18º International Conference on **MPTL** madrid — UNED

Wednesday, 11th September

9:00-9:30	Registration	Entrance hall

9:30-10:00	Opening ceremony	Assembly hall

10:00-11:00	Plenary lecture: **Designing multimedia (MM) for teaching/learning physics and science in general** *Theodore Hoddap*	Assembly hall

11:00-11:30	Coffee break	Gau&Café Rest.

11:30-12:30	Parallel sessions 1&2 (PS1&PS2)	Rooms PS1 & PS2
	Parallel session 1: **Easy Java Simulation, an innovative tool for teacher as designers of gravity-physics computer models** *Loo Kang Lawrence Wee, Giam Hwee Jimmy Goh and Ee-Peow Lim* **An Integrated Augmented Reality System for Easy Java Simulations** *Andres Mejias Borrero, Francisco Esquembre Martínez, Marco Marquez Sanchez and Jose M. Andújar Marquez*	Room PS1

	High-level control of Robots in EJS *Almudena Ruiz Sáez, Humberto Martínez-Barberá and Francisco Esquembre*	Room PS1
	Parallel session 2: **Physics Book Plus: an Android app that extends the content of a Physics book** *Jorge Fonseca E Trindade* **Teaching and Learning Physics with Mobile Phones** *Leopold Mathelitsch and Gerhard Rath* **Computer Based Assessment in Physics: Context and Multimedia** *Anneke Thurlings and Pieter Smeets*	Room PS2

12:30-14:00	Lunch	Gau&Café Rest.

14:00-15:00 15:00-16:00	Parallel sessions 1&2 (PS1&PS2)	Rooms PS1 & PS2
	Parallel session 1: **The use of computers and multimedia in the Italian kindergarten, primary, and lower secondary schools in Results by EU Project SECURE research on the use of computer in Italian compulsory schools** *Stefano Vercellati, Marisa Michelini and Lorenzo Santi* **E-experimentation in preschool science education using remote experiment Environment in Trnava** *Miroslava Ožvoldová and Adriana Čemešová*	Room PS1

	Teaching sciences for primary school *Carmen - Gabriela Bostan* **Cultural heritage and physics education: a multimedia learning proposal** *Marianna Barberio, Pasquale Barone, Assunta Bonanno and Peppino Sapia* **How do Pre-service Physics Teachers Tend to Use Computers while Teaching Physics?** *Nilüfer Didiş and Özgür Özcan* **Teaching Physics using modern technology** *Carmen - Gabriela Bostan*	Room PS1
	Parallel sesión 2: **Connecting hardware to Easy Java Simulations: from virtual experiments to remote/local labs** *Andres Mejias Borrero, Marco Marquez Sanchez, Francisco Esquembre Martinez and Jose M. Andujar Marquez* **A new methodology to design remote laboratories with EJS and the LabVIEW Connector Element** *Jesús Chacón Sombría, Dictino Chaos García, Hector Vargas Oyarzun, Gonzalo Farias Castro, José Sánchez Moreno and Sebastián Dormido Bencomo* **Revisiting historical experiments with new technologies: tracking Huygens' footsteps** *Massimilano Malgieri, Pasquale Onorato and Anna De Ambrosis* **MOSEM in Teaching Sciences.**	Room PS2

Processes and Results *Lucía Amorós-Poveda* **MoLab - Mobile science Laboratory (WORKSHOP)** *Tomasz Greczylo and Elżbieta Kawecka*	Room PS2	

16:00-16:30	Coffee break	Gau&Café Rest.

16:30-17:30 17:30-18:30	Parallel sessions 1&2 (PS1&PS2)	Rooms PS1 & PS2
	Parallel session 1: **Bringing Partial Differential Equations to life** *María José Cano, Francisco Esquembre and Eliseo Chacón* **A classroom experience with a set of interactive Partial Differential Equations simulations** *María José Cano, Francisco Esquembre and Eliseo Chacon* **Sound and noise: a proposal for an interdisciplinary learning path** *Vera Montalbano* **A high-speed walk through non-Newtonian fluids** *Assunta Bonanno, Giacomo Bozzo and Peppino Sapia* **The dynamics of Zeeman's catastrophe machines** *Péter Nagy and Péter Tasnádi*	Room PS1
	Parallel sesión 2: **Team role in creating a multimedia**	Room PS2

project for secondary school students - popularization of science and research *Vitezslav Kriha and Ilona Ali Bláhová* **Physics Education Research Users Guide: Pedagogical Help Online** *Bruce Mason and Sarah McKagan* **Scientix observatory: Good practices in internationalisation and localisation of learning objects in STEM education** *Victor J. Perez-Rubio, Premysl Velek and Àgueda Gras-Velázquez* **EDUCOLAND: Web Support for Physics Teachers** *Josef Trna, Eva Trnova and Jan Krejci* **Creating and curating the Supporting Physics Teaching materials** *Ian Lawrence*	Room PS2

18:30-19:30	Welcome cocktail	

Thursday, 12th September

9:00-10:00	Plenary lecture: **Teaching Physics by Modeling** *François E. Cellier*	Assembly hall

10:00-11:00	Invited lecture: **Creating simulations for tablets using Easy Java(script) Simulations** *Francisco Esquembre and Félix J. García*	Assembly hall

11:00-11:30	Coffee break	Gau&Café Rest.

11:30-12:30	**Report and Recommendations on Multimedia Learning Resources for Waves and Sound** *Bruce Mason*	Assembly hall

12:30-14:00	Lunch	Gau&Café Rest.

14:00-15:00 15:00-16:00	Parallel sessions 1&2 (PS1&PS2)	Rooms PS1 & PS2
	Parallel session 1: **The IWB for the construction of formal thinking: proposals for prospective primary teachers concerning motions**	Room PS1

and electrical, magnetic and optical phenomena *Stefano Vercellati, Giuseppe Fera, Marisa Michelini, Sri Rama Chandra Prasad Challapalli, Alessandra Mossenta and Alberto Stefanel* **The IWB as a bridge between phenomena exploration and interpretation of electromagnetic phenomena in the construction of formal thinking** *Stefano Vercellati and Marisa Michelini* **Productive use of interactive whiteboard with physics-based 2-D sandbox software** *Bor Gregorcic, Gorazd Planinsic and Eugenia Etkina* **Tools for Learning Physics as Regular Applications to MID** *Konstantin Rogozin, Sergey Kuznetsov, Denis Yanyshev and Alexander Kaplinsky* **Student to Student (S2S) Teaching: One Example of Using Multimedia** *Konstantin Rogozin, Ulyana Pshenova, Diana Kondrashova, Maxim Evdokimov, Alexandra Gridneva, Anastasia Tolmacheva, Tatyana Vysochkina and Sergey Leyko* **Redesigning instruction to promote inquiry, interactive and collaborative learning in physics for large class settings** *Darren Wong and Paul Lee*	Room PS1
Parallel sesión 2:	Room PS2

Web based Easy Java Simulation *Fu-Kwun Hwang* **EJSApp: Using virtual and remote labs in Moodle** *Luis de La Torre, Ruben Heradio, José Sánchez and Sebastian Dormido* **Teaching With Moodle and OSP Resources** *Wolfgang Christian* **Virtual laboratory in the teaching of astronomy and astrophysics in Slovakia** *Mária Csatáryová and Štefan Parimucha* **Kinetic and energetic approaches of the Bouncing Ball phenomenon with a Virtual Experimental Activity** *Marcelo Rodrigues and Paulo Simeão Carvalho* **Interactive simulations for the learning and teaching of quantum mechanics concepts** *Antje Kohnle*	Room PS2

16:00-16:30	Coffee break	Gau&Café Rest.

16:30-17:30	Parallel sessions 1&2 (PS1&PS2)	Rooms PS1 & PS2
17:30-18:30		
	Parallel session 1: **Computer simulations to teach Physics in secondary education. Main features for a successful learning** *Daniel Aguirre Molina, Antonio Quesada Armenteros and Marta Romero Ariza*	Room PS1

	Science learning enhancement: A new route for high schools *Filomena Lento, Eleonora Bilotta and Marco Schioppa* **"The Journey of Electrical Energy": an educational animation film for promoting scientific literacy in primary and secondary school** *Anna Spyrtou, Penelope Papadopoulou, George Malandrakis and Elias Pierrakos* **Entertainment Multimedia in Physics Learning Process** *Konstantin Rogozin* **A Long View of Computer Aided Learning in Physics: A message from the past** *Gareth Jones* **Development Physics problem solving abilities of students by multimedia tools assistance** *Iryna Litovko and Alexander Ripp*	Room PS1
	Parallel sesión 2: **An experimental activity to improve learning in Sciences** *Angela Milazzo and Marco Schioppa* **New Physics Remote Laboratories for UNEDLabs** *Manuel Yuste, Carmen Carreras, Juan Pedro Sanchez, Jaime Arturo de La Torre, Alberto de La Torre, Luis de La Torre, Ruben Heradio, Ignacio Zúñiga and Sebastian Dormido*	Room PS2

Helmholtz pair as an environment for teaching basic properties of magnetic field by combining multimedia and real experiments *Dejan Krizaj and Marko Jankovec* **A Remote Laboratory for photovoltaic modules assays using Easy Java Simulation** *Reyes Herrera, Andrés Mejías, Marco A. Márquez and José M. Andújar* **Experimenting from a distance: optical spectrometry via the internet** *Lars-Jochen Thoms and Raimund Girwidz* **ENERGY – remote experiment on characterization of energy sources** *Franz Schauer, Zaneta Gerhatova and Lukas Tkac*	Room PS2

18:30	Guided tour	Starting at the conference venue

21:00	Banquet dinner	

Friday, 13th September

9:00-10:00	Plenary lecture: **GeoGebra - Dynamic Mathematics & Science for Everyone** *István Juhos*	Assembly hall

10:00-11:00	Panel session	Assembly hall

11:00-11:30	Coffee break	Gau&Café Rest.

11:30-12:30	Parallel sessions 1&2 (PS1&PS2)	Rooms PS1 & PS2
	Parallel session 1: **Video analysis problems in recitations of introductory mechanics physics courses** *Sebastian Gröber, Jochen Kuhn and Pascal Klein* **Using Video Lessons in the Physics Classroom** *Vasudeva Rao Aravind* **Some Aspects about Image and Video in Physic´s Subject** *Lucía Amorós-Poveda*	Room PS1
	Parallel sesión 2:	Room PS2

Augmented Interactivity on classroom teaching Physics: how do that? *Jorge Fonseca E Trindade* **Redesigning instruction to promote inquiry, interactive and collaborative learning in physics for large class settings** *Darren Wong and Paul Lee* **Teaching High School Students to Write Popular Science Article** *Ilona Ali Bláhová and Vítězslav Kříha*	Room PS2

12:30-13:00	Closing ceremony	Assembly hall

13:00-14:00	Lunch	Gau&Café Rest.