



As part of Slovenian presidency of the European Council, events will take place in the **Digital Exhibition Center at the BTC Center in Ljubljana** from 27 November to 22 December 2021 under the common name "Digital Exhibition Center - Technology for People". As part of the events on the topic of Industry 4.0 and Robotics, the **Competence Centre for Advanced Control Technologies** organizes an event entitled "**Control Technologies - technologies that make things work**". The event will be held on **Friday 3.12.2021** in hybrid form, online and live at the Digital Exhibition Center in BTC. The event will provide an overview of the priority areas of control technologies for the Factories of the Future in Slovenia. The emphasis will be on (i) **artificial intelligence for control and optimization**, (ii) **digital twins in technical processes**, (iii) **energy domain in complex systems**, (iv) **prognostics and health management of machines and processes**, (v) **industrial internet of things**, (vi) **integrated MES systems** and (vii) some **specific control applications**. For each of the control technology priority areas, a general overview of the field will be highlighted and a presentation of interesting application solutions will be given.

**December  
2021**

**03**

**Digitalno središče  
Slovenije, Hala 1 BTC,  
Ulica Gledališča BTC 6,  
Ljubljana**



[<<Register for ONLINE attendance>>](#)

## Programme:

08:30 - 9:00 Registration

09:00 - 9:30 **Introduction with Guest Speeches**

- Opening Address
  - **Tomaž Boh**, Ministry for education, science and sport : Introductory Speech
  - **Željko Pazin**: EFFRA: Made in Europe and EFFRA - assisting manufacturing companies in their different transitions
  - **Rudi Panjtar**, SRIP ToP: Smart Internationalisation for Smart Specialisation

**09:30 -12:10 Control Technologies – the Digitalization Front-runner for Green Transition**

9:30 - 11:15 Overview of the Technological Priority Areas

- **Dejan Gradišar**: Artificial Intelligence in Systems Control And Optimization
- **Marko Šimic**: Digital Twins in Technical Processes
- **Sašo Brus**: Energy Domain in Complex Systems
- **Đani Juričić**: Prognostics and Health Management of Machines and Processes
- **Marjan Golob**: Industrial Internet of Things / Challenges for Smart Factories
- **Miha Glavan**: Integrated MES

11:15 - 11:50 Presentation of two Slovenian Demonstration Development Centres

- **Marko Šimic**: Demonstration Centre for Digital Twins and Logistics Processes
- **Gregor Dolanc, Igor Škrjanc**: Demonstration Centre for Control Technologies, Artificial Intelligence and Hydrogen Technologies

11:50 - 12:10

- **Zoran Marinšek**: Green Hydrogen Prosumer in Smart Harmonized Electricity Market System

12:10 - 12:40 Lunch

**12:40 - 16:25 Breakthrough/advanced Solutions in the Technological Priority Areas**

12:40 -13:15 Artificial Intelligence in Systems Control and Optimization

- **Marko Jovanović**, SMM: Integrated System for Quality Control in Production Using an Intelligent Process Control System
- **Simon Tomažič**, FE: Artificial Intelligence in Automated Bioreactor Feeding

13:15 – 13:50 Digital Twins in Technical Processes

- **Dejan Gradišar**, IJS: INEVITABLE Project – Digital Twins to Improve Processes in Metal Industry
- **Erih Arko**, Yaskawa: Digital Twins as a Tool for Designing and Managing the Factories of the Future

13:50 – 14:10 Energy Domain in Complex Systems

- **Blaž Likozar**, KI: Digitalisation: A Prerequisite to Industrial Symbiosis of Hydrogen Economy and Carbon Utilisation

14:10 – 14:45 Prognostics and Health Management of Machines and Processes

- **Miha Kern**, Domel: Diagnostic Systems for Motors in Mass Production
- **Luka Knez**, Podkrižnik: Development of Smart Gearbox for high Precision Applications

14:45 – 14:55 Coffee Break

14:55 – 15:30 Industrial Internet of Things

- **Dragan Kusić**, TECOS: Simulations, Machines and Tools in an IIoT System for Control and Optimisation of an Injection Moulding Process
- **Marko Mandelj**, Kolektor Sisteh: IIoT, a Tool for Production OEE Monitoring

15:30 – 16:05 Integrated MES

- **Vanja Tomažič**, Metronik: Introduction of MePIS MES Solution in Discrete Industry
- **Marko Mandelj**, Kolektor Sisteh: MES, a Step in Digital Transformation of Helios Company

16:05 – 16:25 Specific Control Applications

- **Andraž Košuta**, Cosylab: New Technologies for Control Systems in Fusion, Quantum sensing, space, and more

16:25 – 16:40 Conclusions

The event is organised by the **Cluster Systems and Technologies management**. Cluster operates within the **KC STV institute**, which is one of the beneficiaries of SRIP Factories of the future.

All presentation will be in English language. Translation to other languages is not available!