DiVAi 2026

16th International Scientific Conference on Distance Learning in Applied Informatics

May 4, 2026

13:00	18:00	**Registration**
19:00		**Welcome Dinner**

May 5, 2026

7:30	9:00	**Registration, Breakfast**
9:00	9:15	**Opening Ceremony** *Milan Turčáni, František Petrovič*

Keynote Lectures (Chairman: Zoltán Balogh), Room A

9:30	10:00	**Path to Energy-Autonomous Systems-On-Chip Through Ultra-Low-Voltage Design and Energy Harvesting** *Viera Stopjaková*
10:00	10:30	**Scaffolding Data-Centric AI: Engineering Patterns and Failure Modes in Undergraduate Projects** *Tomáš Pitner*
10:30	11:00	**Break**

		Session 1 (Chairman: Boris Aberšek), Room A	Session 2 (Chairman: Gergely Sebestyén), Room B
11:00	11:10	**Use Of Artificial Intelligence: University Students' Positions in Lithuania and Romania** *Vincentas Lamanauskas, Gabriel Gorghiu, Costin Pribeanu*	**Data-Driven Analysis of EV Charging Behavior for Priority-Oriented Load Management Systems** *Istvan Szucs, József Kopják*
11:10	11:20	**From Disruption to Evolution: The Next Era of Educational Transformation** *Boris Aberšek, Metka Kordigel Aberšek, Maja Kerneža*	**Hierarchical Object Detection in Historical Handwritten Substitution Cipher Keys Using YOLOv11** *Stanislav Marochok, Michal Balogh*
11:20	11:30	**Reading and Writing as Enabling Practices in Technology-Enhanced Learning for Students with Special Educational Needs** *Maja Kerneža, Maja Vičič Krabonja, Andrej Flogie*	**PLECS for Resource-Constrained and Distance-Friendly Power Electronics Education: An Education-Focused Comparison with MATLAB/Simulink** *Mark Wendler, József Kopják, Gergely Sebestyén*
11:30	11:40	**Teaching Informatics in Primary School: A Comparative Analysis of Ukrainian Teachers' Practices and the Polish Core Curriculum** *Eugenia Smyrnova-Trybulska, Nataliia Morze*	**Experiences With AI, Attitudes Towards Its Use and Ethical Concerns of Teaching Students: Correlation Analysis** *Vladimír Piskura, Jana Burgerová*
11:40	11:50	**Integrating Generative Artificial Intelligence as a Learning Assistant in Software Engineering: Evaluating**	**Intelligent Database Systems for Sustainable Development: Real-Time ESG Monitoring in African FMCG Operations**

		Developer Productivity with Cost-Benefit Analysis *Marta Palade, Maria Elena Boatca, Andra Diaconescu, Anca Draghici*	*Chinyere Chidera Okechukwu, Petra Poulová, Pavel Bachmann*
11:50	12:00	**Interaction between Real and Virtual Environments in Chemistry Education using the Example of Redox Reactions** *Martin Bílek, Hana Hlavsova, Veronika Machkova*	**A High-Fidelity VR Framework for Immersive Performance Analytics and Seamless User Feedback in Construction 4.0 Environments** *Mariana Moreiras, Luis Alfonso, Leonel Deusdado*
12:00	13:00	**Lunch**	
14:00		**Social Event**	
19:00		**Gala Dinner**	

May 6, 2026

7:30	8:30	**Breakfast**	
		Special Session Smart Biosignal Analysis: IoT, Sensors and Machine Learning Applications (Chairman: Zoltán Balogh),Room A	**Special Session Algorithmic Trading and Computational Intelligence in Finance (Chairman: Martin Drozda), Room B**
9:00	9:10	**Multimodal Analysis of VR Training Scenarios for Industry 5.0: An Interdisciplinary Approach to Physiological, Behavioral, and Technological Aspects** *Denis Ďuriač, Zoltán Balogh*	**The Impact of BinaryTarget Engineering on Sector-Wise Class Differentiation in Next-Day Return Prediction** *Lívia Kelebercová, Michal Munk, Jakub Marták*
9:10	9:20	**Machine Learning Classification of Soil Properties for Discriminating Regenerative and Conventional Agricultural Management Regimes Using IoT Sensor** *Kristián Fodor, Zoltán Balogh*	**Enhancing Time Series Forecasting using Persistent Homology** *Patrik Šebek, Martin Drozda, Maroš Čavojský*
9:20	9:30	**Human vs. LLM Risk Assessment: A Comparative Study of ISO 27001 Cyber Risk Classification** *Marek Hrabčák, Zoltán Balogh*	**Kagi Chart Representations as Structured Inputs for Deep Learning Models** *Filip Hodoň, Maroš Čavojský, Martin Drozda*
9:30	9:40	**Low-Cost Flight Data Recording and Cloud-Based Analysis Platform for General Aviation Training** *Martin Vozár, Ladislav Főző, Peter Korba, Zoltán Balogh*	**Gamified Financial Education: Human vs. Deep Learning Trading Agents** *Maroš Čavojský, Martin Drozda, Filip Hodoň*
9:40	9:50	**Analysis of Security Risks Associated with Cookies in University Information Systems**	**Geometric and Topological Perspectives on Financial Market Dynamics**

		Jan Francisti, Marián Hlavačka, Zoltán Balogh, Azeta Tartaraj	*Jakub Marták, Michal Munk, Daša Munková, Lívia Kelebercová*
9:50	10:00	**Security Evaluation of Communication Protocols in Wireless Sensor Networks for Smart Building Environments** *Zoltán Balogh, Zsolt Čonka, Martin Magdin, Norbert Ádám, Shkëlqim Fortuzi*	**Cumulative True Range for Benchmarking of Trading Algorithms** *Martin Drozda, Maroš Čavojský*
10:00	10:10	**Development of a robot function to support children's movement coordination: a NAO-based approach** *Enikő Nagy, György Molnár*	**Portfolio Optimization with TD3 Algorithm Using Technical Indicators** *Šimon Teodora, Peter Likavec, Maroš Čavojský, Martin Drozda*
10:10	10:20	**Break**	
		Session 3 (Chairman: Attila Kővári), Room A	**Session 4 (Chairman: Jan Francisti), Room B**
10:20	10:30	**Kandó Cloud Campus: A Project-Based, Distributed-Resource Higher-Education Ecosystem** *György Molnár, István Németh, Gergely Sebestyén*	**AI Literacy of Teachers in the Czech Republic in the Context of DigComp 3.0** *Kristýna Kiliánová, Petra Kočková, Kateřina Kostolányová*
10:30	10:40	**Student perceptions of school support for creativity and innovation in technical education** *Elod Gogh, Attila Kovari*	**Comparison of Human and GenAI Feedback Generation for Programming Assignments** *Ľubomír Benko, Janka Pecuchová, Lucia Benková*
10:40	10:50	**Critical Thinking and Media Use in Technical Education** *Elod Gogh, Attila Kovari*	**Mapping Citizen Science Platforms for Environmental Education in Slovakia** *Katarina Skokanova, Imrich Jakab*
10:50	11:00	**Digital Green Campus Interventions: Conditions Under Which AI and IoT Generate Educational Value Alongside Operational Sustainability** *Imre Tóbel*	**Inquiry-Based Learning in Secondary Education through Scavenger Applications** *Imrich Jakab, Zuzana Pucherová, Martina Agarski, Dana Kollárová*
11:00	11:10	**Generative AI in Academia: Student Perspectives** *Olga Martincikova Sojkova, David Martincik, Vaclav Prochazka, Jan Tluchor*	**Didactic Potential of 3D Pen Activities Designed by Pre-service Teachers in the Context of the New National Curriculum: A Qualitative Content Analysis** *Maria Anna Jedina, Lilla Korenova, Angelika Schmid, Katarina Zilkova*
11:10	11:20	**Teaching art history with the help of a three-dimensional virtual model** *Jan Vopršal, Marie Hubálovská*	**STEM in Education: A Comparative Analysis of the Influence of Physical Hardware and Simulation on the Development of Algorithmic Thinking** *Petr Coufal, Eva Milková*

11:20	11:30	**Transforming Higher Education: A Case Study on the Integration of Coursera at the University of Hradec Králové** *Petra Poulova, Miroslava Černá*	**An Indicator-Based Framework for Adaptive Distance Learning: Design of a Learner-Needs Model and Expert Validation** *Iryna Bilous, Viktoriia Homotiuk, Oksana Gomotiyk, Azeta Tartaraj, Beata Akimjakova, Oto Mucka*
11:30	11:40	**Integrating AI and Formative E-Assessment in Geometry Education** *Katerina Biernatova, Lilla Korenova*	***Developing spatial imagination and STEM skills using unmanned technologies*** *Radek Nemec*
11:40	11:50	**Voice-Controlled game interaction** *Patrik Voštinár, Radoslav Proft*	**Analysis of the pilot verification of the questionnaire on the use of digital teaching aids by teachers in the school education process** *Júlia Surodová, Ján Záhorec, Michal Munk*
11:50	12:00	**Students' Intrinsic Motivation When Using Moodle in Informatics Classes** *Ladislav Kalous*	**Assessing Cognitive Load in Technology-Enhanced Learning Environments: An Interface-Based Evaluation Framework** *Iryna Yaroschuk, Oksana Gomotiyk, Oleksandr Kolesnyk, Lubomir Pekarcik, Tomáš Lengyelfalusy, Filip Makan*
12:00	12:10	**AI-Generated Single-Use Educational Applications: The Process of Creation, Publication and Quality Verification** *Petr Voborník*	**Digital Education as a Tool for Shaping Modern Human Capital: A Comparative Analysis of Eastern European Countries** *Viktoriia Savitska, Oksana Gomotiuk, Mykola Karmaz, Tomáš Lengyelfalusy, Ervín Weiss, Filip Makan*
12:10	12:20	**Feedback and Assessment as a Comprehensive Learning Support System in Online Teacher Education Courses** *Lucie Rohlíková*	**Digital Inclusive Technologies in the Literacy Education of Primary School Pupils** *Filip Makan, Andriana Shyshak, Rostyslav Rudenskyi, Silvia Jakabová, Miroslav Tvrdoň, Beáta Akimjaková*
12:20	12:30	**Reproducible Synthetic Tabular Data Generation for Education with Gemini** *Olga Martinickova Sojkova, Miroslav Adámek, Mikuláš Gangur*	**Modeling Cybersecurity in Smart Cities: A Knowledge-based approach** *Peter Mikulecký, Pavel Čech, Karel Mls, Tereza Otčenášková, Daniela Ponce, Peter Tučník, Andrea Žváčková*
12:30	12:40	**The use of Guilford's structural model of intelligence in the design of adaptive learning systems** *Ernest Kováč, Jozef Belko, Ján Máhrik, Stanislav Šurin, Ervín Weiss*	
12:45	13:00	**Closing Ceremony**	
13:00	14:00	**Lunch**	

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