21st International Conference on Multimedia in Physics Teaching and Learning (MPTL 2017)
FINAL PROGRAMME

	Wednesday 13 September	
8.45-9.15	Registration and coffee	Medlar and Juniper
9.15-10.00	Opening ceremony Chair: Nick Braithwaite Welcome address: Hazel Rymer, Pro Vice Chancellor (Learning and Teaching Innovation), The Open University	Hub Lecture Theatre
10.00-11.00	**Plenary A: Learning and teaching physics in the open** Eileen Scanlon Chair: Nick Braithwaite	Hub Lecture Theatre
11.00-11.30	Coffee	Medlar and Juniper
11.30-13.00	**1A: Virtual and remote labs** Chair: Dean Zollman	Hub Lecture Theatre
11.30-11.50	*New advances in online experiments integration into LMS* Luis de La Torre, Daniel Galan, Jacobo Saenz and Sebastian Dormido	
11.50-12.10	*The EXPERES Project: Reflections and actions for virtual laboratories for teaching physics* Francisco Esquembre	
12.10-12.30	*Learning in Virtual Physics Laboratories Assisted by a Pedagogical Agent* Tobias Roth, Julia Appel, Alexander Schwingel and Martin Rumpler	
12.30-12.50	*Field of a Permanent Magnet: Remotely Controlled Measurement and Multiple Representations* Christoph Hoyer, Lars-Jochen Thoms and Raimund Girwidz	
13.00-13.45	Lunch	Medlar and Juniper
13.45-15.15	**2A: Symposium and workshop: Jupyter Notebooks** Chair: Caroline Clewley	Hub Lecture Theatre
13.45-14.05	*Jupyter Notebooks via CoCalc for teaching undergraduate physics* Mark Quinn	

14.05-14.25	*Developing interactive visualisations with Jupyter Notebooks and Javascript* Caroline Clewley, Jonathan Eastwood, Peter Török, Dimitri Vvedensky and the student UROP team		
14.25-15.15	*Using Jupyter Notebook to Teach Physics with Computation* Aaron Titus		
15.15-16.00	Tea and posters for 1A, 2A		Hub Lecture Theatre
16.00- 17.40	**3A: Developments in schools** – CMR 11 Chair: Ian Lawrence	**16.00- 17.40**	**3B: Issues in educational design** – CMR 15 Chair: Bob Lambourne
16.00-16.20	*The Daily Life of a Researcher Introduced with an Online Data Analysis Experience Based on Visual Programming* Cristiano Lino Fontana, Stefania Lippiello, Ornella Pantano, Felix Eduardo Pino and Sandra Moretto	16.00-16.20	*An Assessment of an Interactive On-line Course in Contemporary Physics* Dean Zollman, Raiya Ebini and Ulas Ustun
16.20-16.40	*Motion simulation programs in teaching mechanics: educational experiments* Tamás Radnai, Tünde Juhász, András Juhász and Péter Jenei	16.20-16.40	*Instructional design of eLectures in experimental physics - Bridging the gap between instruction and problem solving* Sebastian Gröber, Thomas Müller and Jochen Kuhn
16.40-17.00	*GeoGebra for Secondary School Physics* Petr Kolar	16.40-17.00	*Developing and embedding inclusive practices in online and distance teaching and learning* Victoria Pearson, Kate Lister, Chetz Colwell and Trevor Collins
17.00-17.20	*Air resistance examination from the students' video experiments with cone* Daniel Dziob	17.00-17.20	*Preparing teachers for the integration of ICT in their IBSE-lessons* Ton Ellermeijer and Trinh-Ba Tran
17.20-17.40	*The BBC micro:bit – A Toy or a Teaching Tool?* Laurence Rogers	17.20-17.40	*30 years of development: Coach 7* Ton Ellermeijer
18.00-19.00	Drinks reception		Jennie Lee Nexus
19.00	Free time		

Thursday 14 September		
8.45-9.15	Registration and coffee	Medlar and Juniper
9.15 -10.00	**Plenary B: Mobile Tech Review** Bruce Mason Chair: Antje Kohnle	Hub Lecture Theatre
10.00-11.00	**Plenary C: Heaviside on the Holodeck** John Belcher Chair: Andrea Jimenez Dalmaroni	Hub Lecture Theatre
11.00-11.30	Coffee	Medlar and Juniper
11.30-13.00	**4A: Symposium and workshop: Remote and robotic observatories** Chair: Ulrich Kolb	Hub Lecture Theatre
11.30-11.50	*Remote and Robotic Telescopes for Schools and Students* Fraser Lewis	
11.50-12.10	*"Adopt a supernova" engages secondary school students with their physics syllabus* Sophie Bartlett	
12.10-13.00	*A comparative study of on-site vs remote astronomy teaching* Ulrich Kolb, Marcus Brodeur, Paul Roche, Nicholas Braithwaite and Shailey Minocha	
13.00-13.45	Lunch	Medlar and Juniper

13.45-15.15	**5A: Simulation and representation** – CMR 11 Chair: Bruce Mason	**13.45-15.15**	**5B: Symposium and workshop: STEM Labs and experimental simulations -** Hub Lecture Theatre Chair: Nick Braithwaite	
13.45-14.05	*Simulations in physics to enhance representational learning* Sharon Ainsworth, Caroline Clewley, Antje Kohnle, Nigel Langford, Niels Walet and Andrew Whitworth	*13.45-14.05*	*RuSTLe: Rutherford Simulation for Teaching and Learning. An Interactive Educational Simulation of the Rutherford Experiment* Cristiano Lino Fontana, Andrea Lanzini, Stefania Lippiello and Sandra Moretto	
14.05-14.25	*Characterising representational competence: an example combining a simulation and tutorial on time-independent perturbation theory* Antje Kohnle and Gina Passante *Dipole Radiation – Multiple Visual Representations*	*14.05-15.15*	*RuSTLe: Rutherford Simulation for Teaching and Learning. A Workshop Discovering the Rutherford's Atomic Model*	

14.25-14.45	*to Assist Learning* Raimund Girwidz and Bianca Watzka		Cristiano Lino Fontana, Andrea Lanzini, Stefania Lippiello and Sandra Moretto
14.45-15.05	*From harmonic oscillation to chaotic motion of a compass* Zoltán Csernovszky		
15.15-16.00	Tea and posters for 3A, 3B, 4A, 5A, 5B		Hub Lecture Theatre
16.00-17.00	**6A: IT and Arduino projects –** CMR 11 Chair: Raimund Girwidz	**16.00-17.30**	**6B: Symposium and workshop: STEM Labs and experimental simulations –** Hub Lecture Theatre Chair: Nick Braithwaite
16.00-16.20	*Robotics and measuring devices based on Arduino applications* Maria Pető	*16.00-16.45*	*OpenSTEM Labs* Nick Braithwaite
16.20-16.40	*Physics – IT based international students exchange program* Sándor Gergely Pesthy and Mihály Hömöstrei	*16.45-17.30*	*The Go-Lab ecosystem* Anjo Anjewierden
16.40-17.00	*Low-cost open-source Arduino technology for Do-It-Yourself labs* Frederic Bouquet, Julien Bobroff, Magali Fuchs-Gallezot, Laurence Maurines, Claire Marrache, Fabrice Bert, Catherine Even, Miguel Monteverde, Anniina Salonen, Charis Quay, Meydi Ferrier, Kensuke Kobayashi and Motoaki Bamba		
18.00-22.30	Excursion to the National Museum of Computing followed by the conference dinner		

Friday 15 September

8.45-9.15	Registration and coffee	Medlar and Juniper
9.15 -10.15	**7A: Game based learning** Chair: Ton Ellermeijer	Hub Lecture Theatre
9.15-9.35	*From Newton to Quantum Mechanics - Learning Physics Through Games* Mads Kock Pedersen, Louise Kindt and Jacob Sherson	
9.35-9.55	*Open-ended learning experiences with Citizen Science* Louise Kindt, Mads Kock Pedersen and Jacob Sherson	
9.55-10.15	*Game Development for Teaching Physics* Gerd Kortemeyer	
10.15-11.15	**8A: Smart phones and mobile tech** Chair: Ton Ellermeijer	Hub Lecture Theatre
10.15-10.35	*App in Sound Measurements to gain a school-work experience* Daniele Buongiorno, Antonella Longo, Marisa Michelini, Domenica Ricci, Lorenzo Santi and Stefano Pagotto	
10.35-10.55	*Real-Life Physics: Phonocardiography, Electrocardiography, and Audiometry with a Smartphone* Lars-Jochen Thoms, Giuseppe Colicchia and Raimund Girwidz	
10.55-11.15	*STEM laboratory in students pocket: a case history* Susanna Bertelli, Rossana Centioni and Francesco Scerbo	
11.15-11.45	Coffee and posters for 6A, 6B, 7A, 8A	Hub Lecture Theatre
11.45-12.45	**Plenary D: Astronomically big data, citizen science and beyond** Karen Masters Chair: Bob Lambourne	Hub Lecture Theatre
12.45-13.00	Closing ceremony Chair: Nick Braithwaite	Hub Lecture Theatre
13.00-13.45	Lunch and depart	Medlar and Juniper