



**ŠIAULIŲ  
UNIVERSITETAS**

UNIVERSITY OF ŠIAULIAI  
FACULTY OF EDUCATION  
NATURAL SCIENCE EDUCATION RESEARCH CENTRE

**1<sup>st</sup> International Baltic Symposium on Science and Technology Education  
BalticSTE2015**

**“STATE-OF-THE-ART AND FUTURE PERSPECTIVES”**

15-18 June 2015

## **SYMPOSIUM PROGRAMME**



Faculty of Education, University of Šiauliai  
P.Višinskio Street 25, Šiauliai, Lithuania

**Sunday**  
14<sup>th</sup> June 2015

**18:00 - 19:30**

**ICE-BREAKING**

*(Room 115, Faculty of Education, University of Šiauliai, P.Višinskio Street 25)*

**Monday**  
15<sup>th</sup> June 2015

**8:00 - 9:30**

**REGISTRATION**

*(First Floor, Hall, Library of Siauliai University, Vytauto Street 84)*

**9:30-10:00**

**OPENING CEREMONY**

*(Second Floor, Room 205, Library of Siauliai University, Vytauto Street 84)*

Rector of the University **prof. dr. Donatas Jurgaitis**,  
Vice-Rector for Research and Art **prof. dr. Diana Šaparnienė**,  
Dean of Faculty of Education **doc. dr. Erika Masiliauskienė**  
Head of NSERC **prof. dr. Vincentas Lamanuskas**

**10:00-12:00**

**PLENARY MEETING (1)**

*(Second Floor, Room 205, Library of Siauliai University, Vytauto Street 84)*

*Chairman: **Andris Broks, Vincentas Lamanuskas***

1. **Vincentas Lamanuskas.** *Natural science and technology education: “Resetting” meaning (Lithuania)*
2. **Kuohung Huang.** *Mobile learning and outdoor science education: Studies of zoo field trips (National Chiayi University, Taiwan).*
3. **Martin Bilek.** *Synergy and/or mismatch of real and virtual environment in science education (Czech Republic)*

**12:00-14:00**



**LUNCH**

**14:00-16:00**

**PLENARY MEETING (2)**

*(Second Floor, Room 205, Library of Siauliai University, Vytauto Street 84, Šiauliai)*

*Chairman: **Andris Broks***

1. **Paolo Bussotti.** *How history of mathematics can be used in mathematics education to teach differential and integral calculus (Italy)*
2. **Kateřina Chroustová, Martin Bilek.** *The development of factors affecting the usage of educational software in chemistry education in the Czech Republic (Czech Republic)*
3. **Lukáš Vízek.** *On volume of the antiprism in cube as a complex mathematical problem (Czech Republic)*

**16:00-17:00**

**POSTER PRESENTATIONS**

*(Fourth Floor, Hall, Library of Siauliai University, Vytauto Street 84, Šiauliai)*

---

**Tuesday**  
16<sup>th</sup> June 2015

08:00 – 19:00



**OUTDOOR WORKSHOP**  
*Historical Aspects of Science & Technology*

---

During symposium  
**POSTERS**

*(Fourth Floor, Hall, Library of Siauliai University, Vytauto Street 84, Šiauliai)*

1. **Louis Trudel, Abdeljalil Métioui.** *The discussion as a method to teach physics at the University (University of Ottawa, Canada)*
  2. **Ewa Szczepanowska.** *Systematic training cycle in adult teaching of exercise physiology (University of Szczecin, Poland)*
  3. **Liudmila Gorbunova.** *Some aspects of the construction of the thematic tests for the diagnosis of cognitive learning outcomes chemistry engineering students (Admiral Makarov State University of Maritime and Inland Shipping, Kotlas Branch, Archangelsk region, Russia)*
  4. **Emilija Lesina, Sandra Kalnina.** *The role of game elements in chemistry acquirement (Ventspils Secondary School No.6, Latvia)*
  5. **Silvija Kreile.** *Students' attitude regarding use of frayer model in the development of the comprehension of chemistry concepts (Riga Jugla Secondary School, Latvia)*
  6. **Violeta Šlekienė, Loreta Ragulienė.** *The role and scope of vision therapy in educational practice (Siauliai University, Lithuania)*
  7. **Renata Bilbokaitė.** *Computer based visualization - effect on cognitive processes of girls (Siauliai University, Lithuania)*
-

**Wednesday**

17<sup>th</sup> June 2015

**09:00-10:30**

## **PLENARY LECTURES**

*(Second Floor, Room 205, Library of Siauliai University, Vytauto Street 84, Šiauliai)*

*Chairman: **Andris Broks***

1. **Metka Kordigel Aberšek**. *Online science literacy: To teach or not to teach* (Slovenia)
2. **Virginia Brianzoni, Liberato Cardellini**. *A study on science education in Italy* (Marche Polytechnic University, Ancona, Italy)

**10:30-11:00**



**COFFEE BREAK**

**11:00-12:30**

## **SECTION 1**

### **General S&T Education Issues**

*(Fourth Floor, Room 412, Library of Siauliai University, Vytauto Street 84, Šiauliai)*

*Chairman: **Josef Trna***

1. **Abdeljalil Métioui, Louis Trudel**. *Acquisition of scientific and pedagogy competences by primary pre-service teachers: Myth or reality?* (Université du Québec à Montréal, Canada)
2. **Eva Trnova, Josef Trna**. *Development of science teacher creativity and IBSE* (Masaryk University, Brno, Czech Republic)
3. **Līga Cakane, Jelena Volkinsteine, Dace Namšone, Ilze France**. *What lesson observation data reveal about the changes in teaching science: Case study from Latvia* (University of Latvia, Latvia)
4. **Dagnija Cedere, Inese Jurgena, Ineta Helmane, Inta Tiltiņa, Gunita Praulīte**. *Cognitive interest: Problems and solutions in the acquisition of science and mathematics in schools of Latvia* (University of Latvia, Latvia, Riga Teacher Training and Educational Management Academy, Latvia)

**11:00-12:30**

## **SECTION 2**

### **S&T Education Praxis**

*(Fourth Floor, Room 205, Library of Siauliai University, Vytauto Street 84, Šiauliai)*

*Chairman: **Andris Broks***

1. **Karol Dudek, Paweł Bernard, Ewa Odrowąż**. *First steps in assessment of students- inquiry - case study of non-experienced chemistry teacher* (Jagiellonian University, Poland)
2. **Āris Kaksis, Agnese Brangule, Mihails Halitovs**. *An approach to teaching medical chemistry that highlights interdisciplinary nature of science* (Rīga Stradiņš University, Latvia)
3. **Denis M. Zhilin, Marina Tokareva**. *Chemistry of paintings or how to involve 8-10 y.o. children for a two-hour session without breaks* (Moscow, Russia)
4. **Marcelo Gouveia Nascimento, Gabriel Nicolas Garcia Alves, Marco Antonio Bueno Filho, Rodrigo Luiz Oliveira Rodrigues Cunha**. *A flash of construction schemes collective in the classroom involving the field structural molecular* (Federal University of ABC, Brazil)

12:30-14.30



LUNCH

14:30 -16:30

## SECTION 1

### General S&T Education Issues

(Fourth Floor, Room 412, Library of Siauliai University, Vytauto Street 84, Šiauliai)

Chairman: **Josef Trna**

1. **Andrej Flogie, Kosta Dolenc, Boris Aberšek.** *Transdisciplinarity in education is near* (University of Maribor, Slovenia)
2. **Parvin Bazghandi, Saeid Zarghami-Hamrah, Yahya Ghaedi, Alireza Mahmudnia, Khosrow Bagheri Noaparast.** *Theoretical investigation of the implications of complex systems theory for teaching science* (Kharazmi University, Tehran, Iran)
3. **Aysan Şentürk.** *Designing a blended learning environment to support self-directed and self-regulated learning* (Uludag University, Bursa, Turkey)
4. **Mateja Ploj Vrtič, Kosta Dolenc.** *Evaluating the potentials of ICT integration in teaching with the aim of intentionally developing competencies for the 21st century in pupils* (University of Maribor, Slovenia)
5. **Rita Birzina, Dagnija Cedere.** *The 1st year students' readiness for studies: The case of the faculty of biology at University of Latvia* (University of Latvia, Latvia)

Discussion

14:30 -16:30

## SECTION 2

### S&T Education Praxis

(Fourth Floor, Room 205, Library of Siauliai University, Vytauto Street 84, Šiauliai)

Chairman: **Andris Broks**

1. **Irina Kazuša.** *Usage of critical thinking principles in medical chemistry course* (Rīga Stradiņš University, Latvia)
2. **Inese Dudareva, Dace Namsonē, Liga Cakane.** *The use of ICT in the science lessons: Experience from Latvia* (University of Latvia, Latvia)
3. **Tamara Brice.** *The Importance of Creative Tasks in Physics Lessons* (Ogres gymnasium, 41 high school, Latvia)
4. **Sergei V.Teleshov, Elena V.Teleshova.** *Chemical experiment which was seen and carried out by gymnasium students, realists and cadets* (Saint-Petersburg, Russia)
5. **Władysław Błasiak, Paweł Kazubowski, Roman Rosiek, Mirosława Sajka.** *The usefulness of physics formulas in the opinion of students. An eyetracking study* (Pedagogical University of Cracow, Poland)

Discussion

18:00-21.00



SYMPOSIUM DINNER

## Thursday

### ICT in S&T Education

(Room 416, Faculty of Education, University of Šiauliai P. Višinskio Street 25)

Chairman: **Andris Broks**

**09:00-10:30**

1. **Juris Porozovs, Anita Migleniece, Daina Voita, Alvis Valdemiers.** *The implementation of information and communication technologies in schools of Latvia* (Riga Teacher Training and Educational Management Academy, Latvia)
2. **Sedat Yüksel, Mestan Boyaci.** *Examining effect of animation applications on student achievement in science and technology course* (Uludag University, Bursa, Turkey)
3. **Dzintars Tomsons, Inta Znotiņa.** *Development of computer-based educational game across computer science curriculum* (Liepāja University, Latvia)
4. **Adem Uzun.** *Innovation skill development potential of teaching programming to children in the context of the STEM education* (Uludag University, Bursa, Turkey)
5. **Aliya Bukusheva.** *The study of computational geometry in the system mathematica* (Saratov State University, Russia)
6. **Hanna Tryfanava.** *Mobile application Socratic in improving of student progress* (Belarusian State University, Belarus)

**10:30-11:00**



**COFFEE BREAK**

**11:00-12:00**

### ROUND TABLE

#### S&T Education Challenges and Insights

(Room 416, Faculty of Education, University of Šiauliai P. Višinskio Street 25)

Chairman: **Vincentas Lamanauskas, Erika Masiliauskienė, Rolandas Paulauskas**

Discussion related to scientific research, international cooperation and other relevant issues.

**12:00-12:30**

### SYMPOSIUM CLOSING

(Room 416, Faculty of Education, University of Šiauliai P. Višinskio Street 25)

---

#### MAIN SPONSORS

Scientific Methodical Centre “Scientia Educologica” & Scientia Socialis, Lithuania

---