MTI – INSTITUTE OF MECHATRONICS AND COMPUTER ENGINEERING

Professional focus

The Institutecovers a wide range of activities, particularly in the areas of applied informatics, database systems, computer modelling, electronics and electrical engineering, automated process control, robotics systems and, more recently, in the areas of dependability and risk assessment. Academic staff and PhD students of the Institute are engaged in basic and applied research, especially within the framework of GACR, TACR, MIT, SGC, etc. The research carried out in the form of complementary activities for industrial partners plays an important role in the Institute's activities.

Working groups

- Laboratory of electric drives,
- Laboratory of modelling of coupled processes,
- Laboratory of magnetic measurements,
- Automated control and optimization research group,
- Dependability and risk department.

Other activities

- research of acoustic metamaterials and ferroelectric materials,
- development of electrical and electronic parts of mechatronic systems,
- measurement and evaluation of the quality of electrical energy,
- measurement, technical diagnostics and analysis of signals,
- development of software applications and database systems.

References

- ČEZ, a.s. – Tušimice II electrical power plant – deployment of a control system based on the principle of predictive management; Dukovanynuclear power plant – technical assistance in the field of reliability and risk assessment equipment for the administration of tangible fixed assets of the control and management system,
- DAKO-CZ, a.s. – collaboration in the development of electromechanical brake drives,
- innogy Gas Storage, s.r.o. – consulting, training and development in the field of modelling, simulation, analysis, design and optimization of underground gas storage,
- KMB systems, s.r.o. Liberec – collaboration in the development of electronics, collaboration in the research and testing of equipment for measuring the consumption and quality of electric power,
- PRECIOSA, a.s. – design of a system for simulating the behaviour of light passing through bijouterie stones with various different optical properties,
- Rieter CZ s.r.o. – long-term collaboration in the development of new textile machines.

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