



14<sup>th</sup> IFAC INTERNATIONAL CONFERENCE on  
PROGRAMMABLE DEVICES and EMBEDDED SYSTEMS

## PDES 2016



Organized by  
**Department of Control and Instrumentation**  
**Faculty of Electrical Engineering and Communication**  
**Brno University of Technology**  
**Czech Republic**

In cooperation with

Institute of Electronics  
Silesian Technical University  
Gliwice,  
Poland



and

Department of Measurement and Control  
Faculty of Electrical Engineering and  
Computer Science  
VSB Technical University of Ostrava  
Czech Republic



Brno/Lednice, Czech Republic  
October 05<sup>th</sup> - 07<sup>th</sup>, 2016

<http://pdes-conference.eu>  
e-mail: [pdes2016@feec.vutbr.cz](mailto:pdes2016@feec.vutbr.cz)

## Sponsored by IFAC/IEEE

IFAC – International Federation of Automatic Control

### *Main Sponsor Technical Committee*

#### **TC 4.1. Components and Technologies for Control**

### *Co-sponsoring Technical Committee*

#### **TC 3.1. Computers for Control**

IEEE – The Institute of Electrical and Electronics Engineers  
Czechoslovakia Section of IEEE

## Aim and Scope

The conference organized by the Department of Control and Instrumentation of the Faculty of Electrical Engineering and Communication, Brno University of Technology is considered to be a continuation of previous PDES conferences.

The main goal of the conference is to provide a forum to present the latest research results and experiences in the area of the design and application of programmable devices and systems and a forum to discuss the current status and future trends of this particular branch of applied electronics in control and information technology.

## General Information

This call for papers invites you to submit papers and to take part at the conference. The program of the conference will include 10 topics covering the field of programmable devices and systems. The conference topics are in more details listed at the second side of this leaflet.

Prospective participants should complete on-line registration using the conference website ([pdes-conference.eu](http://pdes-conference.eu)) by June 14<sup>th</sup>, 2016. Those who want to present their papers or posters are kindly asked to provide draft paper including name and affiliation of the authors.

Papers or posters accepted by the Program Committee will be published in the conference proceedings. The authors will be asked to send camera-ready-copy manuscripts according to the required format and submit them no later than by the August 14<sup>th</sup>, 2016. The conference official language is English.

## Conference Fees

For ALL participants:

- Registration Fee 400 € (till September 15<sup>th</sup> 2016)

For non-IEEE members:

- Early Regular Registration Fee 350 € (till September 1<sup>th</sup> 2016)
- Early Student Registration Fee 200 € (till September 1<sup>th</sup> 2016)

For IEEE members:

- Early Regular Registration Fee 300 € (till September 1<sup>th</sup> 2016)
- Early Student Registration Fee 150 € (till September 1<sup>th</sup> 2016)

## Bank Contact:

Details of bank contact and terms of payment you can find on WWW pages of the conference.

## Copyright Conditions

All publication material submitted for presentation at an IFAC-sponsored meeting (Congress, Symposium, Conference, Workshop) must be original and hence cannot be already published, nor can it be under review elsewhere. The authors take responsibility for the material that has been submitted. IFAC-sponsored conferences will abide by the highest standard of ethical behavior in the review process as explained on the Elsevier webpage, and the authors will abide by the IFAC publication ethics guidelines.

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## Instructions for authors

Instructions for authors are provided to assist authors submitting papers to IFAC meetings. Using information provided below you will be able to prepare your paper in the appropriate form for inclusion in the meeting Proceedings.

### **Please follow:**

Information for IFAC authors

<http://www.ifac-control.org/events/information-for-ifac-authors>

Author Guide

<http://www.ifac-control.org/events/information-for-ifac-authors/instructions-for-authors>

Writing IFAC papers using MS Word - template

<http://www.ifac-control.org/events/resolveuid/01ba93a9dbdc853fb151b873e9bc6935>

LaTeX Style File - template

<http://www.ifac-control.org/events/resolveuid/b0e4734736878819db179d76290a8f78>

## Other information

All accepted and presented papers will be indexed in Scopus. IPC is in contact with Thomson Reuters to arrange indexation of the conference papers in ISI Proceedings (pending). This effort is kindly supported by IFAC.

## Important Dates

- **June 30<sup>th</sup>, 2016**  
Registration and Draft Papers Submissions
- **July 31<sup>nd</sup>, 2016**  
Acceptance / Rejection Papers
- **August 31<sup>th</sup>, 2016**  
Camera-ready Papers, Binding Registration
- **October 5<sup>th</sup> - 7<sup>th</sup>, 2016**  
Conference will be held

## Venue:

The conference will be held in MyHotel (<http://myhotel.cz>) in city Lednice located 55km on south from Brno. For more information about Lednice city please follow this link:

<http://www.lednice.cz/en/>

## National Organizing Committee

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## International Program Committee

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## Topics

### **1. Industrial Programmable Controllers, Industrial PC's and PLC's**

- High effective CPU structures
- Special Purpose Modules
- Sensors and Measurements Converters
- Control Program Representation Methods
- SCADA Systems
- Human Computer Interaction

### **2. Field Programmable Logic and High End Design Means**

- New Programmable Logic Devices and Supporting Tools
- Digital Circuit Design using Programmable Devices, High Level Synthesis and Partitioning
- Emulation of Digital Circuits using Programmable Devices
- Reconfigurable Architectures
- Verification of Digital Logic Systems

### **3. Embedded Systems, Microprocessors and Microcontrollers**

- Multiprocessor Systems
- Design Tools and Application Software
- Microprocessor Based Control Systems
- Emulators and Simulators
- Embedded Systems
- Hardware/Software Co-Design
- Embedded Operating Systems
- Standards, Safety and Security

### **4. Signal Processing**

- Digital Signal Processing
- A/D and D/A Converters
- Neural Signal Processing
- Wavelets
- Design and Implementation of Signal Processing Systems
- Image and Multidimensional Signal Processing
- Signal Detection and Estimation
- Sensor Array and Multichannel Processing

- Speech Processing
- Nonlinear Signal Processing

### **5. Reliability and Safety of Elements, Circuits and Systems**

- Compression, Error Correction Codes and Cryptography
- Remote Testing of Systems
- High Reliable Systems
- Fault Tolerant Circuits and Systems
- Behavioral Failure Modelling
- Quality of Communication Services
- Built-In Test Circuits and Architectures
- Analogue and Mixed-Signal Circuits Design and Test

### **6. Communication for Control Systems**

- Industrial Communication Standards – cable, wireless
- Wireless Embedded Devices in Control Systems
- Personal Digital Accessories in Context of Control Systems
- Sensor networks
- Smart grids

### **7. Industrial applications**

- Innovative Industrial Applications
- Industrial Nets
- Signal Processing Applications

### **8. Biomedical systems**

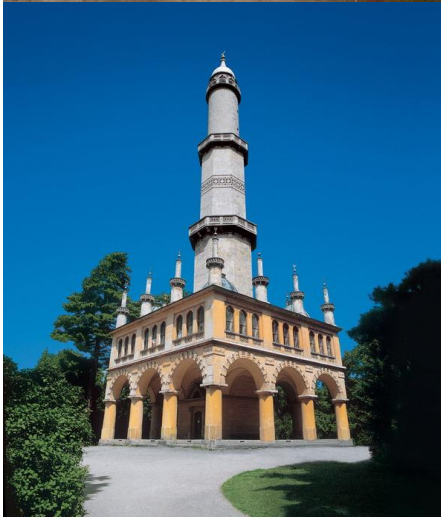
- Biosensors and Data Acquisition
- Sensors of Biological Signals
- Clinical Applications and Research
- Medical Informatics
- Supporting Technologies for Health Handicapped
- Telemedicine
- Medical Imaging and Image Analysis
- Biosignal Processing
- Biomedical Instrumentation, Modelling and Simulation
- Measurement and Control in Biomedicine

### **9. Control theory**

- Adaptive Systems
- Networked Control Systems
- Artificial Intelligence in Control Systems
- RT control
- Cyber physical systems

### **10. Renewable Power Sources**

- Control theory
- Stability and Reliability of Systems with RPS
- Devices Design
- Control Strategies



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IFAC  
 INTERNATIONAL FEDERATION  
 OF AUTOMATIC CONTROL

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 Advancing Technology  
 for Humanity

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 VŠB TU OSTRAVA  
 1991  
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