

ICL2025 Special Session Call for Papers

To the Roots of Engineering Pedagogy (TREP)

Overview

The quality of educators and their professional development is widely recognised as a crucial element in the reform of educational systems and the promotion of innovation within school activities. Engineering pedagogy serves as the theoretical foundation for teacher education, specifically within engineering disciplines. Since its inception, grounded in the theories and applications advanced by Professor Melezinek, engineering pedagogy has disseminated from Central Europe across the European continent and globally. Contemporary shifts in the European and global labour markets have underscored the paramount importance of high-quality education as a fundamental attribute and primary criterion for societal advancement. Consequently, rigorous teacher training is an imperative. This special section aims to explore the core principles of engineering pedagogy, including its origins and relevance in the context of current demands. The principal objectives of organisations such as the International Society for Engineering Pedagogy (IGIP) converge on the enhancement of pedagogical methodologies across both technical and general fields of study. For graduates to achieve successful entry into the labour market, they require not only robust knowledge and skills but also the capacity for rapid adaptation to evolving circumstances. This adaptability is essential for facilitating a seamless transition from academic institutions to the professional sphere and enhancing graduate employability. The special session focuses on the exchange of experiences, the presentation of exemplary practices, and the discussion of future challenges in the application of engineering pedagogy principles.

Topics

- *Engineering pedagogy*
- *Quality of education*
- *Digital education strategy and engineering pedagogy*
- *Digital competencies of teachers*
- *Artificial intelligence in education*
- *Trends in teacher education*
- *Improving teacher training*
- *Pedagogical diagnostics and evaluation*
- *School safety and internal quality*
- *Education and social distance*
- *Startups*
- *Improving the employability of graduates in the labour market*

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