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Guest Editorial

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This Special Issue of the Computer Science and Information Systems (ComSIS) journal presents a selection of the best papers from the third edition of the Artificial Intelligence conference (2025), organized under the auspices of the Serbian Academy of Sciences and Arts (SASA) by its Department of Technical Sciences, the Mathematical Institute of SASA, and the Academy Committee for Artificial Intelligence. The authors of the selected papers were invited to submit substantially extended versions of their work, and all submissions underwent the journal's standard rigorous peer-review process.

Established in 2023, the AI Conference at SASA has quickly become a premier annual, research-oriented event for the AI scientists in Serbia and the wider region. In 2025, the conference became truly international, attracting participants from numerous countries. The conference addresses the growing need for a dedicated academic forum, bringing together both experienced and early-career researchers across diverse branches of AI to share original results, exchange ideas, discuss fundamental theoretical and practical challenges, and strengthen collaboration across the diverse fields of artificial intelligence.

Covering a broad range of topics that reflect the rapidly evolving landscape of artificial intelligence, the conference maintains a strong focus on advancing the field's technical and theoretical boundaries. By highlighting new trends and fostering collaborative regional and international networks, it provides an important forum for promoting excellence in AI research standards and connecting the scientific community within the distinguished academic environment of the Serbian Academy of Sciences and Arts in Belgrade.

Initially fifteen papers were selected by the Conference organizers for this special issue and the authors of seven papers submitted extended versions. After undergoing of standard ComSIS reviewing procedure, six papers were accepted for publication.

In the paper Modeling Students' Acceptance of AI-Assisted Translation Tools: An Extension of the Technology Acceptance Model (TAM-AI) authors Wang Xiaoyun, Vladan Devedzic, and Wan Yinjia investigated students' acceptance of AI-assisted translation tools by proposing an extended Technology Acceptance Model (TAM-AI). The proposed model explains how translation-specific perceptions influence behavioral intention through underlying cognitive mechanisms. A survey was conducted among undergraduate translation students, and it was analyzed using Structural Equation Modeling. Presented results indicate that perceived usefulness and perceived ease of use significantly predict behavioral intention. Finally, the TAM-AI model demonstrates greater explanatory power than

the baseline TAM which offers practical implications for the design of AI-assisted translation tools.

The research presented in the paper Leveraging Large Language Models for Scalable Analysis of the End-of-the-Course Student Feedback by Jelena Jovanovic, Irena Vodenska, and Vladan Devedzic presents an LLM-based feedback analytics pipeline designed to transform students' open-ended feedback into structured, actionable insights. The pipeline includes three sequential stages: (i) segmenting student feedback into semantic units and assigning polarity (sentiment) to those units; (ii) topical classification of semantic units, and (iii) summarization of units within each topical category. The proposed approach enables educators and course managers to efficiently derive meaningful patterns from vast datasets of student opinions. It was evaluated using a comprehensive dataset from several editions of a U.S. university course, yielding encouraging results of the method's effectiveness. Additionally, a scalable, generic methodology for (semi-)automated feedback analysis, ultimately, supporting data-informed improvements in teaching and course management is provided.

Federated Learning Based Analysis of Certain Complex Multivariate Functions Given by Sample Only, by authors Nevena Mijajlovic, Ajlan Zajmovic, Miodrag J. Mihaljevic, Wei Shao, Lianhai Wang, and Shujiang Xu considered Complex Multivariate Functions employing a machine learning approach. The main goal of research is to generate a surrogate of the function based on the given sample, and to perform the optimization on the surrogate function. Due to the distributed nature of the sample Federated Machine Learning (FML) approach is adopted to generate the surrogate function. Authors assume that certain clients participate in FML in a malicious manner by poisoning training data or the model parameters they generate locally. Systematic experiments have been performed to study the characteristics of the surrogate function and its capabilities to provide reliable analysis of the original function depending on the sample available for training, and impacts of the training data poisoning, as well as locally generated model parameters.

In paper EduGrader: The AI-powered grading assistant, Svetozar Iković and Jelena Graovac present an open-source platform that leverages state-of-the-art large language models to support the assessment of open-ended student responses. The study addresses one of the key challenges in modern higher education, providing consistent, scalable, and timely evaluation through a configurable human-in-the-loop framework that combines multiple LLMs, adjustable grading strictness, and explainable feedback. Evaluated on 686 authentic student responses from six university courses in Serbian, a low-resource language, EduGrader achieves a Pearson correlation of up to 0.90 with human graders while maintaining transparency and instructor control. By demonstrating that advanced reasoning models can substantially reduce grading workload without replacing human judgment, this work offers a significant contribution to AI-assisted educational assessment, and it highlights the potential of trustworthy LLM-based technologies beyond English-language educational settings.

Complete meet-continuous codomain lattice and extremal solutions of L-valued fuzzy relation equations by authors Vanja Stepanović and Andreja Tepavčević brings a significant theoretical contribution to the study of lattice-valued fuzzy relational systems by establishing the existence of maximal solutions for a broad class of fuzzy relational equations, inequations, and their systems under the assumption of complete meet-continuous codomain lattices. Beyond extending fundamental lattice-theoretic properties and proving

the equivalence between meet-continuity and composition-continuity, the authors develop constructive algorithms for computing least solutions that terminate after at most countably many steps. By generalizing several earlier results into a unified framework and discussing potential applications in decision support, knowledge representation, control systems, and fuzzy data analysis, this work provides both a rigorous mathematical foundation and practical computational tools for reasoning with uncertainty in fuzzy relational models.

In the paper Encoding, Linking, Retrieving: A Methodological Framework for Knowledge-Enriched Interview Corpora, Ranka Stanković, Tamara Vučenović, Milica Ikonić Nešić, and Biljana Rujević present a comprehensive methodological framework for transforming unstructured interview transcripts into semantically enriched, AI-enabled knowledge resources. By integrating TEI-compliant encoding, textometric analysis, Named Entity Recognition and Linking, Wikidata-based semantic enrichment, and Retrieval-Augmented Generation (RAG), the authors establish a reproducible workflow for constructing knowledge-centric interview corpora. The proposed pipeline combines advanced semantic search, question answering, and knowledge graph integration with a systematic methodology for transforming oral history and cultural heritage collections into interoperable, FAIR-compliant resources for computational analysis. The work provides an important contribution to digital humanities and language technologies, particularly for Serbian and other less-resourced languages, offering a scalable methodology applicable to a wide range of spoken-language archives and documentary collections.

We would like to take this opportunity to give our great thanks to the Organizing and Program Chairs for careful evaluation of papers presented at AI 20205 conference for selecting the most outstanding and impactful contributions among them for inclusion in this special issue.

We are equally grateful to all authors for submitting their high-quality and inspiring papers, to the reviewers for their effort in reviewing the manuscripts, thoughtful evaluations, constructive feedback, and dedication which significantly contributed to improving quality of their papers. Finally, we extend our heartfelt thanks to the Editor-in-Chief, Prof. Ivan Luković, and the editorial team for their continuous support, valuable guidance and professionalism throughout the entire process of preparation of this special issue.