

# Conference Agenda

## Session

### REV Parallel 12: Special Session: Education & Training for Automation 4.0 (ETAT)

Time: Friday, 03/Mar/2023: 12:30pm - 2:00pm

Session Chair: Maria Teresa Restivo, LAETA-INEGI, Fac. Engineering, Univ Porto

Location: Dock Six I (with remote presentations)

External resource: [Link to Dock Six I zoom room](#) 

## Presentations

### IoT Based Monitoring in Learning Factories for Education in Smart and Sustainable Manufacturing

Matteo De Marchi<sup>1</sup>, Benedikt G. Mark<sup>1</sup>, Tanel Aruväli<sup>1</sup>, Erwin Rauch<sup>1</sup>, Dominik T. Matt<sup>1,2</sup>

<sup>1</sup>Industrial Engineering and Automation, Free University of Bozen-Bolzano, Bolzano, Italy; <sup>2</sup>Innovation Engineering Center, Fraunhofer Italia Research scarl, Bolzano, Italy

### Technical Components Integration using APIs for Predictive Maintenance in the context of Industry 4.0 Digital Transformation

Alberto Cardoso<sup>1</sup>, Joel Oliveira<sup>1</sup>, Domicio Neto<sup>1</sup>, Miguel Fernandes<sup>1</sup>, Lorena Petrella<sup>1</sup>, Jorge Henriques<sup>1</sup>, Paulo Gil<sup>1</sup>, Catarina Silva<sup>1</sup>, Bernardete Ribeiro<sup>1</sup>, Benjamin Hilliger<sup>2</sup>, Yacine Rebahi<sup>2</sup>

<sup>1</sup>University of Coimbra, Department of Informatics Engineering, Centre for Informatics and Systems of the University of Coimbra (CISUC), Coimbra, Portugal; <sup>2</sup>Fraunhofer Institute for Open Communication Systems (FOKUS), Berlin, Germany

### VR Training Effectiveness Evaluation based on Activity Data Analysis

Kanuengnij Kubola, Benchaporn Jantarakongkul, Prawit Boonmee, Nattamon Srithammee, Chalermpan Fongsamut, Prajaks Jitngernmadan

Burapha University, Thailand

### The power of Digital Twins, ERP Simulator based in Virtual and Augmented Reality, to increase the learning for Industrial Engineers Students in the educational model TEC21.

Carlos Alberto Gonzalez Almaguer, Beatriz Murrieta Cortés, Verónica Saavedra Gastélum, Natalia Frías Reid, Alejandro Acuña López, Claudia Zubieta Ramírez

Tecnologico de Monterrey, Mexico

### Approaches for Teaching Robotics

Paulo Abreu<sup>1</sup>, Maria Teresa Restivo<sup>2</sup>, Diana Urbano<sup>1</sup>, Fátima Chousal<sup>1</sup>, Dilki Arachchiger<sup>3</sup>

<sup>1</sup>LAETA-INEGI, Faculty of Engineering, University of Porto, Portugal; <sup>2</sup>Faculty of Engineering, University of Porto, Portugal; <sup>3</sup>LAETA-INEGI, University of Porto, A3ES, Portugal

### Lactate Optical Detection Setup Used For Preventive Care

Petru Epure<sup>1</sup>, Mihai Mitrea<sup>1</sup>, Ana-Maria Gurban<sup>2</sup>

<sup>1</sup>Chimgrup SRL, Romania; <sup>2</sup>ICECHIM Bucuresti, Romania