

# 2nd International Conference on Innovating STEM Education

Interdisciplinary approach on Science, Technology, Engineering and Mathematics in Education – STEM Education

## Conference Program 22-24/6/2018

Deutsche Schule Athens, Greece
Dimokritou 6 & Germanikis Scholis Athinon

## Post Graduate Program: "Interdisciplinary Approach on STEM EDUCATION" 2<sup>nd</sup> International Conference on Innovating STEM Education

## **Conference Program**

## Friday 22.06.2018

16:00	Registration
17:00-17:40	Damn! We still forgot the Maths
	Eugenia Koleza
17:40-18:20	STEM education revisited - a German perspective
	Ekkehard Winter- Executive Director Deutsche Telekom
18:20-19:00	Science in Writing: Representing and Assessing Disciplinary Knowledge in
	Online Learning Spaces.
	Mary Kalantzis & Bill Cope
19:00-19:30	Coffee Break
19:30-20:00	Transforming the traditional School Science Laboratory into an STEM Lab
	Michalis Orfanakis

## Saturday 23.06.2018

09:30-10:10	Students' Reasoning with the Pantograph
	Anna Athanasopoulou, Michelle Stephan and David Pugalee
10:10-12:00	Round-Table
12:00-12:20	Mathematics & Engineering design: The working space of the pantograph
	Eugenia Koleza& Maria Kaisari
12:20-14:00	Light Meal
14:00-14:20	Nicola Yelland
	Flinders University Australia
14:20-14:40	Determining «Dark Matter» in school lab
	Maria Theodoropoulou and Ioannis Chiotelis
14:40-15:00	System development for remote education robotic to study the spatial ability
	of students
	Konstantinos Kalovrektis
15:00-15:30	EELLAK
15:30-16:30	Coffee Break
16:30-16:50	Introduction to Physical Computing with Raspberry Pi in a STEM Education
	Framework
	Nikolaos Balaouras, Anthi Karatrantou, Georgios Panetas and Christos
	Panagiotakopoulos
16:50-17:10	CTEM Education in Drimany Schools Applying the Social Cognitive Agrees to
	STEM Education in Primary School: Applying the Social Cognitive Approach to
	an Educational Programming Environment
	Anastassios Emvalotis, Artemisia Stoumpa, Aggeliki Nikolou, Athanasios Cheilas
	Circinas

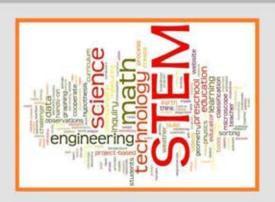
17:10-17:30	STEM education post-graduate students' training in the eCraft2Learn
	ecosystem
	Dimitris Alimisis and Dimitrios Loukatos
17:30-17:50	Educational Robotics & Children's Attitudes Towards STEM
	Marina Karemfyllaki, Anthi Karatrantou and Christos Panagiotakopoulos
18:00-19:00	Coffee Break
19:00-19:20	From STEM to STEAM and to STREAM enabled through meaningful critical
	reflective learning
	Vassilios Makrakis
19:20-19:40	A STEM Educational Scenario: "From Water Power to Hydrogen Fuel Cells
	Ioannis Chiotelis and Maria Theodoropoulou
19:40-20:00	Bridging STEM (Science, Technology, Engineering & Mathematics) Education
	with Education for Sustainability
	Nelly Kostoulas-Makrakis

## Sunday 24.06.2018

10:00-10:20	Web-based repository of STEM activities for education & integration of refugees and migrants - STEMigrants.eu Christina Lousta and Ioannis Lefkos
10:20-10:40	Designing Bridges: Preparing postgraduate students for STEM Project- Based learning Kostas Asimakopoulos, Panagiotis Dimoulas
10:40-11:00	Proposals for the educational utilization of Augmented Reality Applications Fanny Chioteli and Timoleon Theofanellis
11:00-12:00	Conference Conclusions - Distribution of Certificates of Attendance

## PostGraduate Program: "Interdisciplinary Approach on STEM EDUCATION" 2<sup>nd</sup> International Conference on Innovating STEM Education http://stemeducation.upatras.gr/histem2018/

#### 22-24 June 2018, Deutsche Schule Athen, Greece



#### Organizing Committee

Thomas Babalis

National & Kapodistrian University of Athens, Greece

Anastasios Emvalotis

University of Ioannina, Greece

Eugenia Koleza

University of Patras, Greece

Chris Panagiotakopoulos

University of Patras, Greece

Penny Panagiotopoulou

University of Patras, Greece

Kostas Skordoulis

University of Athens, Greece

Vassilis Tolias

Deutsche Schule Athen, Greece

Annette Brunke-Kullik

Deutsche Schule Athen, Greece

Conference Secretariat

Louiza Vaggelatou

University of Patras, Greece vagelat@upatras.gr

Lisa Schubert Deutsche Schule Athen, Greece

schubert@dsathen.gr

Technical support

Andreas Papalambrou

University of Patras, Greece

andreas@papalambrou.gr

Submission

Authors are invited to submit regular full papers, short papers and posters through the conference online system (easychair).

#### Registration fees

50 Euro

University Students: 15 Euro

In recent years, there has been a focus on promoting the uptake of STEM subjects in schools. This has been driven by the need to ensure that young people gain the knowledge and skills essential to help them participate in a society in which mathematics, science and technology are increasingly important. Nevertheless, reform efforts, including curriculum development have treated the STEM subjects mostly in isolation. Recognizing that education within the individual STEM disciplines has great value and that efforts to improve discipline-centered teaching and learning should continue, this conference considers the potential benefits-and challenges-of an explicit focus on integration. In order to prepare students to address the problems of our society, it is necessary to provide students with opportunities to understand the problems through rich, engaging, and powerful experiences that integrate the disciplines of STEM.

The conference provides a platform for dissemination of best practice in teaching and learning in Greece, and will inspire and empower STEM educators to improve teaching quality, to Increase engagement in STEM education and career pathways, to connect students with real life industry relevancy, and to drive creativity, inquiry based learning, problem solving & project based learning.

The conference will contain three strands:

#### 1. Invited speakers

Dr. Ekkehard Winter, Executive Director Deutsche Telekom, co-founded "Science in Dialogue" (Wissenschaft im Dialog, WiD), a science communication initiative of all German research organisations.

The foundation focuses its activities on improving education and teacher training in science, technology, engineering and mathematics (STEM).

Prof. David Pugalee, Prof. Michelle Stephane, Prof. Anna Athanasopoulou

Center for Science, Technology, Engineering and Mathematics (STEM) Education, University of North Carolina-Charlotte

Prof. Mary Kalantzis and Prof. Bill Cope,

University of Illinois, Urbana-Champaign. Department of Education

- 2. STEM Education Research will include presentations from leading STEM education researchers who are examining pressing challenges in STEM education. For example, sessions on integrated STEM education, mathematics education, science education, engineering education, technology education, etc. will be offered.
- 3. K-12 STEM Practice will include selected 15 minutes presentations and workshops from individuals and teams from K-12 schools who are implementing STEM programs and school approaches. For example, sessions on problem and project based pedagogy, engineering design process, integrated STEM curriculum development, strategic planning, and/or engineering education practices will be offered

Conference web site: http://stemeducation.upatras.gr/histem2018/

State for attendance https://goo.gl/forms/0wJR3gJdEOFpFxkH2