



ICIT 2021 Special Session

Teaching and promoting electronics classes including online classes



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Bio: Martin Novak received the MSc. degree in Instrumentation and Control Engineering in 2003 from the Faculty of Mechanical Engineering at the Czech Technical University in Prague, Czech Republic. He continued with a PhD. degree (2008) at the same university. In 2013 he was appointed an associate professor. His main areas of interest are microcontrollers, signal processing, measuring methods and instruments, power electronics and control systems.



Organizer 2: Larisa Dunai, Universitat Politècnica de València, Spain, email: ladu@upv.es

Bio: Larisa is an Associate Professor at Universitat Politècnica de Valencia, Spain. Her research interests is based on acoustics and cognitive systems and their applications, as well as product design and robotics. She is the chair of the TC5: Education in Engineering and Industrial Technologies. In 2013 she received the MIT Innovators Award for Spain and in 2014 the Michael Richey Medal from Royal Institute of Navigation.



Organizer 3:

Stanislav Klusáček, Brno University of Technology, Faculty of Electrical Engineering and Communication, Czech Republic, email: klusacek@feec.vutbr.cz

Bio: Over the last 15 years, Stanislav has gathered knowledge of the research and educational processes within electrical and non-electrical sensors and measurement, with special emphasis on vibration sensors and their calibration, parameters of piezoceramics, and technical diagnostics. As an assistant professor at Brno University of Technology, he is a guarantee and a teacher of tutorials and laboratory exercises for the following courses: Sensors of non-electrical quantities; Smart and Semiconductor Sensors; Measuring techniques for technical diagnostics. He is also a member of the Laboratory of Smart Sensors, which is a part of research group Cybernetics in material science at CEITEC - Central European Institute of Technology.



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-Technical Outline of the Session and Topics:

Outline of the Session

During the COVID-19 pandemic, the face-to-face teaching passed to online teaching. This action produced many drastic changes in the teaching methodology mainly for Universities based on face-to-face teaching methods. The SS should allow researcher and teachers to share novel ideas about teaching electronics for electrical and mechanical engineers. The papers that describe how to promote among students the importance of electronics even for non-electrical engineers as well as how to teach them about electric machines, sensors, electronics are welcome. Welcome are as well the papers describing novel technology and platforms used in the online teaching. It also affects papers describing the novel methods of using laboratory technology such as portable learning tools and methods in online laboratories.

Topics of the Session

- *novel ideas for teaching electronics for electrical and mechanical engineers*
- *promoting the importance of electronics even for non electrical engineers*
- *teaching online classes*
- *online learning methods*
- *software tools for online teaching*
- *hardware tools for online teaching*
- *standards and protocols in online learning*
- *e-learning management systems*

-IEEE IES Technical Committee Sponsoring the Special Session:

IES Technical Committee on Education in Engineering and Industrial Technologies