

FIRST CALL FOR PAPERS

AIMSA 2026

The 20th International Conference on Artificial Intelligence: Methodology, Systems, Applications
Sofia, Bulgaria, 15-16 October 2026

www.aimsaconference.org

Generative and Predictive AI

Initiated in 1984, the biennial Artificial Intelligence: Methodology, Systems, Applications (AIMSA) conference is a premier single-track forum for exchanging information and research results on theory and principles of artificial intelligence (AI) along with real-world applications of intelligent systems technology. The conference traditionally brings together researchers and practitioners in all areas of AI from both the academia and industry to meet and share their ideas and experiences and learn about the recent trends and developments in contemporary AI.

TOPICS

The conference is looking for submissions offering innovative methods, systems and applications that demonstrate efficiency and sustainability for the future of AI. *Efficiency* can be demonstrated against current and traditional methods, systems and applications. *Sustainability* relates to the required resources, computational power, human wellbeing, positive impact on science and the society.

Two main areas of contemporary AI will be on the focus of this conference, *generative AI*, such as LLM, and *predictive AI systems*, such as neuromorphic ones. If properly used, the former can help improve human knowledge and cognition and the latter – to predict early and to prevent mental and other health problems. Contemporary topics for presentations and discussions will be considered in 3 major themes:

- (1) Innovative methods for *efficient* and *sustainable* AI:
 - Advances in AI theories;
 - Advances in neural networks and neurocomputers;
 - Brain-inspired computation;
 - Multimodal data science and AI;
 - Cooperative agents.
- (2) Systems for the development and the implementations of *efficient* and *sustainable* AI:
 - LLM based on novel neurocomputers (spike-based transformers);
 - Agentic AI systems;
 - Neuromorphic agents;
 - Multi-agent systems on the cloud;
- (3) Novel *efficient* and *sustainable* AI applications:
 - LLM in education, from primary-, to tertiary- and to higher education for improved learning and cognitive skills;
 - Improving cognition in elderly population;
 - AI in professional health practice;
 - Predictive AI for early prediction of health problems, such as: stroke, AD, dementia, MS, ADHD, depression;
 - AI for environmental prediction;
 - AI for personalized medicine;
 - Non-invasive AI methods in health.
 - AI against fake information;
 - Ethical use of LLM.

All submissions will be subject to a single-blind academic peer review by at least three members of the program committee. Selection criteria include accuracy and originality of ideas, clarity and significance of results, and quality of presentation.

The author(s) of the best paper (which will be selected based on the votes of the attendees) of the conference will receive the Best Paper Award during the conference.

PROGRAMME COMMITTEE CHAIR

Nikola Kasabov

Auckland University of Technology, Auckland, New Zealand

<https://academics.aut.ac.nz/nkasabov>

Visiting professor in:

Institute of Information and Communication Technologies, Bulgarian Academy of Sciences;

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LOCAL ORGANIZING COMMITTEE CHAIR

Petia Koprinkova-Hristova

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LANGUAGE

The official language of the conference is English

IMPORTANT DATES

Submission deadline:	May 24, 2026
Notification of acceptance:	July 1, 2026
Deadline for camera-ready:	July 15, 2026
Conference:	October 15-16 2026

PROCEEDINGS

Traditionally, proceedings of AIMSA conferences are published by Springer Nature in their Lecture Notes in Artificial Intelligence subline of the Lecture Notes in Computer Science series.

LOCATION

Sofia is a vibrant European city and capital of Bulgaria. It has a long history and many historical monuments along with a modern architecture.

ORGANISERS

Bulgarian Artificial Intelligence Association

Institute of Information and Communication Technologies at the Bulgarian Academy of Sciences
(IICT – BAS)