Fostering creativities in education through technological innovations and transdisciplinary STEAM approaches

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There is a growing emphasis for encouraging creative thinking in education, innovating pedagogies and develop connections among subjects. Activities focusing on creative processes, rather than concentrating on achieving only results for posed problems, are being designed and trialled by innovative groups around the world. Often involving Arts, in a broader sense of design and creation, can be good a starting point for students to find their own interests and follow their own way of learning. Such creative activities often involve the development of collaborative problem-solving skills utilising students' strengths in different areas that adds up at the group level. Furthermore, such activity designs and the opportunities offered by the availability of digital technologies inevitably afford new multi- and trans-disciplinary approaches for education. In my talk, I will introduce examples of technological innovations and STEAM approaches to foster creativities and skills predicted to be crucial for students in the future.

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Short Bio:
Professor Zsolt Lavicza (BA, BA, MS, MA, MPhil, PhD)
After receiving his degrees in mathematics and physics in Hungary, Zsolt began his postgraduate studies in applied mathematics at the University of Cincinnati.

While teaching mathematics in Cincinnati he became interested in researching issues in the teaching and learning mathematics. In particular, he focused on investigating issues in relation to the use of technology in undergraduate mathematics education. Afterwards, both at the Universities of Michigan and Cambridge, he has worked on several research projects examining technology and mathematics teaching in a variety of classroom environments. In addition, Zsolt has greatly contributed to the development of the GeoGebra community and participated in developing research projects on GeoGebra and related technologies worldwide. Currently, Zsolt is a Professor in STEM Education Research Methods at Johannes Kepler University's Linz School of Education. From JKU he is working on numerous research projects worldwide related to technology integration into schools; leading the doctoral programme in STEM Education at JKU; teaching educational research methods worldwide; and coordinates research projects within the International GeoGebra Institute.