



PEDAGOGICAL  
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# Conference

## RESEARCH IN DIDACTICS OF THE SCIENCES – DIDSCI 2023

**June 26<sup>th</sup> to 28<sup>th</sup> 2023**

conference venue - street Jęczmienna 9, Kraków

### **26<sup>th</sup> June 2023 Monday**

13:00 Opening ceremony

13:30 - 14:15 Plenary Lecture 1 (Ang) - Chairman: Lamanauskas Vincentas

*What can we built on in the initial pre-service chemistry teacher training?* Rusek Martin, Bártová Iveta, Koperová Dominika, Machková Veronika, Sirotek Vladimír, Šmejkal Petr, Štrofová Jitka

14:15 - 14:30 Coffee break

14:30 - 16:30 Session 1 (Ang) - Chairman: Bębas Piotr

- *Changes in students' behavior and performance in chemistry calculation tasks on e-learning platforms during and after the COVID-19 pandemic: an updated analysis.* Andrejs Zaichenko, Martin Bilek, Mihails Gorskis
- *Antecedents of the perceived usefulness of an online learning platform during the pandemic.* Lamanauskas Vincentas, Pribeanu Costin
- *USB-microscope in chemistry and geology – a toy for geeks or a teaching aid?* Šmejkal Petr, Kopecký Ondřej, Stratilová Urválková Eva
- *STEM education and education for sustainable development through the escape game coally stone.* Václavíková Zuzana, Smolka Pavel, Maršálek Roman, Trčková Kateřina, Žáček Martin



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- *Skittles candies in teaching the polarity of substances or separation methods.* Petrželová Simona, Boguschová Veronika
- *The International Perspective on Out-of-School Science Education – The Project DOSLECTEP.* Martin Bílek, Martin Rusek, Vesna Milanović, Ahmet İlhan Şen, Tugba Yüksel, Özlem Oktay, İbrahim Delen, Marek Skoršepa, Jarmila Kmet'ová, Martin Lindner, Florian Woithe
- (on-line) *Opportunities and obstacles of integrated teaching from teachers' point of view.* Dobečková Markéta, Kričfaluši Dana

16:30 - 17:00 Coffee break

17:00 - 18:00 Poster session - Chairwoman: Nodzyńska-Moroń Małgorzata

- *Threat prevention and behavior in the face of danger - key skills of the 21<sup>st</sup> century.* Chrzanowski Marcin M., Siporska Agnieszka, Nodzyńska-Moroń Małgorzata, Suszczyńska Agnieszka
- *Teaching the subject Applied Chemistry using flipped classroom method.* Cídllová Hana, Horská Jana
- *Dyslexia and chemistry teaching.* Cídllová Hana, Měcháčková Lucie, Bayerová Anna
- *The effect of attractiveness of fish on people's willingness to protect them.* Fančovičová Jana, Todáková Simona, Lešková Andrea
- *pH and Outdoor Education - the Example of the Hromnice Lake and the Kladská Peat Bog.* Hrdlička Jan, Šrámová Alena
- *Perspectives of pre-service and in-service teachers and teacher educators towards out-of-school learning.* Kmet'ová Jarmila, Skoršepa Marek, Jurečková Miroslava
- *Out-of-school learning and students' motivation.* Kmet'ová Jarmila, Skoršepa Marek, Şen Ahmet İlhan
- *Development of algorithmic thinking through mathematical tasks.* Konečná Petra, Bezouška Tomáš, Žáček Martin
- *Adapting inquiry-based science for distance education.* Kotul'áková Katarína, Orolínová Mária, Frišták Vladimír, Held Ľubomír, Kolarovič Andrej, Pipiška Martin
- *The use of green chemistry in experimental teaching.* Krutinová Eliška, Nodzyńska-Moroń Małgorzata
- *Kitchen as home laboratory – interdisciplinary project for primary school.* Krzeczowska Małgorzata, Augustynovič Āgata



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- *Do we need knowledge of chemistry in everyday life?* Nodzyńska-Moroń Małgorzata
- *Why do we teach chemistry? - considerations of future teachers.* Nodzyńska-Moroń Małgorzata, Bočková Vanessa, Flosman Petr, Holá Lucie, Hrušková Viola, Míka Jan, Milka Dominik, Papež Vojtěch, Pátý Jiří, Siblíková Tereza, Sloup Dominik, Zimanová Kamila
- *Slovak journalism in service of science communication.* Orolínová Mária, Kotuláková Katarína
- *Pass rate of students of Chemistry teaching at final state exam: Case study analysing influences of success rate of students with stress on distance learning during Covid-19 pandemic.* Pospíšil Patrik, Švandová Veronika, Literák Jaromír
- *Water pH and organisms.* Sirotek Vladimír, Chocholoušková Zdeňka, Duras Jindřich
- *Students' skills and knowledge of pH at the different types of schools.* Sirotek Vladimír, Štrofová Jitka, Svitáková Johana, Klečka Milan
- *Designing activities for social environments and nature conservation.* Socha Katarzyna
- *Students' knowledge about health and safety on the basis of a micro-examination - a student project.* Socha Katarzyna, Bębas Piotr, Chrzanowski Marcin M., Siporska Agnieszka, Suszczyńska Agnieszka
- *pH and outdoor education - limestone and shale Beroun.* Šrámová Alena, Hrdlička Jan
- *Teaching carbohydrates in lower secondary school using the TASC method.* Šrámová, Alena, Hrdlička, Jan; Svitáková, Johana
- *Monitoring aquatic environment in an aquarium and chemistry teaching.* Štrofová Jitka, Rychtera Jiří, Sirotek Vladimír
- *My friend Alzheimer.* Svitáková Johana, Šrámová Alena
- *Graduate profile and study plan for a new professionally oriented study program "Chemical Laboratory Technician - specialist.* Vargová Zuzana, Almáši Miroslav, Rendošová Michaela, Oriňáková Renáta, Hamuláková Slávka, Víglaský Viktor, Šandrejová Jana, Ganajová Mária, Dinajová Jana, Burčák Milan, Danielovič Igor, Chomča Igor, Marcinov Peter
- *Modelling Chemical Equilibrium.* Vavra Martin, Sotáková Ivana, Ganajová Mária
- *Readiness of the Czech school environment for the implementation of the Computational thinking principle.* Žáček Martin, Smolka Pavel



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**27<sup>th</sup> June 2023 Tuesday**

9:30 - 10:15 Plenary Lecture 2 (Ang) - Chairman: Rusek Martin

*HomeLab - chemistry experiments at home?* Stratilová Urválková Eva

10:15 - 10:45 Coffee break

10:45 - 12:30 Session 2 (Ang/mix) - Chairman: Šmejkal Petr

- *(on-line) TLC in the experimental preparation of future chemistry teachers.* Richtr Václav, Váňová Anna, Žemlička Matěj
- *Sustainability in the eyes of students and academic teachers of the Institute of Biology of the Pedagogical University in Krakow.* Mikołajczyk Justyna, Nodzyńska-Moroń Małgorzata
- *Well-performing students and their motivation to study chemistry.* Hrubeš Jan, Petrželová Simona
- *Formative assessment supported by the "Digilib" digital library.* Ganajová Mária, Sotáková Ivana, Čtrnáctová Hana
- *Education in the media.* Baprowska Anna
- *Social (anti)education of dog owners.* Ślósarz Anna

12:30 -13:30 Lunch break

13:30 - 15:15 Session 3 - Chairwoman: Ślósarz Anna

- *(on-line) The use of VR in chemistry education.* Turčová Adéla, Nam Daniel, Sirotek Vladimír, Nodzyńska-Moroń Małgorzata
- *Testing chemical tasks on the LMS Moodle platform.* Trčková Kateřina, Maršálek Roman, Václavíková Zuzana
- *Excursion as an important aspect in the preparation of future chemistry teachers.* Hrdlicka Jan, Sramova Alena, Mrákota Vít, Klecka Milan
- *Motivation of teacher study students to prepare for a profession or else a foreign didactic internship.* Sirotek Vladimír, Rychtera Jiří, Šrámová Alena, Kokoška Mila
- *Students' knowledge regarding air pollution and the role of multimedia in changing attitudes.* Lewandowska Agnieszka, Nodzyńska-Moroń Małgorzata
- *(on-line) Pupils, climate and microworld in the light of international research PISA and TIMMS.* Ściślewska Patrycja, Ostrowska E. Barbara, Chrzanowski Marcin M., Siporska Agnieszka, Suszczyńska Agnieszka



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15:15 - 15:45 Coffee break

15:45 - 17:30 Session 4 - Chairwoman: Ganajová Mária

- *(on-line) Innovative strategies for the assessment of geology in secondary education.* Lešková Andrea, Andraščíková Ivana, Mišianiková Anna, Fančovičová Jana
- *Of students and chemistry calculations: Results of three waves of research among Czech freshman chemistry teacher students.* Rusek Martin, Bártová Iveta, Koperová Dominika, Machková Veronika, Sirotek Vladimír, Šmejkal Petr, Štrofová Jitka
- *Matter and energy - what do preschool teachers know about it?* Siporska Agnieszka, Chrzanowski Marcin M., Nodzyńska-Moroń Małgorzata
- *Escape games in the teaching of chemistry. Mini review.* Roman Maršálek, Kateřina Trčková, Zuzana Václavíková
- *Students' knowledge of general waste segregation and the role of multimedia in changing the approach.* Rozbicka Aleksandra, Nodzyńska-Moroń Małgorzata
- *(on-line) Testing the pH of water and aqueous solutions.* Štrofová Jitka, Klečka Milan, Šátavová Simona

19:30 Conference dinner



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**28<sup>th</sup> June 2023 Wednesday**

9:30 - 10:15 Plenary Lecture 3 (Ang) - Chairman: Walosik Alicja

*What is the appropriate methodology for Generation Z education?* Holubova Renata

10:15 - 10:45 Coffee break

10:45 - 11:45 WORKSHOP Chairman: Marcin M. Chrzanowski

*What do you know about radioactivity and matter - how to build a good test?* Marcin M. Chrzanowski, Agnieszka Siporska, Małgorzata Nodzyńska-Moroń, Vladimír Sirotek, Piotr Bębas, Aaron Schirmer, Patrycja Ściślewska

11:45 - 12:15 Coffee break

12:15 - 13:30 Session 5 - Chairman: Cieśla Paweł

- *(on-line) Reflective future teacher and some challenges and needs in chemistry lesson preparation.* Augustinovič Agata, Krzeczowska Małgorzata
- *A strategy for learning biology using models, using the human skeletal system as an example.* Kopek-Putała Wioleta, Nodzyńska-Moroń Małgorzata
- *Support algorithmic learning with GeoGebra tools.* Vera Ferdianova
- *The use of 3D printing technology in primary school in the light of the research.* Cieśla Paweł, Wierzbicka Kinga, Walosik Alicja
- *Artificial intelligence in the teacher's work.* Małgorzata Nodzyńska-Moroń

13:30 The official end of the conference