

InnoComp 2025
22-24 October
Cluj-Napoca, Romania

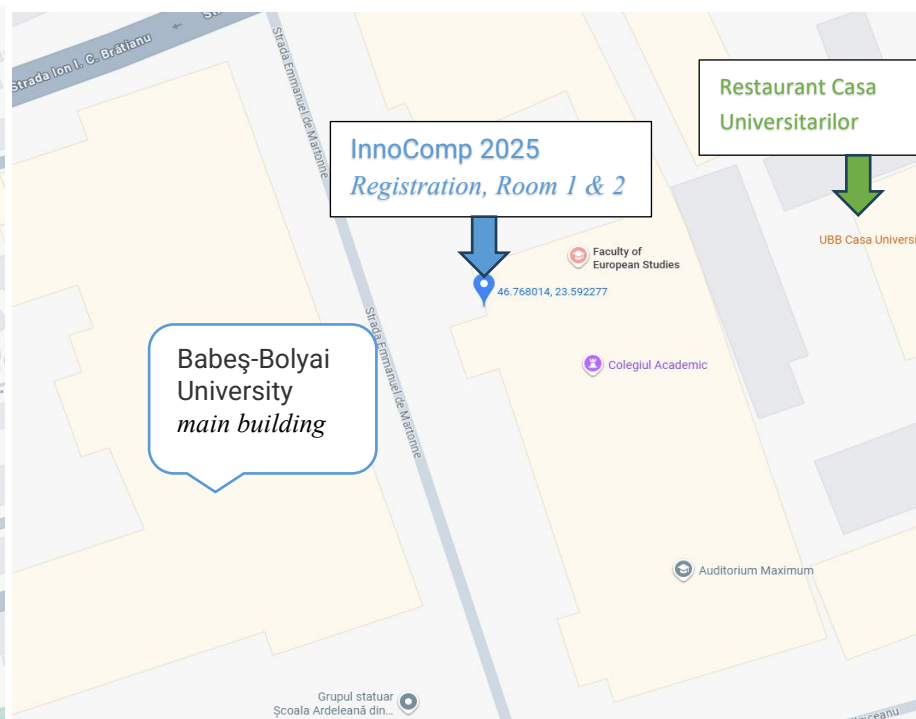
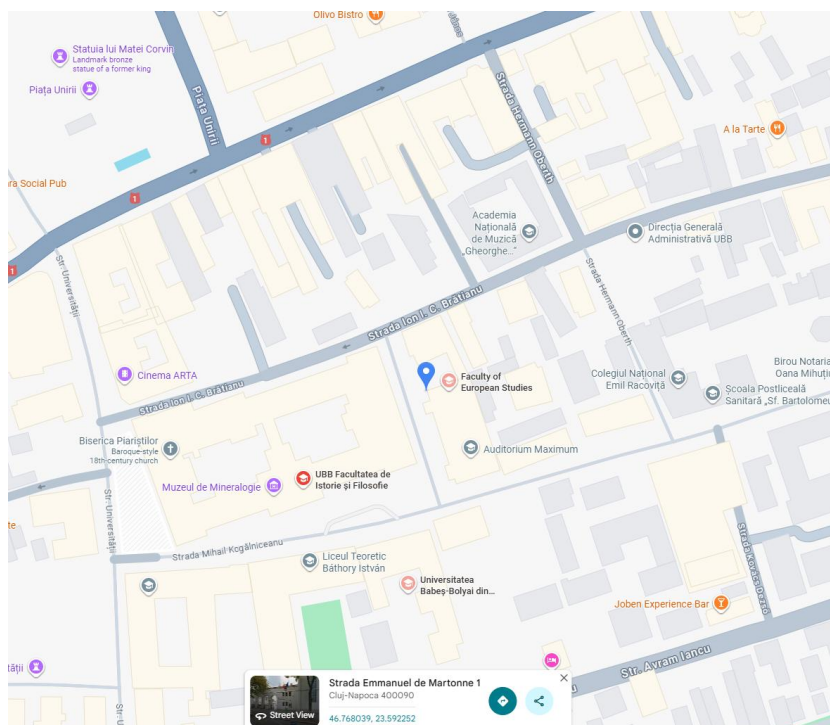
Location

Babeş-Bolyai University
Strada Emmanuel de Martonne nr. 1, Cluj-Napoca, Romania

Rooms

Room 1: Sala Simone Veil, Facultatea de Studii Europene

Room 2: Sala Club, Colegiul Academic



Conference Programme

	22 October – WEDNESDAY		23 October – THURSDAY		24 OCTOBER – FRIDAY	
9:00	REGISTRATION (Open all day)		REGISTRATION (Open all day)		REGISTRATION (Open all day)	
9:45 – 10:00	OPENING <i>(Room 1)</i>					
10:00 – 11:00	PLENARY TALK Aniello Castiglione <i>(Room 1)</i> <i>Chair: Florin Pop</i>		PLENARY TALK Andrei Păun <i>(Room 1)</i> <i>Chair: Petrică Pop-Sitar</i>		PLENARY TALK Jose Antonio Barata De Oliveira <i>(Room 2)</i> <i>Chair: Oliviu Matei</i>	
11:00 – 11:30	COFFEE BREAK		COFFEE BREAK		COFFEE BREAK	
11:30 – 12:50	C1 <i>(Room 1)</i>	I1 <i>(Room 2)</i>	C2 <i>(Room 1)</i>	A3 <i>(Room 2)</i>	11:30-13:30	RESEARCH PROJECTS PANEL <i>(Room 2)</i>
13:00 – 14:30	LUNCH <i>Restaurant Piramida</i>		LUNCH <i>Restaurant Piramida</i>		13:30	LUNCH <i>Restaurant Piramida</i>
14:30 – 15:50	D1 <i>(Room 1)</i>	A1 <i>(Room 2)</i>	C3 <i>(Room 1)</i>	I3 <i>(Room 2)</i>		
15:50 – 16:20	COFFEE BREAK		COFFEE BREAK			
16:20 – 18:00	I2 <i>(Room 1)</i>	A2 <i>(Room 2)</i>	D2 <i>(Room 1)</i>	A4 <i>(Room 2)</i>		
18:00 – 19:00			Walking tour of Cluj city centre			
19:00			GALA DINNER <i>Restaurant Piramida</i>			

Session	Title	Authors
	Computational Intelligence, WEDNESDAY 22 October, 11:30 – 12:50, Room 1 <i>Chair: Aniello Castiglione</i>	
C1	Analysis of Customer Journey Video Data Using Eye-Tracking and Multimodal AI	Sami Heikkinen , Jaani Väisänen, Hannu Kaikonen, Sami Makkula, Petteri Markkanen
	Efficient Face Recognition with ResNet18	Ioan Chitu , Honorius Galmeanu
	Hierarchical Multi-Task Siamese Networks for Vehicle Model Classification	Alexandru Manole , Laura Dioşan
	A comparison of ranking methods for feature selection	Grace Villacrés , Marius Marinescu , Luca Martino , Óscar Barquero
	Computational Intelligence, THURSDAY 23 October, 11:30 – 12:50, Room 1 <i>Chair: Andrei Păun</i>	
C2	Automated Model Interpretation, Pattern Analysis and Insights in Explainable AI	Iulian Popa , David-Ioan Stoica, Alexandra Băicoianu
	Pairwise 3D Fragment Matching Classification with Graph Neural Networks	Raluca Chis , Camelia Chira
	Music Emotion Recognition with Deep Learning Techniques	Denis-Angel Moldovan, Claudia-Ioana Coste
	UI Component Detection in Graphical Interfaces: A YOLO-Based Comparative Analysis	Madalina Dicu
	Computational Intelligence, THURSDAY 23 October, 14:30 – 15:50, Room 1 <i>Chair: Anca Andreica</i>	
C3	Automated Classification of Romanian Mammography Reports	Cristiana Moroz-Dubenco , Anca Andreica
	Comparative Analysis of Activation Functions in Neural Networks for Computer Vision Applications	Octavia-Maria Bolojan , Andrei Sebastian Iaz, Robert Valentin Neagu
	Feature-Efficient Brain-to-Image Reconstruction Using Diffusion Models	Ioana Gabor
	Fine-tuned Vision Transformers for Mammographic Breast Cancer Classification: Evaluating the Impact of Preprocessing Techniques	Bianca Iacob , Laura Dioşan

	Data Science, WEDNESDAY 22 October, 14:30 – 15:50, Room 1 <i>Chair: Rudolf Erdei</i>	
D1	Cultivating Sustainable Data: Challenges and Directions in Digital Agriculture	Daniela Delinschi , Rudolf Erdei, Emil Marian Pasca, Iulia Baraian, Andrei Curos
	Towards Self-learning AI-based Quality Rules for Statistical Process Control	Marcel Dechert , Fulya Horozal , Sebastian Scholze, Marcel Wabo, Ratan Kotipalli
	Modeling Regional Smart Specialization via Value Chains: A Stochastic Approach Using Markov Chains for Smart Development Planning	Laura Andreica , Mara Diana Hajdu-Macelaru, Mario Viman, Mihai Crisan, Ioan Alin Danci
	Advancing Natural Language Querying over Invoice Data: Experimental Insights on Vector and Graph RAG Approaches	Teodora-Cristiana Nemetoc , Ana-Maria Ghiran
	Data Science + Computational Intelligence, THURSDAY 23 October, 16:20 – 18:00, Room 1 <i>Chair: Petrică Pop</i>	
D2	Analysis of economic proximity contagion and regional level using eigenvectors	Laura Andreica , Gabriel Andreica, Patrick Axinte, Ioan Alin Danci, Bogdan Vaduva
	Comparison of Multi Decision Criteria Analysis Methods in Molecular Dynamics of Tritium Interaction with Beryllium at Tokamak Fusion Reactors	Alper Pahsa
	Compact Real-Time Speech Enhancement for ONNX	Andrei Filip , Honorius Galmeanu
	Intelligent Systems, WEDNESDAY 22 October, 11:30 – 12:50, Room 2 <i>Chair: Laura Dioşan</i>	
I1	OpenBot Waffle: A 3D Printable Open-Source ROS2 Mobile Robot	Bogdan Dura, Radu Boncea, Sebastian Balmus, Catalin Nitu, Daniela Timisică
	Human-Centered AI in STEM Education	Mihaela Avramova
	Bayesian Ensemble Learning for Adaptive Time Series Forecasting	Mateusz Panasiuk
	AugRoSent: Boosting Romanian Sentiment Analysis through Advanced Data Augmentation	Andra-Gabriela Ursa , Laura Dioşan

	Intelligent Systems, WEDNESDAY 22 October, 16:20 – 18:00, Room 1 <i>Chair: Iuliana Bocicor</i>	
I2	Immersive Robotics: Real-Time Control of Robotic Systems via ROS2 and Unity	Andrei Ionut Mocanu, Catalin Nitu
	Intelligent Cyber-Social Ecosystem Industry 5.0	Neli Stoycheva
	Distributed Learning for Next-Gen Recommender Systems: A survey	Rares Tamaian , Voicu Babiciu, Oliviu Matei, Sanaz Nikghadam
	Evaluating Large Language Models for Diacritic Restoration in Romanian Texts: A Comparative Study	Mihai Nadăș , Laura Dioșan
	Intelligent Systems, THURSDAY 23 October, 14:30 – 15:50, Room 2 <i>Chair: Ioana Ciuciu</i>	
I3	Comparative Analysis of Edge Computing Architectures for IoT Systems: Towards Scalable, Secure and Sustainable Deployments	Daniela Timisică , Radu Boncea, Sebastian Balmus, Bogdan Dura
	Comparative Evaluation of Flow-Based Feature Extraction Tools for IoT Cyberattack Detection	Branly Alberto Martinez Gonzalez , Malena Pérez Sevilla, J.A Rincon Jaime Andrés Rincón Arango, Daniel Urda Muñoz
	Multi-Quantum Agent System for DNA Self-Assembly	Vasile Vancea
	Quantum Clustering for Classification of DNA Sequences	Vasile Vancea
	Applications, WEDNESDAY 22 October, 14:30 – 15:50, Room 2 <i>Chair: Jose Villar</i>	
A1	Free-range chicken farms oriented bird detection	Enol García González , José Ramón Villar , Javier Sedano
	Innovative Medical Image Analyzer - iMIA tested on COVID-19 images	Cristina Ticala , Camelia-M. Pinteia, Oliviu Matei, Ricardo Peres
	DeepFlow - Deep Clustering for Blood Cell Classification and Quantification	Mihaela Macarie-Ancau , Adrian Groza
	Exploratory Analysis and Classification of Lymphoma DNA Methylation Data	Maria Iuliana Bocicor , Thomas Erbllich

	Applications, WEDNESDAY 22 October, 16:20 – 18:00, Room 2 <i>Chair: Simona Motogna</i>	
A2	Applying L-Moments Statistical Theory to Analyze Real-World Sensor Data from Orchards	José Ramón Torres-Martín, Yolanda Carrión-García, José Manuel Velarde-Gestera, Inmaculada Mora-Jiménez, Mihaela I. Chidean
	L-Moments for Robust Temporal Data Drift Monitoring in Agricultural IoT Systems	Yolanda Carrión-García, José Ramón Torres-Martín, Inmaculada Mora-Jiménez, José Manuel Velarde-Gestera, Mihaela I. Chidean
	Forecasting technical debt in software projects with limited historical data	Oskar Picus
	Technical Debt, empirical study, Human Aspects in Software Engineering	Ciprian-Viorel Stupinean
	Applications, THURSDAY 23 October, 11:30 – 12:50, Room 2 <i>Chair: Md Salauddin</i>	
A3	Analyzing Similarity Across Investment Portfolios: A Multi-Dimensional Approach	Maria Oikonomidou, Ferad Zyulkyarov
	Survey on Cybersecurity in Precision Agriculture: Threat Landscape, Defense Strategies, Ethics and EU Regulations	Valentin-Alexandru Vladuta, Emil Marian Pasca , Javad Jassbi
	Association Rule Mining for Combinatorial Biomarker Discovery. A Case Study on Type 2 Diabetes	Ioana Ciuciu , Dana Ciobanu, Daniel Murg, Cosmin Lazar
	Optimizing Diabetes Risk Prediction: Comparative Analysis of Machine Learning Models and Feature Importance	Ana-Maria Papara
	Applications, THURSDAY 23 October, 16:20 – 18:00, Room 2 <i>Chair: Enol García González</i>	
A4	Assessment of groundwater quality of the Republic of Ireland using Random Forest algorithm	Tahmida Chowdhury , Rajat Nag, Md Arman Habib , Md Salauddin
	AI-based Sensor Optimization and Anomaly Detection in Water Distribution Networks	Furqan Rustam, Usman Saeed, Anca Delia Jurcut, Gabriele Freni, Mariacrosetta Sambito, Md Salauddin

	Multi-View Sky Image Regression for Enhanced Photovoltaic Power Forecasting	Alexandru-Adrian Ciobanu , Fereshteh Jafari, Joseph Moerschell, Ariana-Andra Șerpar, Nebojsa Bacanin, Catalin Stoean
	Forecasting Higher Education Trends Using Multi-Output Random Forest Regression and Regional Economic Weighting: A Case Study Based on Romania	Bogdan Vaduva , Laura Andreica, Mara Diana Hajdu-Macelararu, Anca Avram, Erina Guraziu
	RESEARCH PROJECTS PANEL, FRIDAY 24 October, 11:30 – 12:50, Room 2 <i>Chairs: Florin Pop, Oliviu Matei</i>	
	Strengthening Democratic Resilience Through Digital Twins	Laura Dioșan
	Tailored Exercise Interventions for Dementia prevention	Rudolf Erdei
	Transilvania Digital Innovation Hub	Grigoreta Cojocar
	DACISLab: Virtual Laboratory on Open Data and Open Science in the New Generation of Continuum Computing Systems	Florin Pop, Lilia Sava
	Building PREPAREDness with Collaborative Knowledge Platform, Gamification and Serious Game in Virtual Reality	András Majdik
	Improving Generalisation Capabilities in time series ML models	Mihai Crișan
	Specialised Education programmes in Cybersecurity and Robotics	Darius Bufnea
	Artificial Intelligence for Connected Industries	Camelia Chira, Anca Andreica
	Closing the Cybersecurity Skills Gap in Europe	Vladiela Petrașcu

	A new tool based on intelligent algorithms and machine learning for detecting plant diseases from images	Mara Hajdu-Macelaru
	AI and GIS for Smarter Agriculture: An Adaptive Framework for Land Bonitation	Bogdan Vaduva
	Recycling plastic and developing hybrid living materials by capturing greenhouse gases to produce value-added products	Daniela Curos
	Combatant 5.0 - next step in digital warfare	Laura Andreica