

## Dear colleagues of EDUCON 2019:



As Awards Committee Member of the conference and as well as Chair of the IEEE EDUCON Steering Committee and as IEEE Division VI Director is a great pleasure to include the list of the Awards of IEEE EDUCON 2019 (IEEE Global Engineering Education Conference) inside the proceedings published at IEEE Xplore.

<https://ieeexplore.ieee.org/xpl/conhome.jsp?punumber=1800058>

Congratulations to all the Awardees. Their efforts and dedication help us to have a better conference year to year.

The conference IEEE EDUCON start in 2010 with the first conference in Madrid, Spain, and is rotating along all IEEE Region 8 from Europe to Middle East and to Africa, going until now to Amman, Marrakesh, Berlin, Istanbul, Tallinn, Abu Dhabi, Athens and Tenerife, finishing this 2019 with our tenth conference in Dubai. We are going back to South Europe to Porto in Portugal in 2020.

Year to year we are consolidating and improving this conference of IEEE Education Society in our community, with more than 300 attendees and an strong community of Engineering Education inside IEEE Region 8. Our relations with the other conferences of the IEEE Education Society are stronger too, as we have with Frontier in Education, (FIE), (October 2019 in Cincinnati, OH, USA), IEEE Learning with MOOCs (LWMOOCS), (October 2019 in Milwaukee, WI, USA), IEEE Teaching, Assessment and Learning for Engineering (TALE), (December 2019 in Yogyakarta, Indonesia) and IEEE World Engineering Education Conference (EDUNIE), (March 2020 close to Bogota, Colombia).

Thanks again to all the reviewers, program committee members, organizing members, session chairs, authors and presenters and attendees for their magnificent work and see you next year in wonderful Porto.

### **Manuel Castro**

IEEE EDUCON 2019 Steering Committee Chair

## EDUCON Meritorious Service Award

2019 recipients are **Abdallah Al-Zoubi** and **Alaa K. Ashmawy** for outstanding contributions to the administrative and management efforts for the IEEE EDUCON conference.

## Best Paper Awards

Best Paper Awards are appointed in the following categories:

- Infrastructure and Technologies for Engineering Education
- Innovation, Methods, Teaching and Learning Experiences in Engineering Education
- Attracting, Engaging and Retaining Human Talent to Engineering
- Serious Games, Game-Based Learning and Gamification for Engineering Education
- Virtual and Remote Labs (V&RL) in Engineering Education
- Assessment in Engineering Education
- Best Student Paper
- Most Innovative Paper regarding Engineering Education

### Area 1: Infrastructure and Technologies for Engineering Education

**What Can You Do with Educational Technology that is Getting More Human?**

Carlos Delgado Kloos, Carlos Alario-Hoyos, Pedro J. Muñoz-Merino, María-Blanca Ibáñez, Iria Estévez-Ayres, Raquel M. Crespo García

### Area 2: Innovation, Methods, Teaching and Learning Experiences in Engineering Education

**Promoting and Implementing Digital STEM Education at Secondary Schools in Africa**

Denis Gillet, Bosun Tijani, Senam Beheton, Juan Carlos Farah, Diana Dikke, Aurelle Noutahí3 Rosa Doran, Nuno R. C. Gomes, Sam Rich, Ton de Jon, Célia Gavaud

### Area 3: Attracting, Engaging and Retaining Human Talent to Engineering

**Including Active Learning in an Online Database Management Course for Industrial Engineering Students**

Christina Andersson, Gerald Kroisandt, Doina Logofatu

### Area 4: Serious Games, Game-Based Learning and Gamification for Engineering Education

**Teaching Methods for Simulation Games: The Example of Learning Business Process Change**

Alexander Löffler, Debora Jacoby, Nilüfer Faizan, Matthias Utesch, Harald Kienegger, Helmut Krcmar

### Area 5: Virtual and Remote Labs (V&RL) in Engineering Education

**Implementation of an Arduino Remote Laboratory with Raspberry Pi**

Atilano Fernández-Pacheco, Sergio Martín Gutierrez, Manuel Castro

### Area 6: Assessment in Engineering Education

**Utilizing Web Analytics in the Context of Learning Analytics for Large-Scale Online Learning**

Tobias Rohloff, Sören Oldag, Jan Renz, Christoph Meinel

### Most Innovative Paper regarding Engineering Education

**A Model to Support Outside Classroom Learning**

Boumediene Belkhouche, Heba Ismail, Fatmah Ramsi

### Best Student Paper Award

**Co-Award: How Can Computer Science Faculties Increase the Proportion of Women in Computer Science by Using Robots?**

Lisa Keller, Isabel John

**Co-Award: Promoting Computational Thinking skills in primary school students to improve learning of geometry**

Leovy Echeverría, Ruth Cobos, Mario Morales, Fernando Moreno, Víctor Negrete