

# RiE 2016

7<sup>th</sup> International Conference  
on Robotics in Education

**April 14-15, 2016**  
**Vienna, Austria**

Join RiE 2016, the 7<sup>th</sup> International Conference on Robotics in Education

Conference takes place at high school TGM, Wexstraße 19-23, 1200 Vienna, Austria

## Conference Program

### Thursday, April 14

08:00-08:50 Registration

#### **08:50-09:40 Opening Session**

- **Welcome & Introduction**  
Richard Balogh, Wilfried Lepuschitz, David Obdržálek – RiE 2016 Co-Chairpersons
- **Keynote: Opportunities and Obstacles of Constructionism in Educational Robotics**  
Ass.-Prof. Pavel Petrovič – Comenius University in Bratislava, SK

09:40-09:50 Short break

#### **09:50-10:40 Technical Session 1: Overview on Educational Robotics**

*Session chair: Pavel Petrovič*

- **The Educational Robotics Landscape (#12\*)**  
Lara Lammer, Markus Vincze, Martin Kandlhofer and Gerald Steinbauer
- **ER4STEM – Educational Robotics for Science, Technology, Engineering, and Mathematics (#6\*)**  
Lara Lammer, Wilfried Lepuschitz, Chronis Kynigos, Angele Giuliano and Carina Girvan
- **Activity Plan Template: a mediating tool for supporting learning design with robotics (#33)**  
Nikoleta Yiannoutsou, Sofia Nikitopoulou, Chronis Kynigos, Ivaylo Gueorguiev and Julian Angel Fernandez

10:40-11:10 Coffee break

#### **11:10-12:20 Technical Session 2: Workshops, Activities and Curricula #1**

*Session chair: Ivaylo Gueorguiev*

- **Student-Robot Interactions in Museum Workshops: Learning Activities and Outcomes (#16)**  
Alex Polishuk and Igor Verner

- **A workshop to promote Arduino-based robots as wide spectrum learning support tools (#17)**  
Francesca Agatolio and Michele Moro
- **How to teach with LEGO WeDo at primary school (#24\*)**  
Karolina Mayerova and Michaela Veselovská

12:20-13:20 Lunch break

### 13:20-14:10 ECER Session

4 talks by high school students

### 14:10-15:30 Technical Session 3: Controllers, Platforms and Tools

*Session chair: Igor Verner*

- **Aeris – robots laboratory with dynamic environment (#20)**  
Michal Chovanec, Lukáš Čechovič and Lukáš Mandák
- **UNC++Duino: A kit for learning to program robots in Python and C starting from blocks (#23)**  
Luciana Benotti, Marcos Gomez and Cecilia Martinez
- **On the Design and Implementation of a Virtual Machine for Arduino (#30)**  
Gonzalo Zabala, Sebastián Blanco, Matías Teragni and Ricardo Morán
- **Networking extension module for Yrobot – a modular educational robotic platform (#19\*)**  
Michal Hodon, Juraj Micek and Michal Kochlan

15:40-16:00 Coffee break

### 16:00-18:00 Technical Session 4: Integration with other Science Domains

*Session chair: David Obdrzalek*

- **Robotics in School Chemistry Laboratories (#4)**  
Igor Verner and Leonid Revzin
- **Applied Social Robotics – Building Interactive Robots with LEGO Mindstorms (#14)**  
Andreas Kipp and Sebastian Schneider
- **Model based design of the competition car (#1)**  
Richard Balogh
- **Offering Multiple Entry-Points into STEM for Young People (#32)**  
Wilfried Lepuschitz, Gottfried Koppensteiner and Munir Merdan
- **Usability Evaluation of a Raspberry-Pi Telepresence Robot Controlled by Android Smartphones (#11)**  
Worawan Maruringsith and Krit Janard

From 19:00 Conference Dinner

## **Friday, April 15**

### **09:00-09:40 Morning Session**

- **Keynote: A Journey through the Minds of Educational Robotics Stakeholders**  
Lara Lammer, Vienna University of Technology, AT

09:40-09:50 Short break

### **09:50-11:00 Technical Session 5: Workshops, Activities and Curricula #2**

*Session chair: Lara Lammer*

- **Concept Inventories for Quality Assurance of Study Programs in Robotics (#27)**  
Reinhard Gerndt and Jens Lüsse
- **Project Oriented Approach in Educational Robotics: From Robotic Competition to Practical Appliance (#25)**  
Anton Yudin, Andrey Vlasov, Maria Salmina and Maxim Kolesnikov
- **Using Modern Software and the ICE approach when Teaching University Students Modelling in Robotics (#21\*)**  
Sven Rönnbäck
- **Breeding Robots to Learn How to Rule Complex Systems (#9\*)**  
Franco Rubinacci, Michela Ponticorvo, Onofrio Gigliotta and Orazio Miglino

11:00-11:10 Short break

### **11:10-12:20 Technical Session 6: Human-Robot Interaction**

*Session chair: Julian Angel-Fernandez*

- **Personalizing educational game play with a robot partner (#22)**  
Mirjam De Haas and Emilia Barakova
- **Robot moves as tangible feedback in a mathematical game at primary school (#8)**  
Sonia Mandin, Marina De Simone and Sophie Soury-Lavergne
- **Robots as Tutee (#26\*)**  
Lena Pareto
- **The Experience of Developing Mr. Saud Educational System using NAO Humanoid Robot (#34\*)**  
Hend Al-Khalifa, Bashayer Alsalman, Deema Alnuhait, Atheer Alkhalifah, Ohoud Meldah and Sara Aloud

12:20-13:20 Lunch break

### **13:20-14:45 Technical Session 7: Simulation Environments and Robotics**

*Session chair: Richard Balogh*

- **V-REP and LabVIEW in the service of education (#5)**  
Marek Gawryszewski, Piotr Kmiecik and Grzegorz Granosik
- **Developing Extended Real and Virtual Robotics Enhancement Classes with Years 10-13 (#7)**  
Peter Samuels and Sheila Poppa
- **A thousand robots for each student: using cloud robot simulations to teach robotics (#29)**  
Ricardo Tellez
- **Educational robot task virtual model transformation into real environment (#13\*)**  
Renata Burbaitė, Adomas Paulauskas and Vytautas Štuikys

## **14:45-15:00 Closing Session**

- **Outlook on RiE 2017 & Résumé**  
Richard Balogh, Wilfried Lepuschitz, David Obdržálek – RiE 2016 Co-Chairpersons

From 15:00 ECER Finals

**Regular paper presentations:** 15-20 minutes plus 5 minutes Q&A

**Short paper presentations (paper ID marked with star):** 8-10 minutes plus 3 minutes Q&A, to be complemented by discussions with authors next to posters during breaks