Priority Research Area 5 - Process Automation and Industry 4.0
Thematic conference POB5.11 and POB5.12

Topics:
- Sub-area 11: Digital transformation, maturity models, business models

- Sub-area 12: Methods for rapid prototyping and design of multicontext controls and multicontext

3 p.m. Introduction to the conference topics Anna Timofiejczuk PhD, DSc/University Professor
3:10 p.m. Special guest of the conference
Presentation by EMEA Honeywell
Dr Marta Kapała, Strategy Planning Manger

Session I (POB5.11) conducted by Mirosław Matusek, PhD

3:30 p.m. **Silesian Competence Centre Industry 4.0 - results of implemented projects**
Anna Timofiejczuk PhD, DSc/ Associate Professor (Dean of the Faculty of Mechanical Engineering)

3:45 p.m. Silesian Competence Centre Industry 4.0
Andrzej Soldaty, Director of the Industry 4.0 Centre

4:00 p.m. The impact of digitisation on the resilience of energy companies' business models under conditions of electricity sector transformation
Joanna Staszewska (TAURON)

4:15 p.m. Digitalization level in Polish automotive companies - research results
- assessment in terms of product innovation development
Ewa Stawiarska PhD, DSc/ University Professor (Faculty of Organization and Management)
- assessment in terms of staff competence
Danuta Szwajca PhD, DSc /University Professor (Faculty of Organization and Management),
- evaluation in the quality management dimension
Radosław Wolniak, PhD, DSc/University Professor (Faculty of Organization and Management) **.**

Session II (POB5.12) chairman Adam Milik PhD, DSc/University Professor

4:40 p.m. Implementation of a high-speed programmable controller CPU. Hardware support of calculations.
Robert Czerwiński PhD, DSc /University professor, Mirosław Chmiel PhD, DSc

5 p.m. Methods for hardware representation of control programs, efficient use of logic resources
Adam Milik PhD, DSc/University Professor

5:15 p.m. Logic synthesis strategy for combinational control functions aimed at power reduction
Marcin Kubica PhD

17:30 Control program compiler for multi-context implementation, efficient methods for synchronisation of computational tasks
Michał Walichiewicz MSc

5:45 p.m. PMSM motor controller - an example of implementation of a control system with strong time dependencies Tomasz Rudnicki PhD