



**DEPARTMENT OF AUTOMATION AND HUMAN MACHINE
INTERACTIONS**

Ing. Róbert Rákay, PhD.

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Consultation time: Monday 10:50 – 12:20, Friday 11:35 – 12:20

Curriculum

2009-2014 Faculty of Mechanical Engineering, Technical University of Kosice, Slovakia
2014 University graduate, Field- Automation and control
2018 PhD. – field: Automation
2018 Young researcher
2019 Assistant professor

Foreign language

English: B2 - Independent user , Hungarian – native level

Scientific orientation

- Wireless technologies
 - Sensor networks
 - Microcontrollers
 - Industrial control systems
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Pedagogical activities

Lectures in selected subjects:

- Basics of automation
 - Logic control
 - Sensor systems
 - System identification, modelling and simulation
 - Process control
 - Electrotechnics for automation
 - Electrotechnical engineering and electronics
 - Programming languages and tools
 - Wireless monitoring and control and others.
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Implementation of periodic teaching courses for international company PAS - Process Automation Solutions in collaboration with the Institute of Lifelong Learning TUKE since. 2016 – until now

Projecs

- **KEGA 054TUKE-4/2016** Innovation of teaching courses with a focus on automation in response to the demands of industry and services. Project leader: doc. Ing. Alena Galajdová, PhD.
- **VEGA 1/0911/14** Implementation of wireless technologies into the design of new products and services to protect human health. Project leader: prof. Ing. Dušan Šimšík, PhD.
- **VEGA 1/0330/19** Research and design of algorithms and systems for the fusion of heterogeneous data in multisensor architectures, Project leader: doc. Ing. Alena Galajdová, PhD.
- **H2020: Manufacturing Industry Digital Innovation Hubs (MIDIH)** ,reference no. 767498;period: 1.10.2017 – 30.9.2020, H2020-FOF-2017 (Factory of Future); Activity: FOF-12 a-2017, linked to the initiative I4MS; Activity type: IA (Integrated Activity); coordinator SJF TUKE: prof. Ing. Dušan Šimšík, PhD.

Grant for young researchers

- Realisation of Production Management and Monitoring System with Implementation of Industry 4.0 (Project of PhD students and Young Researchers 2017/18)

Selected publications

Automatizácia – bezdrôtové technológie a riadenie procesov / Alena Galajdová, Dušan Šimšík, Róbert Rákay - 1. vyd. - Košice : Technická univerzita v Košiciach - 2019. - 145 s.. - ISBN 978-80-553-3252-9.

Základy automatizácie / Dušan Šimšík ... [et al.] - 1. vyd. - Košice : Technická univerzita v Košiciach - 2019. - 165 s. [print]. - ISBN 978-80-553-3372-4.

Comparing of Transfer Process Data in PLC and MCU Based on IoT / Antonin Gavlas, Jiri Koziorek, Róbert Rákay - 2020. In: AETA 2018 : Recent Advances in Electrical Engineering and Related Sciences: Theory and Application. - Cham (Švajčiarsko) : Springer Nature s. 390-399 [print, online]. - ISBN 978-3-030-14906-2

Selected wireless communication protocols and their properties for use in IOT systems / Róbert Rákay ... [et al.] - 2019. In: Vedecké práce = Research papers : Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave : Faculty of Materials Science and Technology Slovak University of Technology in Trnava. - Trnava (Slovensko) : Materiálovotechnologická fakulta so sídlom v Trnave Roč. 27, č. 45 (2019), s. 26-32 [print].-ISSN1336-1589

Realizácia modulu pre experimentálne pracovisko s prvkami priemyslu 4.0 / Martin Višňovský ... [et al.] - 2019. In: ARTEP 2019 Automatizácia a riadenie v teórii a praxi 2019 : 13. ročník konferencie odborníkov z univerzít, vysokých škôl a praxe. - Košice (Slovensko) : Technická univerzita v Košiciach, 2019 s. 1-13 [CD-ROM]. - ISBN 978-80-553-3250-5

Robotic Arm with 7 DoF for Upper Limb / Boris Jobbágy ... [et al.] - 2015. In: International Journal of Engineering Research in Africa. Vol. 18 (2015), p. 199-206. - ISSN 1663-3571

Testing properties of E-health system based on Arduino / Róbert Rákay ... [et al.] - 2015. In: Journal of Automation and Control. Vol. 3, no. 3 (2015), p. 122-126. - ISSN 2372-3033