

**International Conference on Technological Ecosystems for Enhancing Multiculturality TEEM
2017**

University of Cadiz
Edificio Constitución de 1812
Paseo Carlos III, 3
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Wednesday, 18th October 2017

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|---------------|--------------------------------------|
| 10:00 – 13:00 | Registration. Help Desk. |
| 14:00 – 15:30 | Lunch break (not included) |
| 15:30 – 16:15 | TEEM 2017 Conference Opening session |
| 17:30 – 18:00 | Coffee break |
| 18:00 – 18:45 | Parallel sessions (4c, 12b) |

Thursday, 19th October 2017

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|---------------|---|
| 9:00 – 10:30 | Parallel sessions (5a, 9a, 12c) |
| 10:30 – 11:00 | Coffee break |
| 11:00 – 14:00 | Parallel sessions (1, 5b, 9b, JeanMonnet) |
| 14:00 – 15:30 | Lunch break (not included) |
| 16:00 – 17:30 | Parallel sessions (3a, SNOLA) |
| 17:30 – 18:00 | Coffee break |
| 18:00 – 19:30 | Parallel sessions (3b) |

Friday, 20th October 2017

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|---------------|----------------------------|
| 9:00 – 10:30 | Parallel sessions (6a, 7a) |
| 10:00 – 10:30 | Coffee break |
| 10:30 – 12:00 | Parallel sessions (6b, 7b) |



12:00 – 13:00 TEEM 2017 Conference Closing



Wednesday, 18th October 2017

10:00 – 13:00 Registration. Help Desk.

14:00 – 15:30 Lunch break (not included)

15:30 – 16:15 TEEM 2017 Conference Opening session
Room MAIN

16:15 – 17:30 Parallel sessions (2, 4a, 11, 12a)

16:15 Session 2 – Track 21st Century Challenges in Engineering and Technological Learning
Room A

16:15 Anna Simons, Jan Latko, José Valiente Saltos, Margot Gutschoven, Raymond Quinn, Abel J. Duarte, Benedita Malheiro, Cristina Ribeiro, Fernando Ferreira, Manuel Silva, Paulo Ferreira and Pedro Guedes: *Self-Oriented Solar Mirror -- An EPS@ISEP 2017 Project*

16:30 Vicente López-Pena, Vicente Adrián López-Chao and Darío Ramiro-Aparicio: *A study of the IT Competence training in Technical Drawing in Higher Education*

16:45 Alisson Calderon, António Mota, Christophe Hopchet, Cristina Grabulosa Olivé, Mathias Roeper, Abel J. Duarte, Benedita Malheiro, Cristina Ribeiro, Fernando Ferreira, Manuel Silva, Paulo Ferreira and Pedro Guedes: *Balcony Greenhouse -- An EPS@ISEP 2017 Project*

17:00 Natércia Lima, Clara Viegas, Marcelo Zannin, Maria Arcelina Marques, Gustavo Alves, Susana Marchisio, Federico Lerro, Claudio Merendino, Manuel Felgueiras, Ricardo Costa, André Fidalgo, Juarez Silva, María Isabel Pozzo, Elsa Dobboletta, Ingvar Gustavsson and Francisco José García Peñalvo: *Do Students Really Understand the Difference Between Simulation and Remote Labs?*

17:15 Matheus Varela Branco, Leticia A. Coelho, Luis Schlichting, Maria Arcelina Marques, Ingvar Gustavsson and Gustavo R. Alves: *Differentiating simulations and remote (real) experiments*

16:15 Session 4a – Track New publishing and scientific communication ways: Electronic edition, digital educational resources & Track New trends in Digital humanities
Room B

16:15 Caitlin Gura, Amelie Dorn, Alejandro Benito and Eveline Wandl-Vogt: *Co-Designing Innovation Networks for Cross-Sectoral Collaboration on the Example of exploreAT!*

- 16:30 José-Antonio Cordón-García, Araceli García-Rodríguez, Raquel Gómez-Díaz, Javier Merchán Sanchez-Jara, Almudena Mangas-Vega, Taisa Rodrigues-Dantas, María Muñoz-Rico, Antonia-Maria Fernández-Luque and Alberto Ramos-Alonso: *Visibility of scientific monographs in the academic field: the institutional assessment of research*
- 16:45 Antonio Jose Rodrigues Neto, Maria Manuel Borges and Licinio Roque: *Preliminary Study about the Applicability of a Service-Oriented Architecture in the OAI model implementation*
- 17:00 Ariovaldo V. Almeida, Maria M. Borges and Licinio Roque: *The European Open Science Cloud: A New Challenge for Europe*
- 17:15 Antonia María Fernandez-Luque, Raquel Gómez-Díaz and José Antonio Cordón-García: *The digital competences in the curriculum of postgraduate studies of the professionals of health. The role of the librarian as a trainer in formative programmes*
- 16:15 Session 11 – 8th International Workshop on Software Engineering for E-learning (ISELEAR'17)**
Room C
- 16:15 Ana M. Gonzalez de Miguel: *Generic eLearning Environments and Intelligent Software Architectures for Complex Cooperation*
- 16:30 Andrea Vázquez-Ingelmo, Juan Cruz-Benito and Francisco J. García-Peñalvo: *Improving the OEEU's data-driven technological ecosystem's interoperability with GraphQL*
- 16:45 Jorge Gomez-Sanz: *Detecting plagiarism in micro-blogging social networks*
- 17:00 Alicia García-Holgado and Francisco José García Peñalvo: *Preliminary validation of the metamodel for developing learning ecosystems*
- 17:15 Alexa Ramírez-Vega, Francisco Iniesto and Covadonga Rodrigo: *Raising awareness of the accessibility challenges in mathematics MOOCs*
- 16:15 Session 12a – Doctoral Consortium**
Room D
- 16:15 Francisco J. García Peñalvo: *Presentation*
- 6' Iñigo Guerrero and Juan José Igartua: *The role of the narrator point of view and the similarity with the protagonist in narratives designed to reduce prejudice towards stigmatized immigrants*

- 6' Francisco Iniesto, Patrick McAndrew, Shailey Minocha and Tim Coughlan: *An investigation into the perspectives of providers and learners on MOOC accessibility*
- 6' Alién García-Hernández and Teresa González-Ramírez: *Design and assessment of the impact of an e-textbook in the engagement towards the learning of Discrete Mathematics*
- 6' Diego Ramos Méndez and Félix Ortega Mohedano: *The revolution in mobile broadband. Generation Y & Z smartphones usage and consumption habits in the University of Salamanca*
- 6' Pedro Luis Basulto-Ramírez and Juan De Pablos Pons Development needs for teaching History of Cuba in university part-time courses with Blended Learning
- 6' Javier Merchán-Sánchez-Jara, José Antonio Cordón-García and Raquel Gómez-Díaz: *Towards a hypermedia model for digital scholarly edition of musical texts based on MEI (Music Encoding Initiative) standard; Integration of hidden traditions within social editing paradigm*
- 6' Marta Cerezo Prieto and Francisco Javier Frutos Esteban: *Applications for mobile devices, interpretation of cultural heritage and educational innovation. Effects of usability in the process of edutainment*
- 6' Almudena Mangas-Vega, Raquel Gómez-Díaz and José Antonio Cordón-García: *Creating quality standards for scientific content in digital environments through the development of a utility model*
- 6' Beatriz Albelda: *Libraries Contribution to the Acquisition of Reading Literacy among the Population of Elementary and Secondary Education Students in Spain. An Approach Based on International Assessment Studies*
- 6' Yen Caballero and Ana García-Valcárcel Muñoz-Repiso: *Development of computational thinking skills and collaborative learning in initial education students through educational activities supported by ICT resources and programmable educational robots*
- 6' Patricia Sanchez-Holgado and Carlos Arcila-Calderón: *Adoption of media by European scientists for the creation of scientific transmedia storytelling*

17:30 – 18:00 Coffee break

18:00 – 18:45 Parallel sessions (4b, 12b)

18:00 **Session 4b – Track *New publishing and scientific communication ways: Electronic edition, digital educational resources* & Track *New trends in Digital humanities***
Room B

18:00 Cristiana Freitas, Maria Manuel Borges and Jorge Revez: *Archives' call to Digital Humanities: a case study of Portuguese Municipal Archives*

18:15 Laura Icela González Pérez, María Soledad Ramírez Montoya, Francisco José García-Peñalvo and Juan Eliezer Quintas Cruz: *Usability evaluation focused on user experience of repositories related to energy sustainability: A Literature Mapping*

18:30 Marc Alier Forment and María José Casany Guerrero: *The need for interdisciplinary research on exponential technologies and sustainability*

18:00 **Session 12b – *Doctoral Consortium***
Room D

18:00 Individual presentations (continuation of session 12a)

Preparation of group dynamics

9:00 Session 5a – Track *Learning analytics: Expanding the frontier*
Room B

- 9:00 Fernando Moreira, Ramiro Gonçalves, José Martins, Frederico Branco and Manuel Au-Yong-Oliveira: *Learning Analytics as a Core Component for Higher Education Disruption: Governance Stakeholder*
- 9:06 Néstor Dario Duque Méndez, Mauricio Giraldo Ocampo and Fernando Moreira: *Storage scheme for analysis of academic data and interaction of students with virtual education platforms*
- 9:12 Mikel Villamañe, Mikel Larrañaga and Ainhoa Alvarez: *Rating monitoring as a means to mitigate rater effects and controversial evaluations*
- 9:18 Sheila Lucero Sánchez López, Rebeca P Díaz Redondo and Ana Fernández Vilas: *Discovering knowledge from student interactions: clustering vs classification*
- 9:24 Rafael Molina-Carmona, Carlos J. Villagrà Arnedo, Francisco José Gallego Durán and Faraón Llorens-Largo: *Analytic-driven redesign of an instructional course*
- 9:30 Salvador Ros Muñoz, Juan Carlos Lazaro Obensa, Antonio Robles-Gomez, Agustin Caminero, Llanos Tobarra and Rafael Pastor: *Analyzing content structure and Moodle milestone to classified student learning behavior in a basic desktop tools course*
- 9:36 Diego Buenaño-Fernández, Sergio Luján-Mora and W. Villegas-Ch: *Improvement of massive open online courses by text mining of students' emails: a case study*
- 9:42 Alvaro Figueira: *Mining Moodle Logs for Grade Prediction: A methodology walk-through*
- 9:48 Víctor Manuel Pérez-Colado, Iván José Pérez-Colado, Ivan Martínez-Ortiz, Manuel Freire-Morán and Baltasar Fernandez-Manjon: *Simplifying location-based serious game authoring*
- 9:54 Ruth Cobos and Victor Macias Palla: *edX-MAS: Model Analyzer System*
- 10:00 Alejandra Martinez Monés, Christophe Reffay, Javier Hoyos Torío and Juan Muñoz: *Learning Analytics with Google Classroom: Exploring the possibilities*

- 10:06 Jorge Durán-Escudero, Francisco José García Peñalvo and Roberto Therón: An architectural proposal to explore the data of a private community through visual analytic
- 10:12 Rubén Pazmiño, Francisco José García Peñalvo and Miguel Ángel Conde: Comparing hierarchical tree in Statistical Implicative Analysis & hierarchical cluster in Learning Analytics
- 10:18 Juan Antonio Caballero Hernández, Manuel Palomo-Duarte and Juan Manuel Dodero: An Architecture for Skill Assessment in Serious Games Based on Event Sequence Analysis

9:00 Session 9a – Track *Educational Innovation*
Room C

- 9:00 David Fonseca, Sergi Villagrasa Falip, Isidro Navarro, Ernest Redondo and Francisco Valls: *Student motivation assessment using and learning virtual and gamified urban environments*
- 9:15 Isabel Núñez Vazquez and Rafael Crisman Pérez: *Development of Metalinguistic Awareness in Reading Comprehension from Video-based Instruction*
- 9:30 Brenda Guajardo and Jaime Ricardo Valenzuela González: *Transdisciplinary design of virtual learning environments: the case of a xMOOC on the study of electrical energy*
- 9:45 Jorge Daniel Ortiz Herrera, Susana Graciela Cadena Vela and Gisela Torres: *A step towards innovation at Universidad Central del Ecuador: Implementation of the virtual educational platform*
- 10:00 Javier Esteban Escaño, Ángel Fidalgo Blanco, María Luisa Sein-Echaluce and Francisco José García Peñalvo: *Pilot test for validation of an instrument of knowledge management in the massive open online context*

9:00 Session 12c – *Doctoral Consortium*
Room D

Group dynamics and closing (continuation of session 12b)

10:30 – 11:00 Coffee break

11:00 – 14:00 Parallel sessions (1, 5b, 9b, JeanMonnet)

11:00 Session 1 – Track *Computational Thinking Issues*
Room A

- 11:00 Elizabeth K. Morales Urrutia, José Miguel Ocaña Ch., Diana Perez-Marin and Silvia Tamayo: *A first proposal of Pedagogic Conversational Agents to develop Computational Thinking in children*
- 11:15 José Figueiredo and Francisco García-Peñalvo: *Improving Computational Thinking Using Follow and Give Instructions*
- 11:30 Juan Manuel Dodero, Iván Ruiz-Rube and José Miguel Mota Macias: *Bringing computational thinking to teachers' training: a workshop review*
- 11:45 Yen Caballero and Ana García-Valcárcel Muñoz-Repiso: *Development of computational thinking and collaborative learning in kindergarten using programmable educational robots: a teacher training experience*
- 12:00 Giuseppe Chiazese, Giovanni Fulantelli, Vito Pipitone and Davide Taibi: *Promoting computational thinking and creativeness in primary school children*
- 12:15 Miguel Ángel Conde, Camino Fernández, Francisco Rodríguez-Sedano, A.M. Guerrero-Higueras, Vicente Matellan and Francisco José García Peñalvo: *Promoting Computational Thinking in K-12 students by applying unplugged methods and robotics*
- 12:30 José Alfredo Martínez-Valdés, J. Ángel Velázquez-Iturbide and Raquel Hijón-Neira: *A (Relatively) Unsatisfactory Experience of Use of Scratch in CS1*
- 12:45 Arturo Rojas and Francisco José García Peñalvo: *Personalized education using computational thinking and b-learning environment: classroom intervention*
- 13:00 Mariluz Guenaga, Iratxe Menchaca, Pablo Garaizar and Andoni Eguíluz: *Trastea.club, an initiative to develop computational thinking among young students*
- 11:00 Session 5b – Track Learning analytics: Expanding the frontier**
Room B
- Discussions (continuation of session 5a)
- 11:00 Session 9b – Track Educational Innovation**
Room C
- 11:00 Rocío Chao Fernández, Sara Román García and Aurelio Chao Fernández: *Art, Science and Magic: Music and Math the classroom*
- 11:15 Elena Carrera Pérez, Sara Román García and Rocío Chao Fernández: *Free software in music education: an interdisciplinary practical approach in Primary School*

- 11:30 Vicente López-Chao, Jesús Miguel Muñoz-Cantero and Vicente López-Pena: *Analysis of the relation between IT school design and the lack of teaching method based on digital competence*
- 11:45 Ana María Pinto-Llorente, M^a Cruz Sánchez-Gómez and Francisco José García-Peñalvo: *The Use of Online Quizzes in Blended Learning Modality: A Qualitative Approach*
- 12:00 Concepción Bueno García, Clara Ubieto Artur, María Isabel Ubieto Artur, Lola Hernández Ara, Pedro Bueso Guillén, Ángel Fidalgo Blanco and María Luisa Seín-Echaluce: *Designing and Implementing a Massive Open Online Course: Lessons Learnt*
- 12:15 Razvan Raducu, Camino Fernández Llamas, Alexis Gutiérrez Fernández, Francisco Javier Castaño Gutiérrez and Miguel Ángel Conde González: *ULe-Bank*
- 12:30 Ángel Fidalgo, María Luisa Sein-Echaluce and Francisco José García Peñalvo: *APFT: Active Peer-Based Flip Teaching*
- 11:00 Special Session – Jean Monnet project workshop: “Improving Financial culture through a Banking platform”**
Room D

14:00 – 15:30 Lunch break (not included)

16:00 – 17:30 Parallel sessions (3a, SNOLA)

- 16:00 Session 3a – Track *Educational Assessment & Evaluation in Digital Society***
Room A
- 16:00 Leandro Flórez Aristizábal, Sandra Cano, Cesar A. Collazos, Fernando Moreira, Daniyal Alghazzawi and Habib Fardoun: *Tools and Methods Applied in Interactive Systems to Evaluate the User Experience with Deaf/Hard of Hearing Children*
- 16:15 Manuel Rafael De-Besa Gutiérrez, Mar Lugo-Muñoz and Dolores Limón-Domínguez: *University services for students' transition to Higher Education.*
- 16:30 Ana García-Figuerola, Fernando Martínez-Abad and María-José Rodríguez-Conde: *Evaluation of Digital Competence in Teacher Training*
- 16:45 Mikel Villamañe, Ainhoa Alvarez and Mikel Larrañaga: *Supporting complex assessment processes*

17:15 Joaquin-Lorenzo Burguera, María-Del-Henar Pérez-Herrero and Estefanía Suárez: Study on coexistence and conflicts in students of Secondary Education in a center of Asturias (Spain)

16:00 Session S – SNOLA meeting: Learning Analytics round table
Room B

17:30 – 18:00 Coffee break

18:00 – 19:30 Parallel sessions (3b)

18:00 Session 3b – Track Educational Assessment & Evaluation in Digital Society
Room A

18:00 Leticia-Concepción Velasco-Martínez and Juan-Carlos Tójar-Hurtado: *Construction of a questionnaire to know the transparency in the evaluation of the learning of Engineering students*

18:15 Carmen Garcia-Berdones, F. David Trujillo-Aguilera and J. Carlos Tojar-Hurtado: *Teamwork in Engineering Degrees: What is it and what should it be? A qualitative approach*

18:30 Sonia Casillas Martín, Marcos Cabezas González, Maria Soledad Ibarra Sáiz and Gregorio Rodríguez Gómez: *Evaluation of digital competence from a gender perspective*

18:45 Susana Olmos-Migueláñez, Eva María Torrecilla-Sánchez, Adriana Gamazo, María Soledad Ibarra-Sáiz and Gregorio Rodríguez-Gómez: *Design of an assessment system for the improvement of competences among Pedagogy students*

19:00 José Carlos Sánchez Prieto, Susana Olmos-Migueláñez and Francisco José García Peñalvo: *Assessment of the Disposition of Future Secondary Education Teachers Towards Mobile Learning*

19:15 Jaione Cubero-Ibáñez, María Soledad Ibarra-Sáiz and Gregorio Rodríguez-Gómez: *Assessment literacy through serious games in virtual learning environments*

Friday, 20th October 2017

9:00 – 10:30 Parallel sessions (6a, 7a)

9:00 Session 6a – Track *Technology, Health Sciences Education and Health*
Room A

9:00 Maria Teresa Ugidos Lozano, Fernando Blaya Haro, Alessandro Ruggiero and Juan A. Juanes: *Systems of Digitalization and Processing of Anatomical Pieces for their Three-dimensional Reconstruction*

9:15 Lourdes Asensio Romero, Manuel Asensio Gómez and Juan A. Juanes Méndez: *Development of 3D models of female pelvis embedded in anatomical sections from the Visible Human Project*

9:30 Santiago González Izard, Juan Antonio Juanes Méndez, Jesús María Gonçalves Estella, Maria José Sánchez Ledesma, Pablo Ruisoto and Francisco García Peñalvo: *Virtual Simulation for Scoliosis Surgery*

9:45 Santiago González Izard, Juan Antonio Juanes Méndez, Francisco García Peñalvo, Marcelo Jiménez López, Pablo Ruisoto and Francisco Pastor Vázquez: *360 vision applications for medical training*

9:00 Session 7a – Track *A world of digital competences: mobile apps, e-citizenship and computational systems as learning tools*
Room B

9:00 Pablo Martin-Ramos, Maria Susano, Pedro S. Pereira Da Silva and Manuela Ramos Silva: *BYOD for Physics Lab: studying Newton's Law of cooling with a smartphone*

9:15 Azucena Hernández Martín and Ana Iglesias Rodríguez: *Digital and Informational Competences as an Ecological Context for the Development of an Intercultural School*

9:30 Carlos Mera, Gonzalo Ruiz-Cagiga, José Ignacio Navarro-Guzmán, Estíbaliz Aragón-Mendizábal, Cándida Delgado and Manuel Aguilar-Villagrán: *APP designed for early math training. magnitudes comparison*

9:45 Angel Jaramillo-Alcázar and Sergio Luján-Mora: *Mobile Serious Games: An Accessibility Assessment for People with Visual Impairments*

10:00 – 10:30 Coffee break

10:30 – 12:00 Parallel sessions (6b, 7b)

10:30 Session 6b – Track *Technology, Health Sciences Education and Health*
Room A

10:30 María Antonia Fuentes Calderón, Roberto Llorens Rodríguez, Enrique Noé Sebastián and María José Sánchez Ledesma: *Active Multimodal Stimulation in Rehabilitation of paretic upper limb after stroke: technical procedure.*

10:45 Fernando Blaya, Julia López Silva, Juan Antonio Juanes, Pilar San Pedro, Roberto D'Amato and Juan Gómez Lagándara: *Study, design and prototyping of arm splint with additive manufacturing process*

11:00 Manuel Islán, Jorge Carvajal, Pilar San Pedro, Roberto D'Amato, Juan Antonio Juanes and Enrique Soriano: *Linear approximation of the behavior of the rotator cuff under fatigue conditions. Violinist case study*

11:15 Ángeles Serrera-Figallo, Vanesa Montoya-Salazar and Mar Lugo-Muñoz: *Improvement of oral surgery teaching quality through the incorporation of electronic books*

11:30 Ana C. Zamorano, Esperanza Marchena-Consejero, Federico Hervías-Ortega, Inmaculada Menacho-Jimenez and Carlos Mera: *A review of Online Psychological Interventions*

11:45 Katrin Muradas Mujika, Juan Antonio Juanes Méndez and Andrés Framiñán de Miguel: *Workstation versus Free Open Source Software in radiology*

10:30 Session 7b – Track *A world of digital competences: mobile apps, e-citizenship and computational systems as learning tools*
Room B

10:30 Ana Pérez-Escoda, Rosa García-Ruiz, Ana Castro-Zubizarreta and Ignacio Aguaded: *Media Literacy and Digital Skills for Enhancing Critical Thinking in Networked Society*

10:45 Ana Pérez-Escoda, Águeda Delgado-Ponce, Paula Renés-Arellano, Paloma Contreras-Pulido, Vicent Gozálviz, Amor Pérez-Rodríguez and Pilar Marín-Mateos: *Mobile Apps and Social Media: Enablers of Media Literacy in Primary School Students*

11:00 Luis González Roderó: *Collaborative work with wikis. Analysis of some innovative educational centers*

11:15 María Cruz Sánchez-Gómez, Ana Iglesias-Rodríguez and Francisco José García-Peñalvo: *Digital competence, social networks and apps in education: views and beliefs of users of the Twitter virtual domain*

10:30 Special Session – Jean Monnet project workshop: “Improving Financial culture through a Banking platform”
Room D

12:00 – 13:00 TEEM 2017 Conference Closing
Room A