## 25<sup>th</sup> International Workshop on Multimedia in Physics Teaching and Learning, 8 – 10 Sept. 2022

8 September 2022, Thursday				
12:00 - 12:30	Opening ceremony Speakers: Tomasz Greczyło, Lars-Jochen Thoms, Michał Tomczak Dean of Faculty of Physics and Astronomy		60 (1 <sup>st</sup> floor) 164 (2 <sup>nd</sup> floor)	
12:30 - 14:00	Keynote (chairperson: Lars-Jochen Thoms)  Digital Competences and Physics Education – Perspectives for Classroom  Practice and Teacher Education  Speaker: Andréas Mueller		60 (1 <sup>st</sup> floor) 164 (2 <sup>nd</sup> floor)	
14:00 - 14:45	Lunch		119 (2 <sup>nd</sup> floor)	
14:45 - 16:15	Workshops I			
	I.1 (room 320, 4 <sup>th</sup> floor)  Thermal Imaging Camera in Physics Hands- On Experiments  Leader: Petr Kácovský	I.2 (room 511, 6 <sup>th</sup> floor) Using Low-Cost and Standalone Virtual and Augmented Reality Headsets to Teach and Learn Motion Concepts Leader: Tommaso Rosi		
16:15 - 16:45	Coffee break		119 (2 <sup>nd</sup> floor)	
16:45 - 17:45	Poster presentations Presenters: Petr Kácovský, Zdeňka Koupilová, Robert Teese, Ralf Widenhorn		hall 2 <sup>st</sup> floor	

9 September 2022, Friday					
9:00 - 10:30	Keynote Using phyphox for innovative teaching-learning Speaker: Jens Noritzsch	(chairperson: Tomasz Greczyło)	60 (1 <sup>st</sup> floor) 164 (2 <sup>nd</sup> floor)		
10:30 - 11:00	Coffee break		119 (2 <sup>nd</sup> floor)		
11:00 - 12:00	Workshops II Using Phyphox for Innovative Teaching-Learning Situtations in Physics Leader: Jens Noritzsch		320 (4 <sup>th</sup> floor)		
12:00 - 12:30	Coffee break		119 (2 <sup>nd</sup> floor)		
12:30 - 13:30	Presentations I Speakers: Ralf Widenhorn - Using a 3D Camera and a Local Positioning System in Physics Instruction Lars-Jochen Thoms - Simple experiments to observe and analyse Haidinger's brush with a smartphone		60 (1st floor) 164 (2nd floor)		
13:30 - 14:30	Lunch		119 (2 <sup>nd</sup> floor)		
14:30 - 16:00	Keynote Compute shaders in physics education Speaker: Maciej Matyka	(chairperson: Robert Bryl)	60 (1 <sup>st</sup> floor) 164 (2 <sup>nd</sup> floor)		
16:00 - 16:30	Coffee break		119 (2 <sup>nd</sup> floor)		
16:30 - 18:00	Workshops II				
	II.1 (room 320, 4 <sup>th</sup> floor)  Student Laboratory for Conductivity — a  Low-Cost, Easy and Fun Project for Students  Leader: Dorottya Schnider	II.2 (room 511, 6 <sup>th</sup> floor) Imaging in Physics Education and in Science Popularization: an Introductive Workshop Leader: Peppino Sapia			
19:00	Workshop dinner	Rynek 5, 50	Dwór Polski -106 Wrocław polski.wroclaw.pl		



## 25<sup>th</sup> International Workshop on Multimedia in Physics Teaching and Learning, 8 – 10 Sept. 2022

10 September 2022, Saturday				
10:00 - 11:30	Keynote (chairperson: Ewa Dębowska)  How Computers Improve Physics Teaching Through Interactive  Engagement  Speaker: Wolfgang Christian	60 (1 <sup>st</sup> floor) 164 (2 <sup>nd</sup> floor)		
11:30 - 12:00	Coffee break	119 (2 <sup>nd</sup> floor)		
12:00 - 13:00	Presentations II Speakers: Masoud Seifikar - Students' Perspective on the Classroom Response Systems in Physics Classrooms Francisco Esquembre - WebEJS: A fully Web-Based Version of Easy JavaScript Simulations	60 (1 <sup>st</sup> floor) 164 (2 <sup>nd</sup> floor)		
13:00 - 13:30	Coffee break	119 (2 <sup>nd</sup> floor)		
13:30 - 14:30	Presentations III Speakers: Marina Babayeva - Implementing Virtual Instruments to Increase Knowledge Comprehension and Engagement Rate in Distance Physics Teaching Joerg Zumbach - Visualization and Metacognitive Scaffolding in Learning from Animations about the Anomaly of Water	60 (1 <sup>st</sup> floor) 164 (2 <sup>nd</sup> floor)		
14:30 - 15:00	Closing ceremony Speakers: Tomasz Greczyło, Lars-Jochen Thoms	60 (1 <sup>st</sup> floor) 164 (2 <sup>nd</sup> floor)		

## Workshop wi-fi access

Network: IFD Guest

Password: ifdguest

