

Call for Papers: *International Workshop on AI in Education and Educational Research (AIEER)*

The AIEER 2024 International Workshop on AI in Education and Educational Research is a part of the 27th European Conference on Artificial Intelligence ECAI 2024 [<https://www.ecai2024.eu/>]. This Workshop is scheduled for Saturday and Sunday, 19-20 October 2024.

Scope of the Workshop

This workshop has two distinct foci with the aim of facing the field of AI in education in a wider manner.

Part 1. A (social science-led) discussion about the real issues in education that AI-enabled applications might help address.

This includes the study of educational and teaching AI, but also social sciences, economics, and humanities, including all subjects such as education and teaching in action, labor market research with a focus on educational needs, history of education and related cultural heritage of education, as well as informative predictions for decision making and behavioral science perspectives. On the one hand, we focus on the connections between AI, education, and society. This includes quantitative and qualitative research, data science methods for analyzing education and labor market data, AI approaches for recommender systems, and digitized learning. On the other hand, we focus on how AI can be used to push the boundaries of the field. This includes developing new methods (including methods using AI), finding and making accessible new data sources, enriching data, and more. In both cases, it is essential that the different perspectives communicate and understand each other, which is also one of the goals of this workshop.

More broadly, we are interested in how AI methods affect all areas of education, as well as businesses and labor markets. This includes approaches to how all sectors of education, from primary to tertiary, are affected by and respond to AI methods. The design of digitalized futures with AI methods raises several questions for education: At the broadest level, legislative and normative questions; at the level of companies, questions about investment decisions and how to maintain productivity and their workforces; at the level of individuals, questions about qualifications and which skills need to be applied and possibly learned anew. Skills and qualifications are thus at the heart of AI in education and educational research.

Part 2. A (computer science-led) discussion about what AI-enabled applications might be developed (and how) to address the issues raised in Part 1.

The use of AI-based systems to support teaching or learning has been developing for more than 4 decades, but its rise has increased markedly in recent years, due to the increase in the use of e-learning tools during the COVID-19 pandemic and the recent explosion of generative AI. We are at a key moment of development in this field, in which experts in AI and experts in education must join forces to achieve an optimal use of this technology in teaching and learning processes. This workshop aims to create a space for the presentation of new proposals and the reflection on the state of the art in this field of such social relevance. In this first part, we are especially interested on the technical aspects of AI, focusing on the specific techniques used for content creation (generative AI), student profiling (machine learning), learning analytics or explainable AI methods for teacher's

dashboards. The aim is to provide a clear picture of the type of approach followed in the scope of education, and its particularities.

Thus, we are particularly interested in interdisciplinary exchange and dissemination with a clear focus on AI methods. This workshop was born with the purpose of lasting in future editions of ECAI, thus creating a specific community within this event.

Topics of Interest

The list of topics includes, but is not limited to:

- AI techniques applied to education:
 - Explainable AI,
 - Application of generative AI in educational setups,
 - Multimodal learning analytics,
 - *AI techniques and models in analyzing the educational data*
 - *Intelligent tutoring systems*
 - *Intelligent learning/e-learning systems*
 - *Student profiling for personalized learning*
 - *AI-based apps and simulations*
 - *AI to support learners with disabilities*
 - *Automatic formative assessment*
 - *Dialogue-based tutoring systems*
 - *Exploratory learning environments*
 - *Classroom monitoring tools*
 - *Teacher focused apps*
 - *Automatic assessment systems*
- AI approaches for the interdisciplinary work on education in the science of education, social sciences, economics, and humanities: report on theoretical, methodological, experimental, and applied research, experience reports and tools containing theoretical aspects of AI, program curations for (vocational) education or at schools and universities, and the ethical issues of the education with AI
- AI for linking data from different digital resources for educational research, including online social networks, web and data mining, Knowledge Graphs, Ontologies.
- AI methods for text mining and textual analysis, for example texts within social sciences, digital literacy studies, computational stylistics and stylometry.

Important Dates

- Workshop paper submission deadline: 31st May 2024
- Notification of acceptance: 15th July 2024
- Camera-Ready copy due: 31st July 2024
- Workshop date: 19th-20th October 2024

Submission Instructions

Proceedings

AIEER proceedings will be available online at <https://ceur-ws.org>. The proceedings of this workshop will not be included in the proceedings of ECAI 2024.

Paper Format

Papers should be formatted according to the [ECAI 2024 guidelines](#), and they should have a maximum of 7 pages (with additional pages containing references only). In addition, the submission of preliminary results is welcomed, i.e. work-in-progress, as well as visionary outlook papers that lay out directions for future research in this specific area, both up to 4 pages in length.

All submissions will be peer-reviews (double-blind). Accepted work will have allocated time for oral presentation during the working.

Submissions

<https://chairingtool.com/conferences/AIEER2024/MainTrack>

Organization

This workshop is jointly organized by the University of A Coruña (Grupo Integrado de Ingeniería, Spain), the Federal Institute for Vocational Education and Training (BIBB, Germany) and the Universities of Bonn and Koblenz (Germany).

Workshop Organizers

- Francisco Bellas (University of A Coruña),
- Jens Dörpinghaus (BIBB, University of Koblenz),
- Oscar Fontenla-Romero (University of A Coruña),
- Michael Tiemann (BIBB, University of Bonn).

Program Committee

- Helen Crompton, Old Dominion University
- Mutlu Cukurova, UCL
- Dalila Duraes, University of Minho
- Sara Guerreiro, UDC
- Robert Helmrich, BIBB, University of Bonn
- Lars Mehnen, Fachhochschule Technikum Wien
- Peter Peer, University of Ljubljana
- Noelia Sánchez-Marroño, UDC
- Mortimer Schlieker, BIBB
- Stefan Udelhofen, BIBB

For questions, please contact francisco.bellas@udc.es or jens.doerpinghaus@bibb.de