

Special Session Call for Papers for ICL 2026

Sept 30–Oct 02, 2026, Wasserturm Hotel, Cologne, Germany



“Special Session: Challenges, Opportunities, and Visions in Digital Learning Processes for a future-oriented Engineering Education (IPW)”

as part of the 29th International Conference on Interactive Collaborative Learning &
55th IGIP International Conference on Engineering Pedagogy

IPW Background and Overview

In digital age and also integrating innovative technologies in teaching and learning not only offer new opportunities, learning environments, but also lead to challenges due to new approaches in engineering education. Additionally, AI may lead to disruptive changes in industrial context, professional usage and even in every-day life. The core elements and competence development in engineering disciplines and vocational training require experiential learning environments that prepare students to seize future-oriented opportunities and minimize associated risks. Combining these constraints with the development of responsively acting engineers and technical staff necessitates an examination of content and methodology of technology-oriented educational processes within the context of ongoing digital transformation. This should also be addressed by re-designing curriculum development, capable of responding to often rapidly changing processes and requirements. This leads to fundamental research of how practical skills and competency development can be combined by digital space and environment, regarding restrictions and efforts for the realization of technological solutions in complex context such as industrial automation or digital frameworks.

The session “Challenges, Opportunities, and Visions in Digital Learning Processes for a future-oriented Engineering Education”, organized by the Scientific Society for Engineering Education (IPW), addresses essential questions about the requirements in engineering education and vocational training against the background of digital learning environment, AI and innovative, future-oriented technologies. This includes the content of technical training, its methodological design and questions about the engineering-pedagogical qualification of the teaching staff, whose tasks will increasingly include the development of digital competences in the future.

IPW Topics

- Holistic Competence Framework in Engineering Education
- Learning Processes in Digital Spaces
- Responsible Use of Artificial Intelligence in Engineering Education
- Applications of Innovative Technologies
- Engineering Ways of Thinking and Ethical Issues regarding Digital Environments
- Re-design of learning processes and curriculum development
- Engineering-Pedagogical Requirements for Engineers and Trainer and Approaches to Engineering-Pedagogical further Training

IPW Special Session Chair(s)

- Ralph Dreher, University of Siegen, Germany, dreher.tvd@uni-siegen.de
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IPW Committee Member(s)

- Natali Becker, becker.tvd@uni-siegen.de
- Achim Höfele, ahoefe@gmx.ch
- Thomas Jambor, jambor@dei.uni-hannover.de
- Justinus Pieper, Justinus.pieper@uni-siegen.de

General Information and Proceedings

Special sessions, held in parallel with the general conference, are an integral part of the conference. They provide researchers in focused areas the opportunity to meet and present their work and offer a forum for interaction among the broader community of technology-enhanced learning, and online engineering worldwide.

Special sessions papers are required to meet the same standards as papers in the general conference and are published in the same conference proceedings. Special Session papers must be submitted to STE submission server (ConfTool® Submission Server) to the respective Special Session track. Special Session papers will be reviewed by at least two members of the Special Session's Program Committee, and acceptance decisions will be made by the conference program Co-Chairs and Special Sessions Chairs. All accepted and presented papers will be published as ICL2026 Proceedings in the Springer series "Lecture Notes in Networks and Systems", which is indexed among others in Scopus and Compendex.

Important Deadlines

Submissions for the ICL2026 Special Sessions may be submitted by the following deadlines:

15 May 2026	Submission of complete Special Session Papers (no abstract stage)
15 June 2026	Notification of acceptance
15 July 2026	Camera-ready due & Author registration deadline
30 Sept 2026	ICL2026 Conference Opening