



SMC
“SCIENTIA EDUCOLOGICA”

Symposium Partners



6th International Baltic Symposium on Science and Technology Education
BalticSTE2025

**“SCIENCE AND TECHNOLOGY EDUCATION:
EXPECTATIONS AND EXPERIENCES”**

16-19 June 2025

SYMPOSIUM PROGRAMME



Šiauliai, Lithuania

Symposium Organizer

Scientific Methodical Center „Scientia Educologica“, Lithuania

Organizing Committee

Chairman

Prof. dr. Vincentas Lamanauskas, *Vilnius University & SMC „Scientia Educologica“, Lithuania*

Members

Assoc. Prof. Dalia Augienė, *SMC „Scientia Educologica“, Lithuania*

Jūratė Kiškienė, *Šiauliai Technology Training Centre, Lithuania*

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Scientific Committee

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Prof. Dr. Martin Bilek, *Charles University, Czech Republic*

Prof. Dr. Andris Broks, *University of Latvia, Latvia*

Prof. Dr. Solange W. Locatelli, *Federal University of ABC, Brazil*

Prof. Dr. Paolo Bussotti, *University of Udine, Italy*

Prof. Dr. Muammer Çalik, *Trabzon University, Turkey*

Prof. Dr. Metka Kordigel Aberšek, *University of Maribor, Slovenia*

Prof. Dr. Vincentas Lamanauskas, *Vilnius University, Lithuania*

Prof. Dr. Daiva Malinauskienė, *Vilnius University, Lithuania*

Dr. Laima Railienė, *SMC „Scientia Educologica“, Lithuania*

Dr. Lukaš Richterek, *Palacky University, Czech Republic*

Dr. Uladzimir Slabin, *University of Oregon, USA*

Symposium Website & E-mail

<http://balticste.com> balticste@gmail.com

Sunday
15th June 2025

17.30 - 20.30

ICE-BREAKING
(Individual activity)

Monday
16th June 2025

8:00 - 9:30

REGISTRATION
(First Floor, Šiauliai Technology Training Centre, Vilniaus Street 27)

9:30-10:00

OPENING CEREMONY
(First Floor, Šiauliai Technology Training Centre, Vilniaus Street 27)

Musical Greeting
Vicemayor of Šiauliai Municipality **Justinas Švegžda**
Director of Šiauliai Technology Training Centre **Jolita Vengrė**
Head of the ŠTTC Division **Reda Valiukienė**
Symposium Chair **Prof. dr. Vincentas Lamanauskas**

10:00-12:00

PLENARY MEETING 1
(Second Floor, Šiauliai Technology Training Centre, Vilniaus Street 27)
Chairmen: **Tiia Rүүtmann, Vincentas Lamanauskas**

1. **Gražina Šmitienė.** Engineering in primary education: Challenges and opportunities (*Klaipėda University, Lithuania*)
2. **Lukaš Richterek.** Supporting physics and science education with ICT tools (*Palacky University, Czech Republic*)

12:00-13:30



LUNCH

13:30-14:30

PLENARY MEETING 2
(Second Floor, Šiauliai Technology Training Centre, Vilniaus Street 27)
Chairmen: **Angela James, Boris Aberšek**

Katarzyna Potyrala. Digital literacy in the light of the pedagogy of change (*Cracow University of Technology, Poland*)

14:30-15:00



COFFEE BREAK

15:00-17:00

WORKSHOP 1

Computational Thinking and Coding Skills

(Second Floor, Šiauliai Technology Training Centre, Vilniaus Street 27)

Chairmen: *Angela James*

Stamatios Papadakis. Computational thinking and coding skills in early childhood education and care (ECEC) (*University of Crete, Greece*)

17:00-18:00

SECTION 1

General S&T Education Issues

(Second Floor, Šiauliai Technology Training Centre, Vilniaus Street 27)

Chairmen: *Angela James, Metka Kordigel Aberšek*

1. **Tiia Rüütmann.** Generating curricula: A human-centred perspective in the era of artificial intelligence (*Tallinn University of Technology, Estonia*)
2. **Aušrinė Raudoniūtė.** Science education for students with specific learning and attention disorders: An evaluation of reading strategies using eye-tracking technology (*Kaunas University of Technology, Lithuania*)

POSTER PRESENTATIONS

(Second Floor, Šiauliai Technology Training Centre, Vilniaus Street 27)

1. **Paweł Bernard.** Bridging the gap: University laboratory visits as a catalyst for chemistry interest among secondary school students (*Jagiellonian University, Poland*)
2. **Beata Jancarz-Lanczkowska, Marta Koplejewska.** E-therapy as a form of developmental support for children with ASD (*Cracow University of Technology, Poland*)
3. **Maria Babinčakova.** Exploring cognitive load in chemistry learning: A pilot study of immersive and traditional methods (*Jagiellonian University, Poland*)
4. **Lina Mišeikienė.** Light control processes in photography education (*Šiauliai Technology Training Centre, Lithuania*)
5. **Aistė Grajauskienė, Rasa Mockienė.** A STEAM project on the weight lifting of a plant (*Šiauliai Technology Training Centre, Lithuania*)

Tuesday

17th June 2025

07:30 —
18:30/19.00



**OUTDOOR
WORKSHOP/EXCURSION**
Science & Technology EDUCATION

Wednesday
18th June 2025

08:00-9:00

PLENARY MEETING 3

(Second Floor, Šiauliai Technology Training Centre, Vilniaus Street 27)

*Chairmen: **Metka Kordigel Aberšek**, **Martin Bilek***

Muammer Calik. Effectiveness of socio-scientific issues-based science teaching in promoting scientific literacy (*Trabzon University, Türkiye*)

9:00-9:30



COFFEE BREAK

9:30-11:00

SECTION 2

General S&T Education Issues

(Second Floor, Šiauliai Technology Training Centre, Vilniaus Street 27)

*Chairmen: **Angela James**, **Metka Kordigel Aberšek***

1. **Maja Kerneža.** Metacognitive strategies for reading scientific and sustainability-related content in digital and print media (*University of Maribor, Slovenia*)
2. **Elina Neilande, Jelena Kosmaca, Tija Sile.** Developing learning materials in physics and programming towards high-level Digital skills (*University of Latvia, Latvia*)
3. **Slindokuhle Mbotho, Caitlin Govender, Angela James.** Foundation phase preservice teachers' expectations of engaging in an education for sustainable development collaborative online international learning programme (*University of KwaZulu-Natal, South Africa*)

11:00-12:00

WORKSHOP 2

(Šiauliai Technology Training Centre, Vilniaus Street 27, Šiauliai)

*Chairmen: **Reda Valiukienė**, **Jūratė Kiškienė***

Nelda Šutaitė, Eglė Saročkienė. Making of Traditional/Folk Lithuanian Straw Gardens (*Šiauliai Technology Training Centre, Lithuania*)

Discover the ancient Baltic tradition of making *sodai* – delicate geometric ornaments crafted from straw. In this hands-on workshop, you will learn the cultural significance, symbolism, and techniques behind these traditional Lithuanian folk art forms. No prior experience needed – just patience, creativity, and a connection to heritage.

12:00-13.00



LUNCH

13:00-14:30

PLENARY MEETING 4

(Second Floor, Šiauliai Technology Training Centre, Vilniaus Street 27)

*Chairmen: **Metka Kordigel Aberšek**, **Martin Bilek***

1. **Paolo Bussotti.** The concept of force: An educational itinerary with historical support (*University of Udine, Italy*)
2. **Stamatios Papadakis.** Reimagining preschool pedagogy: AI-enhanced teaching through multiliteracies-informed curriculum innovation (*University of Crete, Greece*)

14:30-15:00



COFFEE BREAK

15:00-16:00

SECTION 3

General S&T Education Issues

(Second Floor, Šiauliai Technology Training Centre, Vilniaus Street 27)

Chairmen: **Metka Kordigel Aberšek, Jelena Kosmaca**

1. **Martin Bílek, Karel Kolář, Monika Pelikánová.** A STEM approach to standard science curriculum topics: Chemical reactions as a typical example (*Charles University, Czech Republic*)
2. **Rita Birzina, Daiga Kalnina, Sandra Kalnina.** Development of the content of the "Biology I" set of methodological materials for a competence-based approach to secondary school biology (*University of Latvia, Latvia*)
3. **Daiga Kalnina, Ludmila Belogradova, Ilva Cinite, Inese Dudareva, Jelena Kosmaca.** Physics teacher strategies for blended learning with Khan Academy (*University of Latvia, Latvia*)

Discussion

16:30-17:30

Visit to the lower-secondary school (progymnasium) in Šiauliai

18:00-21.00



SYMPOSIUM DINNER
(Naisiai Village)

Thursday

19th June 2025

08:00-9:00

SECTION 4

General S&T Education Issues

(Second Floor, Šiauliai Technology Training Centre, Vilniaus Street 27)

Chairmen: **Narendra D. Deshmukh, Jelena Kosmaca**

1. **Narendra D. Deshmukh, Sandhya A. Thakur.** Integrating multimodal teaching strategies into STEM education: Reflections from pre-service and in-service teacher workshop experiences
2. **Arto Mutanen, Antti Rissanen, Kalle Saastamoinen.** Bridging disciplines: The role of mathematical reasoning in interdisciplinary inquiry
3. **Angela James, Cecile Gerwel Proches, Macdonald Kanyangale, Valentina Dagienė, Eglė Jasutė, Roger Waldeck.** The role of leadership in curriculum transformation: Implications for science, technology, engineering, arts and mathematics in higher education

Discussion

9:00-9:30



COFFEE BREAK

9:30-11:00

WORKSHOP 3

(Šiauliai Technology Training Centre, Vilniaus Street 27, Šiauliai)

Chairmen: **Vincentas Lamanuskas, Reda Valiukienė**

Angela James, Cecile Gerwel Proches, Macdonald Kanyangale. Facilitating stakeholder engagement in curriculum transformation (*University of KwaZulu-Natal, South Africa*)



Discussion

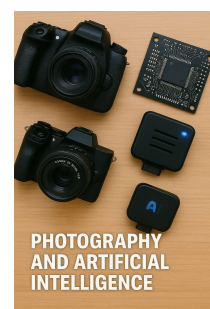
11:00-12:00

WORKSHOP 4

(Šiauliai Technology Training Centre, Vilniaus Street 27, Šiauliai)

Chairmen: **Reda Valiukienė, Jūratė Kiškienė**

Renata Chvoinkovienė, Jolita Balčiūnienė. Exploring the Intersection of Photography and Artificial Intelligence (*Šiauliai Technology Training Centre, Lithuania*)



This hands-on session will take place during a scientific symposium where participants will engage with photography and artificial intelligence. Blending traditional DSLR use with digital innovation, the workshop will encourage exploration of how AI will reshape the way we capture, analyze, and interpret visual narratives.

12:00-13:00



LUNCH

13:00-15:00

SECTION 5

General S&T Education Issues

(Second Floor, Šiauliai Technology Training Centre, Vilniaus Street 27)

Chairmen: **Jelena Kosmaca, Lukaš Richterek**

1. **Uladzimir K. Slabin.** Landolt tables in primo Levi's "Best is water" for value-based chemical education (*University of Oregon, USA*) /online/
2. **Peter Demkanin.** Physics within STEM education: Expectations (*Comenius University, Slovakia*) /online/
3. **Kuo-Hung Huang.** AI in education: Promotion in Taiwan (*National Chiayi University, Taiwan*) /online/
4. **Solange Locatelli.** Bridging the submicroscopic gap: Student drawings, inquiry-based learning, and metacognition in chemistry (*Federal University of ABC, Brazil*) /online/.
5. **Vincentas Lamanuskas.** Position of preservice preschool and primary school teachers on the use of AI in the study process (Vilnius University, Lithuania)

15.00 – 15.30

SYMPOSIUM CLOSING

(Šiauliai Technology Training Centre, Vilniaus Street 27, Šiauliai)

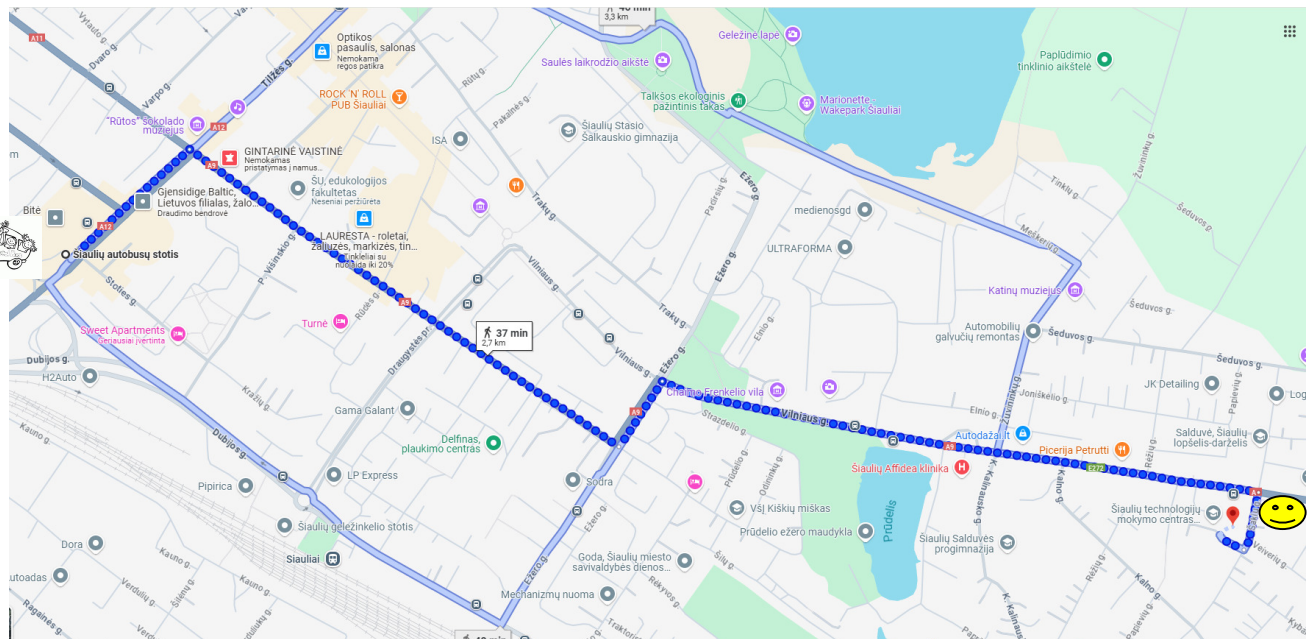
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- Bus station/Sun City

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