



# 4th World Conference on Physics Education 2024, Kraków, Poland

## Tuesday 27 August 2024

### **Workshop: HYBRID W-PTE-2. Physics Teacher Education and Professional Learning - Large Lecture Hall A (11:30 - 13:00)**

-Conveners: Marilu Chiofalo

time	[id] title	presenter
11:30	[245] School-University Collaboration and Teachers' Professional Development	CHIOFALO, Marilu

### **Workshop: W-EPW-1. Experiments and Practical Work in Physics Education - Conference Room (11:30 - 13:00)**

-Conveners: Mirela Kaczmarek

time	[id] title	presenter
11:30	[299] Catch the Balance: DIY toys for inquiry physics	KACZMAREK, Mirela

### **Workshop: W-MDR-1. Contemporary Physics, Modern Physics in Schools and Universities - Exhibition Room B (11:30 - 13:00)**

-Conveners: Joao Pereira

time	[id] title	presenter
11:30	[108] Using MACROBITS to illustrate the logic of quantum cryptography protocols	PEREIRA, Joao

### **Workshop: W-MMP-1. Multimedia, AR, VR and AI in Physics Education - Exhibition Room A (11:30 - 13:00)**

-Conveners: David Sokoloff

time	[id] title	presenter
11:30	[15] Engaging Students in Class and Virtually with Interactive Lecture Demonstrations (ILDs)	SOKOLOFF, David

### **Workshop: W-PTE-1. Physics Teacher Education and Professional Learning - Small Hall (11:30 - 13:00)**

-Conveners: Wouter Spaan

time	[id] title	presenter
11:30	[113] Thinking-Back-and-Forth in Practical Work	SPAAN, Wouter

## Wednesday 28 August 2024

### **Workshop: W-EPW-2. Experiments and Practical Work in Physics Education - Conference Room (11:30 - 13:00)**

-Conveners: Michael Holik

time	[id] title	presenter
11:30	[252] Pixel detector based particle camera as a motivation tool for practical physics education demonstrating properties of radiation and elementary particles in a comprehensible way	Dr HOLIK, Michael VÍCHA, Vladimír

### **Workshop: W-EPW-3. Experiments and Practical Work in Physics Education - Exhibition Room A (11:30 - 13:00)**

-Conveners: Mojca Čepič

time	[id] title	presenter
11:30	[159] Floating and Melting of Ice in Oil	ČEPIČ, Mojca

### **Workshop: W-EPW-4. Experiments and Practical Work in Physics Education - Exhibition Room B (11:30 - 13:00)**

-Conveners: Leoš Dvořák

time	[id] title	presenter
11:30	[7] "Tuneable" levitating pencil	DVOŘÁK, Leoš

### **Workshop: W-PTE-3. Physics Teacher Education and Professional Learning - Small Hall (11:30 - 13:00)**

-Conveners: Sebastian Schellhammer

time	[id] title	presenter
11:30	[223] Shaping physics teacher education together: How to successfully connect didactics and scientific discipline?	Dr SCHELLHAMMER, Sebastian

# Thursday 29 August 2024

## **Workshop: W-EAD-1. Evaluation and Assessment of Student Learning and Development - Medium Lecture Hall A (11:30 - 13:00)**

-Conveners: Věra Koudelková

time	[id] title	presenter
11:30	[214] Formative approach in physics education	KOUDELKOVÁ, Věra

## **Workshop: W-EPW-5. Experiments and Practical Work in Physics Education - Exhibition Room B (11:30 - 13:00)**

-Conveners: Marian Kires

time	[id] title	presenter
11:30	[250] Exploring Thermoelectric Phenomena by the method of Blended Learning	KIRES, Marian JUHASOVA, Antonia

## **Workshop: W-EPW-6. Experiments and Practical Work in Physics Education - Large Lecture Hall B (11:30 - 13:00)**

-Conveners: Shachar Bublil

time	[id] title	presenter
11:30	[140] Methods for addressing strengths and weaknesses of the rubber sheet analogy	BOUBLIL, Shachar

## **Workshop: W-EPW-7. Experiments and Practical Work in Physics Education TEACHER CONTRIBUTION - Conference Room (11:30 - 13:00)**

-Conveners: Malgorzata Szymura

time	[id] title	presenter
11:30	[327] Outer space in the classroom... – how to introduce astronomical phenomena in physics lessons?	SZYMURA, Malgorzata

## **Workshop: W-PSI-1. Physics for Environment and Social issues - Medium Lecture Hall B (11:30 - 13:00)**

-Conveners: Thomas Schubatzky; Sarah Wildbichler

time	[id] title	presenter
11:30	[28] "Tutorials in Climate Change": Teaching scientific concepts underlying climate change	WILDBICHLER, Sarah SCHUBATZKY, Thomas

## **Workshop: W-PTE-4. Physics Teacher Education and Professional Learning - Exhibition Room A (11:30 - 13:00)**

-Conveners: Smadar Levy

time	[id] title	presenter
11:30	[46] Physics Cards Games - What's New? From "Newton's Laws" to the challenges identified in a large-scale implementation	LEVY, Smadar

## **Workshop: W-EPW-8. Experiments and Practical Work in Physics Education - Exhibition Room A (15:30 - 17:00)**

**-Conveners: Irena Dvořáková**

time	[id] title	presenter
15:30	[32] Measuring time - from sundials to exploring the pendulum	DVOŘÁKOVÁ, Irena

**Workshop: W-EPW-9. Experiments and Practical Work in Physics Education TEACHER CONTRIBUTION - Conference Room (15:30 - 17:00)**

**-Conveners: Dobromiła Szczepaniak**

time	[id] title	presenter
15:30	[300] The IYPT Ideas in Daily Teaching and Learning	SZCZEPANIAK, Dobromiła

**Workshop: W-IBP-1. Identity and Belonging in Physics - Medium Lecture Hall A (15:30 - 17:00)**

**-Conveners: Michael Wittmann**

time	[id] title	presenter
15:30	[175] Using the EP3 Guide to Address Concerns with Low Enrolments in Physics Departments	WITTMANN, Michael

**Workshop: W-MDR-2. Contemporary Physics, Modern Physics in Schools and Universities - Large Lecture Hall B (15:30 - 17:00)**

**-Conveners: Maria Bondani**

time	[id] title	presenter
15:30	[174] QTris: a new game for teaching quantum physics	BONDANI, Maria

**Workshop: W-MMP-2. Multimedia, AR, VR and AI in Physics Education - Exhibition Room B (15:30 - 17:00)**

**-Conveners: Paul Alstein**

time	[id] title	presenter
15:30	[101] Hands-on with Relativity Lab: a simulation environment for special relativity in secondary education	ALSTEIN, Paul

**Workshop: W-PTE-1. HYBRID Physics Teacher Education and Professional Learning - Large Lecture Hall A (15:30 - 17:00)**

**-Conveners: Lorenzo Santi**

time	[id] title	presenter
15:30	[221] Innovation in Teaching/learning physics in Master IDIFO	SANTI, Lorenzo

**Workshop: W-TLP-1. Teaching and Learning Physics Concepts - Seminar Room (15:30 - 17:00)**

**-Conveners: Katarína Kozelková; Zuzana Jeskova**

time	[id] title	presenter
15:30	[165] Empowering learning through dynamic modelling activities to enhance physics education	KOZELKOVÁ, Katarína JESKOVA, Zuzana

## Friday 30 August 2024

### **Workshop: W-CPE-1. Competence-based physics education - Conference Room (09:30 - 11:00)**

-Conveners: Gerald Feldman; Guillaume Schiltz

time	[id] title	presenter
09:30	[77] Creating a Student-Centered Collaborative Learning Environment in a University Physics Classroom	FELDMAN, Gerald SCHILTZ, Guillaume

### **Workshop: W-EPW-10. Experiments and Practical Work in Physics Education - Seminar Room (09:30 - 11:00)**

-Conveners: Dagmara Sokołowska

time	[id] title	presenter
09:30	[289] Indians, bells and whistling bottles - an inquiry-based learning unit for enhancing students' motivation, creativity and empirical skills	SOKOŁOWSKA, Dagmara

### **Workshop: W-PTE-5. Physics Teacher Education and Professional Learning - Small Hall (09:30 - 11:00)**

-Conveners: Joan BORG MARKS

time	[id] title	presenter
09:30	[199] An overview of the outcomes of the GIREP Malta Webinars 2020 and 2021	BORG MARKS, Joan