdc467b0a3a396f67ddb3da9b8f) Room: IF01
09:30 - 09:50	Coffee Break

	Session A - Room: IF01 Automata, Logic, and Models of Computatio n Chair: György Vaszil (https://unideb.webex.com/unideb-hu/j.php?MTID=m7068bdc467b0a3a396f67ddb3da9b8f)	Session B - Room: IF02 Software Technology Chair: László Szathmáry (https://unideb.webex.com/unideb-hu/j.php?MTID=m0f286129ce42d187e2e074ad549ec1e3)
	Predictive Analytics Chair: Ágnes Fogarassyné Vathy (https://unideb.webex.com/unideb-hu/j.php?MTID=m7068bdc467b0a3a396f67ddb3da9b8f)	Artificial Intelligence and its Applications Chair: Balázs Harangi (https://unideb.webex.com/unideb-hu/j.php?MTID=m0f286129ce42d187e2e074ad549ec1e3)
09:50 - 10:10	On properties of feasibility in non-standard Heyting arithmetic <i>Péter Battyányi</i>	Next Generation of Assessment Evaluation System for IT Configuration Challenges <i>Tamás Kádek and Piroska Biró</i>
10:10 - 10:30	Parsing Boolean grammars with a three-valued semantics <i>Adrián Patrik</i>	Transforming Erlang Server Applications - online <i>Zsófia Erdei, István Bozó and Melinda Tóth</i>
10:30 - 10:50	Non-cooperative Polymorphic P systems <i>Anna Kuczik</i>	Availability modeling in Software Architecture <i>Tamás Bartók, Ferenc Héjja and Gergely Kocsis</i>
10:50 - 11:10	Coffee Break	
11:10 - 11:30	A Two-Component Approach of Granules in Rough Sets Theory <i>Tamás Kádek</i>	Machine Learning Classification Approach for Refractive Index Prediction of D-Shape Plasmonic Biosensor - online <i>Nazrul Islam, Md. Nahid Hasan, Mia Mohammad Shoaib Hasan, Imam Hossain Shibly, Mohammad Abu Yousuf and Md. Zia Uddin</i>
11:30 - 11:50	Predicting Engineering Students' Employability using Data Mining Classification Techniques - online <i>Maria Elisa Linda Cruz, Mohammed Muneerali, Badria Al Ruqishi and Bernard Cruz</i>	Machine Learning-Based Fine-Tuning for Accented Speech Recognition in Trinidad and Tobago - online <i>Koffka Khan and Shaquille De Lancy</i>
11:50 - 12:10	Winner prediction model for basketball matches based on statistical data of teams, players, and line-ups <i>Chanin Witheesawas and Suphakant Phimoltares</i>	Emotion recognition based on facial gestures and Convolutional Neural Networks - online <i>Francisco Emiliano Sanchez-Callejas, Irving A. Cruz-Albarran and Luis A. Morales-Hernandez</i>

12:10 - 14:00	Lunch Break	
14:00 - 14:30 Plenary Talk	The First Instruct-Following Large Language Models for Hungarian <i>Zijian Győző Yang, Réka Dodé, Gergő Ferenczi, Péter Hatvani, Enikő Héja, Gábor Madarász, Noémi Ligeti-Nagy, Bence Sárossy, Zsófia Szaniszló, Tamás Váradí, Tamás Verebélyi and Gábor Prószéky</i> Chair: András Hajdu (https://unideb.webex.com/unideb-hu/j.php?MTID=m7068bdc467b0a3a396f67ddbf3da9b8f) Room: IF01	
14:30 - 14:50	Coffee Break	
	Session A - Room: IF01 Autonomous vehicles and embedded systems Chair: Imre Varga (https://unideb.webex.com/unideb-hu/j.php?MTID=m7068bdc467b0a3a396f67ddbf3da9b8f) Artificial Intelligence and its Applications Chair: János Tóth (https://unideb.webex.com/unideb-hu/j.php?MTID=m7068bdc467b0a3a396f67ddbf3da9b8f)	Session B - Room: IF02 (https://unideb.webex.com/unideb-hu/j.php?MTID=m0f286129ce42d187e2e074ad549ec1e3) Artificial Intelligence and its Applications Chair: József Sütő (https://unideb.webex.com/unideb-hu/j.php?MTID=m0f286129ce42d187e2e074ad549ec1e3)
14:50 - 15:10	Application of digital twins for connected, cooperative and automated mobility - online <i>Alexandru Forrai, Amit Gali and Ion Barosan</i>	Further Keyword Generation Experiment in Hungarian with Fine-tuning PULI Llumix 32K Model <i>Réka Dodé and Zijian Győző Yang</i>
15:10 - 15:30	Forecasting Roll Rate for Sensor Plausibility Check in Off-Road Vehicle Conditions - online <i>János Kontos, László Bódis and Ágnes Vathy-Fogarassy</i>	Improving Machine Translation Capabilities by Fine-Tuning Large Language Models and Prompt Engineering with Domain-Specific Data <i>László János Laki and Zijian Győző Yang</i>
15:30 - 15:50	A speed detection method for BLDC motor - online <i>Fehmi Sevilmiş, Ali Sait Özer and Hulusi Karaca</i>	Training Embedding Models for Hungarian <i>Péter Hatvani and Zijian Győző Yang</i>
15:50 - 16:10	Coffee Break	
16:10 - 16:30	Robust Pole Identification and Model Reduction for SISO-LTI Systems: A Frequency Domain Approach - online <i>Mátyás Márton Szabari</i>	Prediction Uncertainty and Node Usefulness in Shallow Unattributed Graph Neural Networks for Explainability <i>Richárd Kiss and Gábor Szűcs</i>

16:30 - 16:50	A ConvNeXt V2 Approach to Document Image Analysis: Enhancing High-Accuracy Classification - online <i>Md Saiful Islam Sajol, A S M Jahid Hasan, Md Shazid Islam and Md Saydur Rahman</i>	A stacked ensemble model to identify Bangla religious hate comments - online <i>Md. Nahid Hasan, Raiyan Azim, Mahmudul Hasan and Md. Monarul Islam</i>
16:50 - 17:10		Analysis of the B5G/6G Communication Power Entropy Patterns Based on Generative AI Methods - online <i>Djamila Talbi and Zoltán Gál</i>

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