

## Guest Editorial

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Rapid developments in Technology and Engineering practices in the 21st century imposed challenges on Engineering and Technology educators to find new models and venues for dynamic and problem solving engineering and technology education. Use of experiential learning and new techniques in engineering education enhances professional skills for new engineers in this fast changing and dynamic high technology era.

This special issue “Innovation in Engineering Practice and Technology Education” consists of twelve papers in four main areas:

### **Computational Modeling and Simulation**

There are three papers on Computational Modelling and Simulation:

1. A Proposed Methodology to Evaluate Educational Competences in Engineering Degrees, Based on Electronic Devices and Open Access Software by Alfonso Gonzalez.
2. Innovative Evaluation by Projects for Course with Mixed Computer Science Degrees by Jose-Maria. Gutierrez-Martinez” Ana Castillo-Martinez, Juan Aguado-Delgado, Roberto Barchino, Salvador Otón
3. Key Issues of Low-Level Parallel Programming in the Individual Projects for Graduate Students by Irina Zakharova.

### **Experiential Learning**

There are five papers on new methods and techniques for Experiential Learning:

1. Improving Students’ Engagement and Performance through New e-Learning Tools in Laboratory Subjects in Mechanical Engineering by Silvia de la Flor; Alberto Belmonte; Albert Fabregat-Sanjuan.
2. Use of Multimedia for Experiential Learning in Engineering Technology Labs by Fei Geng and Faiez Alani.
3. Practice-Intensive Learning: An Effective Approach to Enhance the Fundamental Skills of PLC Beginners by Zhen Gao, Tom Wanyama, Ishwar Singh.
4. Virtual Field Trip for Mobile Construction Safety Education using 360-degree Panoramic Virtual Reality by Hai Chien Pham, Nhu-Ngoc Dao, Akeem Pedro, Quang Tuan Le, Rahat Hussain, Sungrae Cho, Chan Sik Park.
5. An Experience with Different Teaching Methodologies at Mechanical Engineering Program by I. Ortigosa.

### **Industry 4.0**

There are two papers covering Industry 4.0 or Interneting of thing (IOT):

1. Web-Based Control and Process Automation Education and Industry 4.0 by Marjan Golob, Božidar Bratina.
2. Analysis and Evaluation of Discussion Forums in the Teaching Process of Industrial Organization Engineering by Juan I. Castillo Tello.

### **Innovation and Engineering Design**

There are two papers on Innovation and Engineering Design:

1. Factors Affecting Innovation in Engineering Design Teams: An Empirical Investigation of Student Team Perceptions by Sarah M. Asioa and Jennifer A. Cross.
2. Effective Learning of Innovation by Engineering Students in a Multi-Disciplinary Context by L. Belkhir, R. Fleisig, and D. K. Potter.

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We are deeply thankful to the authors and reviewers for valuable contributions to this special issue, and we are indebted to Dr. Ahmad Ibrahim, IJEE Editor-in-Chief for his help and collaboration.

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May 2018