

Inspiring Science Learning

1. Workshop Description

Over the last two decades the design of pedagogical approaches and the development of technological tools for inspiring science learning have had a profound impact on the process of science teaching and learning. The employment of new technologies and applications such as augmented reality, virtual reality, portable devices, wearable computers, simulations and computer modeling of physical phenomena in science classrooms has allowed the enhancement and enrichment of their current curriculum.

However, the introduction of such innovating tools into students' learning experience itself, cannot improve their learning without the active participation of their educators. With the employment of innovative and highly interactive technologies as well as available authoring or data analysis tools, the educators are able to implement sets of demonstrators to enhance the quality and effectiveness of the teaching and learning process.

Furthermore, technology-enhanced learning tools give the opportunity to connect science education with real life & research and motivate learners to engage themselves in exploratory learning.

This workshop aims to introduce educational practices that inspire and support science learning through the usage of innovative technology tools. The application of various leading edge technologies and applications that can transform the educational environment and the teaching and learning processes is further inspected. This workshop embraces the interconnection between science learning and real data collected

form daily activities and/or basic research, along with the instructional influence upon learning processes.

Moreover, modern techniques of organizing digital content and metadata are investigated along with educational resources that use these appropriate metadata to form learning objects.

The mapping of pioneering technologies to enhance science education identifies sets of technological tools in which science centres and schools should invest. This will create valuable teaching and learning processes that will effectively capture the needs of modern communities.

2. List of speakers & the title of their talks

Convenor: *Prof. Christine Kourkouveli*

Dr. Sofoklis Sotiriou
(Ellinogermaniki Agogi)
"Inspiring Science Learning"

Dr. Angelos Lazoudis
(Ellinogermaniki Agogi)
"Associating Sports Activities with Scientific Enquiry and Experimentation"

Dr. Nikitas Kastis
(Lambrakis Foundation)
"Open Science Resources"

Dipl.-Ing. Hagen Buchholz
(Fraunhofer Institute)
"Science Center To Go - A mixed reality learning environment of miniature exhibits"

Prof. Erik Johansson
(University of Stockholm)
"Particle collisions for students and teachers"