

# XV International Conference on Applied Internet and Information Technologies AIIT 2025

7<sup>th</sup> November 2025 – Bitola

**Venue: Faculty of Information and Communication Technologies – Bitola**  
**Partizanska bb (Kompleks kasarni)**

<b>CONFERENCE AGENDA</b>	
<b>9:00-9:30</b>	<b>Registration of participants</b>
<b>9:30-10:00</b>	<b>Conference Opening – Amphitheater</b> <b>Chairs:</b> Prof. Blagoj Ristevski, PhD Prof. Kostandina Veljanovska, PhD Prof. Zeljko Stojanov, PhD
<b>10:00-11:00</b>	<b>Plenary Session – Amphitheater</b> MOR Over Frequency Range by Interpolation – Jovan Stefanovski Current State and Future of Intelligent Agents and their Applications – Eleonora Brtka Detection and Response in Cybersecurity – Marjan Sterjev
<b>11:00–11:30</b>	<b>Coffee Break</b>
<b>11:30-12:30</b>	<b>Parallel Sessions:</b> Session 1 – Amphitheater Session 2 – DB Lab Session 3 – Ceremonial Hall MK SafeNet Workshop – Conference Room Online/Video Session 7 – CSNE Lab
<b>12:30-13:30</b>	<b>Cocktail</b>
<b>13:30-14:30</b>	<b>Round Table:</b> Cyber Security – Ceremonial Hall
<b>14:30–15:30</b>	<b>Parallel Sessions:</b> Session 4 – Amphitheater Session 5 – DB Lab Session 6 – Ceremonial Hall EDIH Workshop – Conference Room
<b>15:30-16:00</b>	<b>Coffee Break</b>
<b>16:00-16:30</b>	<b>Poster Session 8 - CSNE Lab</b>
<b>19:30-00:00</b>	<b>Gala Dinner – Hotel Premier Centar</b>

Session 1: Applied Informatics, Systems Design, and Smart Applications – Amphitheater 11:30-12:30		
12	Serbian Workforce Potential for Leading Global IT Projects	Ivana Denčić, Sanja Stanisavljev and Vladimir Todić
14	East–West Perspectives on Social Media Use Among Older Adults: Lessons for the Western Balkans	Dragana Bodiroga and Dragan Ivetic
15	Antiderivatives Solved with LLMs?	Sonja Mančevska and Elena Karamazova Gelova
31	Deepfake Video Detection: How Far Have We Gone?	Zoran Kotevski
36	Do Hyperbolic Heads Make Better Mistakes? A Minimal Euclidean-vs-Hyperbolic Comparison on CIFAR-100	Dilan Dobardžić, Jelena Stojanov, Višnja Ognjenović, and Nikola Jerković
Session 2: Cybersecurity, Privacy, and Trust in Digital Environments – DB Lab 11:30-12:30		
6	Analysis of the popularity of antivirus solutions – Microsoft Defender, Kaspersky and Bitdefender	Dejan Jocin, Biljana Radulović and Tamara Milić
8	Application of Security in Electronic Business on the Example of Application Development using Multi-factor Authentication in Online Learning Platforms	Tamara Milic, Vesna Makitan
41	Bluetooth LE Spam with ESP32 running Marauder and Bruce	Blagoj Nenovski
43	ICT as a Catalyst for Effective Waste Management in the Circular Economy Context	Saso Nikolovski, Bozidar Milenkovski, Anita Ilieva Nikolovska, Biljana Stojcevska and Viktorija Spasevska
59	Mathematical Foundations of Multi-Criteria Decision-Making and Their Application in Modern Telecommunications and Information Security	Jovana Knezevic, Dalibor Dobrilovic, Jelena Stojanov
Session 3: Data Science, Big Data, and Knowledge Discovery – Ceremonial Room 11:30-12:30		
42	Exploring the Impact of VR and AR Integration in Learning Management Systems: A Study on Enhancing Immersive Learning Experiences	Buen Bajrami, Igor Nedelkovski, Andrijana Bocevska and Kostandina Veljanovska
19	Comparative Analysis of Text Mining Techniques and Tools	Marija Apostoloska-Kondoska, Blagoj Ristevski, Nikola Rendevski, Snezhana Savoska
35	Scalable ETL Processes with Change Data Capture (CDC) and Monitoring Using Apache Superset	Aneta Trajkovska, Violeta Manevska and Kostandina Veljanovska
45	KPI metrics in the Software Industry: Literature Review and Analysis	Igor Vecstejn, Zeljko Stojanov, Tamara Milic and Maja Gaborov
40	Recipe Radar: A Voice-Driven Hybrid Recommender System for Recipes Using NLP, Text-to-SQL, and Cloud-Native Infrastructure	Aleksandra Kolevska, Natasha Blazheska-Tabakovska
Session 4: Intelligent Systems and Machine Learning Applications – Amphitheater 14:30-15:30		
56	The Role of Digital Humanism in Shaping AI-Driven Augmented Humanity	Blagoj Ristevski, Nikola Rendevski and Dragan Grueski
29	Intelligent Educational Agents as Mediators in the Learning Process	Katarina Vignjević, Dragana Glušac, Slavica Isakov and Marko Blažić
33	Integrating XGBoost and Neural Networks for Accurate Student Performance Prediction in Higher Education	Buen Bajrami, Blagoj Ristevski, Kostandina Veljanovska
34	Optimizing Real-Time Data Processing with Kafka and Databricks Integration for Scalable Machine Learning Solutions	Aneta Trajkovska, Blagoj Ristevski , Kostandina Veljanovska, Trajche Trajkov, Nikola Rendevski
48	Transforming Human Resource Management: The Role of AI Technologies	Tatjana Ivanovic and Mimoza Bogdanoska Jovanovska
23	Artificial Intelligence and Critical Thinking in Foreign Language Learning: From Theory to Practice	Lela Ivanovska, SilvanaNeshkovska, Milena Kasaposka-Chadlovska

Sesión 5: Digital Transformation, Education, and Human–AI Interaction – DB Lab 14:30-15:30		
5	Digital School in Transition: Overcoming Resistance Through Mental Models and Organizational Learning	Maša Magzan, Ana-Maria Karleuša and Snežana Jokić
30	Enhancing Digital Competencies Through Visual Programming in Education	Katarina Vignjević, Dragana Glušac, Nemanja Tasić and Marko Blažić
57	Understanding User Acceptance of Technology: A Theoretical Review of Behavioral Intention Models	Vesna Rodić Lukić, Mia Marić and Nemanja Lukić
58	Towards Standardized Quality Practices for Custom Game Development Tools: A Contextualization of ISO/IEC 25010 Standard	Vasilije Bursać, Dragan Ivetić and Aleksandar Kupusinac
7	A Comparative Analysis of Locomotion Techniques in Virtual Reality for Architectural Visualization	Danilo Bulatović and Dragan Ivetić

  

Sesión 6: Internet of Things and Real-Time Computing – Ceremony Hall 14:30-15:30		
4	The Role of Caching in Real-Time Systems – A Case Study: Application of Redis in Monitoring Economic Indicators	Teodora Siljanoska, Violeta Manevska
24	A Comparative Methodological Framework for Semantic Enrichment of Time Series Forecasting: Beyond the Balkans Case Study	Teodora Siljanoska Taskovska, Snezana Savoska, Natasha Blazeska Tabakovska
37	Practical Tensor Decompositions for NLP Embeddings with TT, Tucker, and CP	Dilan Dobardžić, Višnja Ognjenović, Jelena Stojanov, and Vladimir Brtka
46	Applying semantic web technology in IoT: A Review	Valimir Sinani, Ramona Markoska and Natasa Tabakovska
55	Development and Functional Design of “Smart” Surgical Masks Based on IoT Technology	Valentina Bozoki, Ineta Nemeša, Marija Pešić, Danka Đurđić, Igor Vecštejn

Online/Video Session 7 – CSNE 11:30-12:30		
1	Validation of Parameters for AI Source Code Detector	Eugene Alooeff, Yuliya Zhaltko
10	Data-Driven Quality Assurance in Higher Education: Insights from University Information System	Aybeyan Selim, İlker Ali, Fehmi Skender
11	Security Monitoring of a PHP MVC Single Page Web Portal with Access Categorization: Preschool Institution Zrenjanin Case Study	Ljubica Kazi, Tatjana Lojović and Željko Cvijanović
17	Knowledge-based Decision Support System for Personalised Training	Marija Kolevska, Natasha Blazheska-Tabakovska
20	ECG Classification Utilizing a Hybrid Transformer-BiLSTM Network	Luka Glišić, Ivana Berković

**Poster Session 8 – CSNE Lab 16:00-16:30**

2	Intelligent UAV Surveillance GIS-Based Path Planning and Post-Flight Object Detection Using YOLOv11	Dalibor Šeljmeši, Velibor Ilić, Višnja Ognjenović, Vladimir Brtka and Dalibor Dobrilović
3	Application of Control Flow Graph in White Box Testing Techniques	Zoltan Kazi, Ljubica Kazi
9	Wireless Communication Security – Review on ZigBee and Bluetooth protocol	Vuk Amizic, Dalibor Dobrilovic
13	Comparative Analysis of Platforms for Analysis, Design and Product Development with a Focus on AI-Based Tools	Borce Ugrinovski, Andrijana Bocevska, Kostandina Veljanovska and Blagoj Ristevski
16	Management of Interdependent Data in Web Applications Using React and Redux Toolkit Illustrated Through a Video Game Point Calculation System	Nikola Jovanov, Eleonora Brtka, Ema Brtka, Vesna Makitan, Velibor Premcevski
18	Comparative Study of Depth-First Search Algorithms: DFS, DLS, and IDDFS in Undirected Unweighted Graphs	Nikola Jerković, Jelena Stojanov and Ivana Berković
21	Analysis of the Internet Banking in the Macedonian Banking Sector and Other Countries	Marina Blazhekovicj Toshevski
22	Improving Learning Recommendations Through Combined Audio and Text-based Sentiment Insights	Aleksandar Kotevski, Blagoj Ristevski
25	Intelligent Agents Architecture for Evacuation Route Planning in QGIS Environment	Srđan Popov, Milena Zeljković, Tanja Vranić, Nebojša Ralević and Željko Zeljković
27	Orkes Conductor - performance comparison with Apache Kafka	Srđan Popov, Jelena Ninković, Rade Radišić and Margarita Khazhoyan
28	Integrating Artificial intelligence in Virtual Engineering for Architectural Visualization	Darko Pajkovski, Igor Nedelkovski
32	Development of a smart sleep monitoring ecosystem	Kirill Zhilenkov, Konstantin Zheltov, Andrey Dorofeev, Irina Kuznetsova
38	Analysis of Traditional Complexity Metrics and Their Applicability to IoT Devices	Vuk Amizic, Dalibor Dobrilovic
39	Integrity of digital evidences in the investigation process	Rade Dragović, Dragan Dragović and Dalibor Dobrilović
44	Detection of Road Edge Lines Using Hough Transform	Ivan Gašić, Marko Beljin, Željko Eremić, Vladimir Tadić
47	AI-Based Prediction of Elastic Properties in Crystals with Class Balancing	Nora Pireci Sejdiu, Nikola Rendevski and Blagoj Ristevski
50	Artificial Intelligence for Assisting People with Sensory and Cognitive Disabilities	Kostandina Veljanovska, Simona Gulevska and Blagoj Ristevski
52	Circular Economy in Manufacturing Processes: A Comparative Analysis of the EU and Serbia	Milica Jovanov
54	Technology Transformation in IT SMEs: A Holistic Approach to Embracing Innovation	Mihajlo Mitkovski, Elena Petkovska, Mimoza Bogdanoska Jovanovska