

# BCI 2025 Program

## Day 1: Monday, October 13, 2025

08:00 – 08:45	Registration	
08:45 – 09:00	Opening	
09:00 – 10:00	Keynote talk: Mira Mezini	
10:00 – 11:00	Invited talk: Panagiotis Sarigiannidis	
11:00 – 11:30	Coffee Break – Poster Session	
11:30 – 13:00	Session 1: Cloud, Agents and Data Management	Session 2: Programming and Software
13:00 – 15:00	Lunch Break	
15:00 – 16:30	Session 3: Microservices	Session 4: Large Language Models
16:30 – 16:45	Coffee Break – Poster Session	
16:45 – 18:15	Session 5: Natural Language Processing and Recommender Systems	Session 6: Internet of Things
20:00 – 22:00	Conference Dinner	

## Day 2: Tuesday, October 14, 2025

08:00 – 09:00	Registration	
09:00 – 10:00	Invited talk: Orges Cico	
10:00 – 11:00	Invited talk: Dragan S. Janković	
11:00 – 11:30	Coffee Break & Networking	
11:30 – 13:00	Session 7: Machine Learning	Session 8: Educational Issues
13:00 – 13:15	Closing	
13:15 – 15:00	Lunch Break	

## Day 3: Wednesday, October 15, 2025

07:30 – 17:00	All-Day Excursion: Tirana – Apollonia – Vlora Monastery of Zvernec – Tirana
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*More details of the excursion will be provided on the first day of the conference*

### Session 1: Cloud, Agents and Data Management

- **Comparison of rating functions for establishing trust in multi-agent systems (full)** - Rasmus Østergaard Thorsen (Aarhus University); Jakob Dybdahl Andersen (Aarhus University); Mirgita Frasheri (Aarhus University)\*; Lukas Esterle (Aarhus University)
- **Decentralized intelligence in the service of heterogeneous swarms (short)** - Lidija Fodor (University of Novi Sad)\*; Dragana Bajović (University of Novi Sad); Dušan Jakovetić (University of Novi Sad); Milica Jankov (University of Novi Sad); Nemanja Petrović (University of Novi Sad); Nikola Simić (University of Novi Sad); Stefan Komarica (University of Novi Sad)
- **Advances in Kubernetes scheduling for efficient resource utilization and environmental impact mitigation: A review (full)** - Megi Tartari (Polytechnic University of Tirana)\*; Sindi Prifti (Polytechnic University of Tirana); Genti Daci (Polytechnic

University of Tirana); Elinda Kajo Mece (Polytechnic University of Tirana)

- **Column-oriented databases and their industry impact: Insights from a literature review (full)** - Vigan Raca (University of Prishtina); Dhuratë Hyseni (University of Prishtina)\*; Goran Velinov (University Ss. Cyril and Methodius); Betim Çiço (Epoka University)
- **NexusChat: Enabling privacy-preserving AI through decentralized data objects on the Sui Blockchain (short)** - Sotirios Anastasiadis (University of Macedonia); Antonios Giatzis (University of Macedonia)\*; Marios Tsoulopoulos (University of Macedonia); Christos Georgiadis (University of Macedonia)

## Session 2: Programming and Software

- **Towards automated vulnerability detection in Erlang codebases using static code analysis (full)** - Vladimir Kovacevic (University of Novi Sad); Milos Radovanovic (University of Novi Sad); Dusan Jakovetic (University of Novi Sad); Danijela Boberic Krsticev (University of Novi Sad)\*
- **Analysing the energy consumption of Erlang programs based on the Savina benchmark (full)** - Paulas Ndalawa (Eötvös Loránd University); Youssef Gharbi (Eötvös Loránd University); Melinda Tóth (Eötvös Loránd University)\*
- **A practical guide for application security and quality baselines in the software deployment process (full)** - Mariya Harseva (Sofia University St. Kliment Ohridski)\*; Milen Petrov (Sofia University St. Kliment Ohridski)
- **Technical debt perception in growth phase startups - A four facet model (full)** - Orges Cico (Autronica)\*; Anh Nguyen Duc (University of South-Eastern Norway); Letizia Jaccheri (Norwegian University of Science and Technology)
- **Recursion vs. dynamic programming: An experimental evaluation on illustrative examples (short)** - Aleksandar Dimovski (Mother Teresa University, Skopje)\*; Shpetim Rexhepi (Mother Teresa University, Skopje); Bujar Jakupi (Mother Teresa University, Skopje)

## Session 3: Microservices

- **Pantheonix: A microservice-based distributed online judge system (short)** - Nicusor Dumitru Sami Barbut-Dica (University of Craiova); Mirel Cosulschi (University of Craiova)\*
- **Schema evolution and isolation in decentralized microservice datastores: A controlled experiment on service resilience and deployment independence (short)** - Isak Shabani (University of Prishtina)\*; Dalinë Vranovci (University of Prishtina); Dhuratë Hyseni (University of Prishtina); Miranda Vranovci (University of Prishtina); Fakije Zejnullahu (University of Applied Sciences in Ferizaj)
- **CPU consumption in microservices-based and monolithic applications (full)** - Isak Shabani (University of Prishtina)\*; Kujtim Mustafa (University of Prishtina); Dhuratë Hyseni (University of Prishtina); Qamil Kabashi (University of Prishtina); Betim Çiço (Epoka University)
- **Memory consumption in microservices based and monolithic applications (full)** - Isak Shabani (University of Prishtina)\*; Ndrim Halili (University of Prishtina); Qamil Kabashi (University of Prishtina); Dhuratë Hyseni (University of Prishtina); Fakije Zejnullahu (University of Applied Sciences in Ferizaj)
- **Micro-frontend architecture: A qualitative study of practical implementations (full)** - Arbnor Puka (University of Prishtina); Dhuratë Hyseni (University of Prishtina)\*; Isak

Shabani (University of Prishtina); Betim Çiço (Epoka University Tirana)

## Session 4: Large Language Models

- **Fine-tuning LLMs from textual documents: Performance, cost, and integration analysis (full)** - Krenar Darlishta (South East European University)\*; Nuhi Besimi (South East European University)
- **Performance of large language models in automatic generation of logic programs (full)** - Nikolaos Karamousalidis (University of York Europe Campus, City College)\*; Petros Kefalas (University of York Europe Campus, City College); Ioanna Stamatopoulou (University of York Europe Campus, City College)
- **The problem-solving capabilities of modern LLMs in the competitive programming context (full)** - Mirel Cosulschi (University of Craiova)\*; Mihai Gabroeanu (University of Craiova); Florin Slabu (University of Craiova)
- **Comparison of RAG-enhanced open-source quantized lightweight LLMs for C# code smell detection (full)** - Arbi Elezi (Epoka University)\*; Dhuratë Hyseni (University of Prishtina); Betim Çiço (Epoka University)
- **ValidoAI tax regulation search module for legal-tax orientation by using GPT-based natural language models for financial analysis (short)** - Slavoljub Milojkovic (MB University)\*; Pavle Dakic (Singidunum University); Marijana Aleksic (MB University)

## Session 5: Natural Language Processing and Recommender Systems

- **Understanding and establishing natural language understanding and natural language generation technologies for reliable, ethical AI systems that don't impoverish the human languages (full)** - Nikitas Karanikolas (University of West Attica)\*
- **Sentiment analysis of public opinion on the 2025 national elections in Kosovo using NLP techniques and machine learning algorithms (short)** - Melisa Alaj (University of Prishtina "Hasan Prishtina"); Jetë Lajçi (University of Prishtina "Hasan Prishtina"); Mergim Hoti (University of Prishtina "Hasan Prishtina"); Dhuratë Hyseni (University of Prishtina)\*
- **A hybrid model for movies recommendations, utilizing SBERT and collaborative filtering (full)** - Anastasios Koutsogiannopoulos (University of Thessaly); Michael Vassilakopoulos (University of Thessaly)\*; Eleni Tousidou (University of Thessaly); Nikitas Karanikolas (University of West Attica)
- **Application of vector databases in recommender systems: BISIS case study (full)** - Danijela Boberic Krsticev (University of Novi Sad)\*; Danijela Tesendic (University of Novi Sad)

## Session 6: Internet of Things

- **Smart waste management in urban Tetovo using IoT sensor networks (short)** - Agon Memeti (University of Tetova)\*
- **Real-time optimization of IoT-based control systems for concentrated solar power using edge-AI and hybrid simulation (full)** - Helga Sallaku (University of Montenegro)\*; Radovan Stojanović (University of Montenegro)
- **A review of digital twin architectures in IIoT-driven manufacturing (full)** - Erilda Muka (Canadian Institute of Technology)\*; Galia Marinova (Technical University of Sofia); Emiliano Mankolli (Polis University)



- **Low-cost edge-enabled sensor system for small farms and households (full)** - Radovan Stojanovic (University of Montenegro); Jovan Djurković (MECOnet); Helga Sallaku (University of Montenegro)\*; Vesna Maraš (University of Montenegro and MECOnet); Nedeljko Latinović (University of Montenegro and MECOnet)

## Session 7: Machine Learning

- **Leveraging open innovation and systems thinking to enhance the success of AI-driven HealthTech ventures: A case study of Baby FM in south-east Europe (full)** - Tamara Papic (University Singidunum)\*; Pavle Dakic (University Singidunum); Bojan Gutic (University Singidunum)
- **A scoring app for the efficient recording, analysis and documentation of pest infestation on plants (full)** - Matthias Becker (Universität Hannover)\*
- **Melanoma detection based on deep learning networks (full)** - Martin Shameti (Epoka University)\*; Entela Shkodrani (EB); Betim Çiço (Epoka University)
- **Brain tumor detection using U-Net and Res-UNet convolutional neural networks (full)** - Karafil Kareci (University of Tirana)\*; Helios Peti (University of Tirana); Alda Kika (University of Tirana); Suela Maxhelaku (University of Tirana)
- **From data to decisions: Applying ML algorithms to optimize resource allocation in Kosovo's tax system (short)** - Isak Shabani (University of Prishtina); Erza Osmani (University of Prishtina); Arjana Ternava (University of Prishtina); Albin Hashani (University of Prishtina); Mërgim H. Hoti (University of Prishtina)\*
- **Exhaustive convergence analysis of label propagation algorithm for community detection in complex networks (full)** - Filip Janjić (University of Belgrade); Dragan Olćan (University of Belgrade); Marko Mišić (University of Belgrade)\*

## Session 8: Educational Issues

- **Student success in computer literacy: A longitudinal study of midterm and exam performance at the Faculty of Philosophy in Novi Sad, Serbia (full)** - Mirjana Ivanovic (University of Novi Sad)\*; Zoltán Gellér (University of Novi Sad); Dragana Milin (University of Novi Sad); Karlo Bala (Institute for Artificial Intelligence Research and Development of Serbia)
- **Experiences in virtual exchange in education in the Mediterranean (full)** - Tatjana Welzer (University of Maribor)\*; Maja Rotovnik (University of Maribor); Saša Grašič (University of Maribor); Konstantinos Petridis (Hellenic Mediterranean University)
- **Behavior change support systems to alleviate academic procrastination: Analysis of prior research with student population (short)** - Emma Kemppainen (University of Oulu); Harri Oinas-Kukkonen (University of Oulu)\*
- **Is one shot prompting enough for reliable essay evaluation by language models (full)** - Bojan Ilijoski (Ss Cyril and Methodius University in Skopje)\*; Katerina Zdravkova (Ss Cyril and Methodius University in Skopje)
- **TINKER: A robotics curriculum to foster computational thinking, collaboration, communication, creativity, and critical thinking in kindergarten (full)** - Soultana Tsingidou (Aristotle University of Thessaloniki)\*; Sophia Rapti (Aristotle University of Thessaloniki); Theodosios Sapounidis (Aristotle University of Thessaloniki)
- **Ethical hacking approaches for securing learning management systems: A case study with GlassWire and Log Analysis (full)** - Agon Memeti (University of Tetova)\*; Florim Idrizi (University of Tetova)

## Posters:

- **Testing strategies in MVC-based applications: Model, view, and controller strategies** - Agon Memeti (University of Tetova)\*
- **Rethinking cache management in mobile networks: The power of hybrid consistency and smart replacement** - Ramzi Haraty (Lebanese American University)\*; Meghry Tchangoulia (Lebanese American University)
- **Assessing the methods and difficulties of incorporating software security testing into system development process in Tanzania's public sectors** - George Oreku (The Open University of Tanzania)\*
- **Evaluating algorithms for non-spectroscopic radiation portal monitors to detect illicit trafficking in Albania** - Gani Demiraj (Polytechnic University of Tirana)\*; Ilir Shinko (Polytechnic University of Tirana); Betim Çiço (Epoka University)
- **Securing MVC-based LMS platforms: Addressing authentication, XSS, and injection vulnerabilities** - Agon Memeti (University of Tetova)\*; Florim Idrizi (University of Tetova); Florinda Imeri (University of Tetova)
- **A cloud-native framework for microservices and AI-enabled predictive maintenance in manufacturing** - Isak Shabani (University of Prishtina)\*; Mentor Arifaj (University of Prishtina)
- **Collective intelligence via BCI** - Christopher Dass (WWP HSS)\*; Prajit Basu (WWP HSS); Sharvil Talware (WWP HSS); Akhil Arun (WWP HSS); Jaiden Justin (WWP HSS)
- **Unlocking vonsumer sentiment: Random Forest's unprecedented accuracy in Analyzing amazon mobile phone reviews** - Ramzi Haraty (Lebanese American University)\*
- **MVC vs MVVM vs MVP: Which architectural pattern suits modern applications best** - Agon Memeti (University of Tetova)\*; Florim Idrizi (University of Tetova)
- **Zero-prompt AI tutor** - Juljan Halilaj (University of York Europe Campus, City College); Konstantinos Dimopoulos (University of York Europe Campus, City College)\*