

DEPARTMENT OF CYBERNETICS AND ARTIFICIAL INTELLIGENCE

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Head of Department
Assoc. Prof. Ing. Peter Papcun, PhD.
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1 DEPARTMENT'S PROFILE

The Department of Cybernetics and Artificial Intelligence (DCAI) is responsible for education in two study programs: Intelligent Systems (bachelor, master, and PhD), and Business Informatics (bachelor and master), and cooperates on the PhD program in Computer Science.



The main research topics at the DCAI are intelligent and cognitive robotics with the aim to develop learnable collaborative robot systems, interactive intelligent environment able to perceive and recognise activities and events, cloud computation, data science, knowledge management, semantic technologies, intelligent decision support systems, mobile technologies, pervasive computing, processing and analysis of the large volume and continuous data in real-time, Internet of things, Industry 4.0, modern control theory and fault tolerant control design, cyber-physical systems, under-actuated and actuated nonlinear dynamical systems, flexible manufacturing systems, collective intelligence and computer vision.

The predecessor of the Department was founded in 1964. Department of Cybernetics and Artificial Intelligence was adapted in 1989. Currently it has 24 staff members and 17 internal PhD. students. There are 3 research centers within the department: Center for Artificial Intelligence (<http://www.cloudai.sk/>), Center of Applied Cybernetics (<http://kkui.fei.tuke.sk/info/cak>) and Center of Business Information Systems (<https://hi.kkui.fei.tuke.sk/>). The Department is involved in a number of research and educational projects (see below).

2 STAFF

Professors: prof. Ing. Dušan Krokavec, CSc.
prof. Ing. Kristína Machová, PhD.
prof. RNDr. Eva Ocelíková, CSc.
prof. Ing. Ján Paralič, PhD.
prof. Ing. Ján Samovský, CSc.
prof. Ing. Peter Sinčák, CSc.
prof. Ing. Iveta Zolotová, CSc.

Associate Professors:

doc. Ing. František Babič, PhD.
doc. Ing. Peter Bednár, PhD.
doc. Ing. Marek Bundzel, PhD.
doc. Ing. Peter Butka, PhD.
doc. Ing. Anna Filasová, CSc.
doc. Ing. Anna Jadlovská, PhD.
doc. Ing. Ján Jadlovský, CSc.
doc. Ing. Marián Mach, CSc.
doc. Ing. Peter Papcun, PhD.
doc. Dr. Ing. Ján Vaščák

Assistant Professors:

Ing. Anna Biceková, PhD.
Ing. Erik Kajáti, PhD.
Ing. Ján Magyar, PhD.
Ing. Martin Sarnovský, PhD.
Ing. Miroslav Smatana, PhD.
Ing. Martina Szabóová, PhD.

Researchers:

Ing. Maroš Hliboký
Ing. Miroslav Jaščur, PhD.
Ing. Viera Maslej Krešňáková, PhD.

Technical Staff:

Tatiana Baňasová
Ing. Lenka Ličková

Ph.D. Students (internal):

1st. Ing. Nikola Hrabovská
Ing. Lenka Kališková
Ing. Maroš Krupáš
Ing. Miroslava Pavlusová
Ing. Ľubomír Ulbrík

2nd. Ing. Tomáš Adam
Ing. Alexander Brecko
Ing. Martin Durkáč
Ing. Dušan Herich
Ing. Maroš Hliboký
Ing. Stanislav Husár
Ing. Oliver Lohaj
Ing. Kristián Mičko
Ing. Zuzana Pugelová
Ing. Tomáš Tkáčik
Ing. Jakub Ivan Vanko
Ing. Dominik Vranay

3rd. Ing. Viera Anderková
Ing. Ivan Čík
Ing. Lukáš Hruška
Ing. Michal Kolárik
Andrinandrasana David Rasamoelina, MSc.

4th. Ing. Juliana Ivančáková
Ing. Zuzana Pella
Ing. Pavol Šatala

Ph.D. Students (external):

2nd. Ing. Dušan Zagata

3rd. Ing. Jozef Rešetár

4th. Ing. Miroslava Hrešková
Ing. Ladislav Pomšár

3 RESEARCH TEAMS

- **Data science** – primarily focused on methods and models for analysis of different types of data, including big data, various aspects of data analytic models and processes in different application domains.
(<https://hi.kkui.fei.tuke.sk/>)
- **Fault-tolerant and Robust Control** – primarily focused on innovative control design techniques exploiting convex optimization problems with constraints and disturbance suppression, models and algorithms for processing and synthesis of robust control of dynamical systems working under system model uncertainties and severe failure conditions and design, implementation and experimental verification of methods guarantying system fault tolerance and reconfiguration structures of control.

- **Modern Control Techniques and Industrial Informatics** – primarily focused on methods and developing resources for hybrid modeling and control of cyber-physical systems, new methods and algorithms for modeling, identification, control and diagnostics of under-actuated and actuated nonlinear dynamical systems, research and development of flexible manufacturing systems, automated and robotic production lines and the design of diagnostic systems focused on diagnostics of vibration and chatter for the cyber systems.
(<http://kyb.fei.tuke.sk/laben/>)
- **Intelligent Cybernetic Systems** – primarily focused on machine learning algorithms, collective intelligence, and optimization, and computer vision, intelligent and cognitive robotics, smart living, intelligent space topics, sensors nets, intelligent gateways and processing with IoT/loE and cloud technologies in smart industry, and multi-robotics systems and navigation.
(<http://ics.fei.tuke.sk/>)
- **Intelligent Technologies and Systems** – primarily focused on intelligent robotics (to develop learnable collaborative robot systems), interactive intelligent environment able to perceive and recognise activities or events, and cloud computation (AI bricks – modular services providing functionality of selected artificial intelligence methods).
(<http://www.cloudai.sk/>)

4 TEACHING

4.1 Undergraduate Study (Bc.)

Subject	Semester	Lectures/exercises (hours per week)	Name of lecturer
Foundations of Intelligent Systems	2 nd	3/2	Bundzel, Papcun
Introduction to Business Informatics	2 nd	1/2	Paralič, Babič
Industry 4.0.	2 nd	2/2	Zolotová, Kajáti
Programming in Python	2 nd	2/2	Magyar
Basics of economics	2 nd	2/2	Biceková
Industrial informatics in applications	3 rd	2/2	Jadlovská
Intelligent Space and IoT	3 rd	2/2	Papcun
Simulation Systems	3 rd	2/2	Jadlovská
Project Management	3 rd	2/2	Babič
Foundations of Python Language	3 rd	2/2	Magyar
Applications of Web Technologies	3 rd	2/2	Bednár
Analysis and Design of Information Systems 1.	3 rd	2/2	Babič, Sarnovský M.
Artificial Intelligence	3 rd	2/2	Sinčák, Machová
Programming in C#	3 rd	2/2	Magyar
Application of database systems	4 th	2/2	Kajáti
Analysis and Design of Information Systems 2.	4 th	1/2	Bednár
Sensors and actuators	4 th	2/2	Jadlovský
Knowledge-Based Systems	4 th	2/2	Machová
Intelligent systems and mobile robotics	4 th	2/2	Vaščák
Subject	Semester	Lectures/exercises (hours per week)	Name of lecturer
Fuzzy Systems	4 th	2/2	Vaščák
Neural Networks	4 th	2/2	Sinčák
Supervision Systems and HMI	4 th	2/2	Zolotová, Kajáti

Machine Learning	4 th	2/2	Machová
Scheduling and Logistics	4 th	2/2	Paralič
Languages for Data Analytics	4 th	2/2	Butka
Intelligent Robotics	5 th	2/2	Papcun
Business Analytics	5 th	2/2	Butka
Application of logic in intelligent systems	5 th	2/2	Mach
Computer Systems	5 th	2/2	Jadlovský
Computer Vision	5 th	2/2	Bundzel
Computer Systems in Control	5 th	2/2	Jadlovský
Optimization in Economic Processes	5 th	2/2	Filasová
Development of intelligent mobile solutions	5 th	2/2	Babič, Butka
Business Informatics in practice	6 th	2/2	Babič
Machine Learning II	6 th	2/2	Mach
IT Management	6 th	2/2	Sarnovský M.
Repetition of the field of study	6 th	2/2	Papcun, Szabóová
Fundamentals of cloud technologies	6 th	1/2	Zolotová

4.2 Graduate Study (Ing.)

Subject	Semester	Lectures/exercises (hours per week)	Name of lecturer
Team Project	1 st	0/3	Zolotová
Multiagent and network control systems	1 st	2/2	Kajáti
Architectures of Industrial Information Systems	1 st	2/2	Zolotová, Papcun
Knowledge Discovery	1 st	2/2	Paralič
Fundamentals of Deep Learning	1 st	2/2	Sinčák
Heuristic Optimization Processes	1 st	2/2	Mach
Mathematics for intelligent systems	1 st	2/2	Szabóová
Engineering Econometrics	1 st	2/2	Krokavec
Control and Artificial Intelligence	2 nd	2/2	Jadlovská
Technologies for Big Data Processing	2 nd	2/2	Bednár, Sarnovský M.
Hybrid Computational Intelligence	2 nd	2/2	Vaščák
Evolutionary Algorithms	2 nd	2/2	Mach
Distributed Control Systems	2 nd	2/2	Jadlovský
Hybrid Computational Intelligence	2 nd	2/2	Vaščák
Machine Learning	2 nd	2/2	Machová
Current trends in Business Informatics	2 nd	2/1	Babič, Paralič
Knowledge Management	3 rd	2/2	Paralič, Bednár
Management Information Systems	3 rd	2/2	Jadlovský
Navigation methods in robotics	3 rd	2/2	Vaščák
Advanced Methods of Computer Vision	3 rd	2/2	Bundzel
Semantic and Social Web	3 rd	2/2	Machová
Languages for Intelligent Systems	3 rd	2/2	Mach
Subject	Semester	Lectures/exercises (hours per week)	Name of lecturer
Advanced Methods for Data Analysis	3 rd	1/2	Bednár
Main Knowledge of the Field Intelligent Systems and Their Use	4 th	0/2	Zolotová
Main Knowledge of the Field of	4 th	0/2	Butka

5 RESEARCH AND EDUCATIONAL PROJECTS

- **LifeBots Exchange – creating a new reality of care and welfare through the inclusion of social robots**, H2020-MSCA-RISE-2018 project 824047, duration: 2019-2023, project leader for TUKE: Marek Bundzel
- **Determinants of increased cardiovascular risk and their prognostic significance analyzed by machine learning in the detection of high-risk individuals**. Slovak Research and Development Agency project no. APVV-17-0550, duration: 2018-2022, coordinated by Daniel Pella, Faculty of Medicine, P.J. Šafárik University in Košice, members from our department: Ján Paralič (Team leader for TUKE), František Babič, Peter Butka, Zuzana Pella, Ľudmila Pusztová, Juliana Ivančáková, Pavol Šatala, Viera Anderková, Michal Kolárik, Oliver Lohaj
- **Processing and analysis of ultrasonography video sequences using artificial intelligence methods**. Slovak Research and Development Agency project no. APVV-20-0232, duration: 2021-2024, members: František Babič (project leader), Marek Bundzel, Martina Szaboová, Ján Magyar, Maroš Hliboký, Miroslav Jaščur, Ján Paralič, Viera Anderková, Michal Kolárik, Martin Samovský, Tomáš Adam.
- **Intelligent platform for managing the supply-customer chain for retail**, ITMS2014+: 313012Q957, duration: 2020 – 2022, members: František Babič, Peter Bednár, Martin Samovský, Miroslav Smatana.
- **ASPIS - Feasibility study of data-driven Autonomous Service for Prediction of Ionospheric Scintillations**. ESA (European Space Agency) grant project, 6th PECS call, duration: 2022-2023, FEI TUKE as subcontractor, members (TUKE team) : Peter Butka (TUKE team leader), Viera Maslej Krešňáková.
- **SK-S2P-Edu - Proposal for Slovak universities curriculum adaptation toward S2P market**. ESA (European Space Agency) grant project, 7th PECS call, duration: 2022-2023, FEI TUKE as prime contractor, members (TUKE team) : Peter Butka (project leader), Martin Samovský, Viera Maslej Krešňáková.
- **Intepretable data analysis models to support decision making**, Scientific Grant Agency project No. 1/0685/21, duration: 2021 – 2024, members: Ján Paralič (project leader), František Babič, Kristína Machová, Peter Butka, Peter Bednár, Martin Samovský, Miroslav Smatana, Viera Maslej Krešňáková, Anna Biceková, Zuzana Pella, Ľudmila Pusztová, Juliana Ivančáková, Michal Kolárik, Viera Anderková, Oliver Lohaj, Jakub Ivan Vanko, Tomáš Adam, Miroslava Pavlusová, Lenka Kališková
- **Intelligent Health Lab - Siemens Heathineers Space**, duration: 2019–2023, members: Iveta Zolotová (project leader), Peter Papcun, Ladislav Pomšár, Alexander Brecko, Erik Kajáti, Ján Vaščák
- **Edge-enabled inteligentné snímanie a výpočty**, APVV-20-0247, duration: 2021-2025, members: Iveta Zolotová (project leader), Ladislav Pomšár, Alexander Brecko, Peter Papcun, Erik Kajáti, Ján Vaščák, Ľubomír Urbík, Kristián Mičko and coperating organisation Betamont

- **EDEN: EDge-Enabled inteligentné systémy**, 1/0480/22, Scientific Grant Agency project, duration: 2022 – 2025, members: Peter Papcun (project leader), Iveta Zolotová, Ladislav Pomšár, Alexander Brecko, Erik Kajáti, Ján Vaščák, Kristián Mičko, Ľubomír Urblík, Maroš Krupáš
- **AAIE - Acceleration of artificial intelligence at the edge of networks**, 07/TUKE/2022, duration: 2022, members: Alexander Brecko (project leader), Dušan Herich, Melvin Alexis, Lara de León
- **Computer Vision in Intelligent Space**, FEI grant, duration: 2022, members: Peter Papcun (project leader), Erik Kajáti, Dušan Herich, Kristián Mičko, Alexander Brecko
- **ArtiPark 2 - Artificial Parkinson**, Tatra Banka Foundation, duration: 2022/2023, members: Michal Podžuban (project leader), Alexander Brecko, Ladislav Pomšár, Maryna Tsvietaieva, Iveta Zolotová
- **RoboSwarmNET**, Tatra Banka Foundation, duration: 2022/2023, members: Dušan Herich (project leader), Kristián Mičko, Peter Papcun, Yaroslav Nosenko, Gabriel Nagy, Patrik Mačina, Ján Vaščák, Iveta Zolotová
- **ALICE experiment at the CERN LHC: The study of strongly interacting matter under extreme conditions** (*Experiment ALICE na LHC v CERNe: Štúdium silno interagujúcej hmoty v extrémnych podmienkach*), ALICE TUKE - No. 0410/2022, Agreement for the co-financing of the ALICE CERN research and development project for duration: 2022 - 2026, members: Ján Jadlovský (project leader), Anna Jadlovská, Slávka Jadlovská, Milan Tkáčik, Zuzana Pugelová, Tomáš Tkáčik, Dominika Lišková, Filip Pazdič, Martin Kopecký
- **Basic Research of Deep Learning Methods for Image Processing (DL4VISION)**, Scientific Grant Agency project No. 1/0394/22, duration: 2022 – 2025, members: Peter Sinčák (project lead), Marek Bundzel, Marián Mach, Ján Magyar, Martina Szabóová, Lukáš Hruška, Miroslav Jaščur, Fouzia Adjailia, Ivan Čík, Andrinandrasana David Rasamoelina
- **Intelligent Operation and Management Systems for UAV (Inteligentné operačné a spracovateľské systémy pre UAV)**, ITMS2014+: 313011V422, duration: 2019 – 2023, members: Peter Sinčák, Marek Bundzel, Marián Mach, Ján Magyar, Ivan Čík, Andrinandrasana David Rasamoelina, Maroš Hliboký
- **Intelligent Rehabilitation of Upper Limb Tremors**, FEI grant No. FEI-2022-83, duration: 2022, members: Stanislav Husár (project lead), Maroš Hliboký, Dominik Vranay, Ivan Čík, Andrinandrasana David Rasamoelina
- **Modular Teaching of Artificial Intelligence in English (Modulárna výučba Umelej inteligencie v anglickom jazyku)**, Ministry of Education, Science, Research and Sport of the Slovak Republic, duration: 2021 – 2022, members: Peter Sinčák (project lead), Ján Paralič, Marek Bundzel, Peter Bednár, Martin Sarnovský, Ján Magyar

6 CO-OPERATION

6.1 Co-operation in Slovakia

- Department of Automatic Control Systems Bratislava, Slovak University of Technology, Bratislava
- Faculty of Informatics and Information Technologies, Slovak University of Technology in Bratislava
- Institute of Computer Science, University of P.J. Šafárik, Košice
- Kempelen Institute of Intelligent Technologies, Bratislava
- Institute of Computer Science, Slovak Academy of Sciences in Bratislava
- Department of Biophysics IEP Slovak Academy of Science
- Institute of Experimental Physics, Slovak Academy of Sciences
- Department of applied informatics (Centre for Cognitive Science), Faculty of Mathematics, Physics and Informatics, Comenius University, Bratislava
- Department of Control and Information Systems, Faculty of Electrical Engineering, University of Zilina
- Accenture Košice
- Americká obchodná komora na Slovensku
- bart.sk Košice
- Betamont Slovakia
- Control Systems Slovakia
- Elcom Prešov
- Erste Group IT International GmbH Bratislava
- Exponea Bratislava
- Fpt Slovakia: FPT Group
- Freudenberg IT
- GlobalLogic Slovakia
- Gymbeam Košice
- IBM Slovakia
- IT Valley Košice
- Microsoft Slovakia
- Ness Košice Development Center
- Promiseo Košice
- Siemens Heatheeners, Košice
- US Steel Košice
- ui42 Bratislava
- VSE Holding, člen Innogy
- Východoslovenská distribučná, člen Innogy

6.2 International Co-operation

- Department of Software Engineering and Interactive Systems, Vienna University of Technology, Austria
- Dept. for Technical & Operational Information Systems (Data & Knowledge Engineering Group), Otto-von-Guericke-University Magdeburg, Germany
- University of Regensburg, Germany
- University of Dortmund, Germany
- Waseda University, Tokyo, Japan
- Technical University of Czestochowa
- Tokyo Institute of Technology, Japan
- Kuyshu Institute of Technology, Japan

- University Pablo de Olavide of Seville, Spain
- Université Joseph Fourier Grenoble, IUT 1 (Institut Universitaire de Technologie 1), Grenoble, France
- Heudiasyc UMR CNRS 6599, UTC, Compiègne, France
- Université Henri Poincaré, Laboratoire CRAN (Centre de Recherche en Automatique de Nancy), Nancy 1, France
- Department of Informatics, Technical University Ostrava, Czech Republic
- Department of Control Systems and Instrumentation, Faculty of Mechanical Engineering Technical University Ostrava, Czech Republic
- Department of Cybernetics and Biomedical Engineering, Technical University Ostrava, Czech Republic
- Department of Cybernetics, Czech Technical University Prague, Czech Republic
- Department of Control Engineering, Czech Technical University, Prague, Czech Republic
- Institute of Information Theory and Automation, Academy of Sciences of Czech Republic, Prague, Czech Republic
- Department of Information Engineering, Faculty of Economics and Management, Czech University of Agriculture, Prague, Czech Republic
- Faculty of Informatics and Management, University of Hradec Králové, Czech Republic
- Dept. of Computer Science and Engineering, Faculty of Applied Sciences, University of West Bohemia, Plzeň
- The Technical Faculty of IT and Design, Aalborg University, Denmark
- Faculty of Mechanical Engineering, Department of Automation, Institute of Information, University of Miskolc, Hungary
- Óbuda University, Budapest, Hungary
- Budapest University of Technology and Economics, Hungary
- Hungarian Academy of Sciences, Computer and Automation Research Institute, Hungary
- Regional Association of the Hungarian Academy of Sciences, Miskolc, Hungary
- Laboratory for Industry 4.0 Smart Manufacturing Systems (LI4.0) , University of Auckland, New Zealand
- Center for Innovation in Design and Technology, Monterrey, Mexico
- Ulysseus, the European University for the citizens of the Future, university alliance
- CERN, LHC, ALICE: European Organization for Nuclear Research, Large Hadron Collider, A Large Ion Collider Experiment, Geneva, Switzerland

6.3 Membership in International Organizations and Societies

- Bundzel M.: IEEE, Computational Intelligence Society
- Krokavec, D.: Member of the International Federation of Automatic Control IFAC Technical Committee TC 1.4 Stochastic Systems and TC 6.4 Fault Detection, Supervision & Safety of Technical Processes
- IEEE Student Branch – Lojka, Miškuf, Hvizdoš, Mocnej, Ferenčík, Kajáti
- Ocelíková, E.: CSSSCzech and Slovak Society for Simulation
- Machová, K.: ACM – Association of Computer Machinery
- Papcun P.: IEEE, Automation and Robotic Society
- Paralič, J.: IEEE – senior member, ACM – Association for Computing Machinery,

- Sabol, T.: Information Society Technologies Program Committee (IST PC), 5th Framework Program, Brussels
- Samovský, J.: INESInternational Network of Engineers and Scientists for Global Responsibility
- Samovský, J.: Principia Cybernetica Web PRNCYB-L
- Samovský, J.: SWISSupplementary Ways for Improving International Stability
- Sinčák P.: European Society of Neural Networks
- Sinčák P.: IEEE, Computational Intelligence Society
- Vaščák, J.: IEEE – senior member, Computational Intelligence Society
- Zolotová, I.: IEEE – senior member, IEEE SMC Society, IEEE Educational Society

6.4 Membership in Slovak Organizations and Societies

- The whole Department of Cybernetics and Artificial Intelligence is a team member of:
 - Slovak Society for Cybernetics and Informatics
 - Slovak AI Society
- Filasová, A.: Slovak Society for Cybernetics and Informatics
- Krokavec, D.: Slovak Electrical Engineering Society
- Jadlovská, A; Ocelíková, E.; Samovský, J.: Slovak Society for Cybernetics and Informatics
- Paralič, J.: Slovak Society for Computer Science

6.5 International Networks and Exchange Programs

- Erasmus+ programme agreement between TU of Košice and University of Auckland, New Zealand, contact person: Iveta Zolotová
- SocratesErasmus agreement between TU of Košice and Czech University of Life Sciences, Prague, Czech Republic. Contact person: Eva Ocelíková
- Socrates Erasmus agreement between TU of Košice and University Pablo de Olavide, Sevilla, Spain. Contact person: Ján Vaščák
- SocratesErasmus agreement between TU of Košice and University Hradec Kralove, Czech Republic. Contact person: Ján Vaščák

6.6 Visits of Staff Members to Foreign Institutions

- P. Sinčák: Miškolc, Maďarsko, 10.2.
- P. Sinčák: Miškolc, Maďarsko, 2.3.
- M. Tkáčik: Ženeva, Švajčiarsko, 13.-27.3.
- P. Bednár: Plzeň, ČR, 5.4.
- P. Sinčák: Miškolc, Maďarsko, 1. 4.
- P. Sinčák: Soul, Južná Kórea, 27.5.-8.7.
- P. Papcun:Soul, Južná Kórea, 5.-12.6.
- F. Babič: Helsinkí, Fínsko, 6-10.6
- M. Bundzel: Praha, ČR, 8.-10. 6.
- J. Magyar: Praha, ČR, 8.-10.6.
- F. Babič: Viedeň, Rakúsko, 23.-26.8.
- T. Tkáčik: Ženeva, Švajčiarsko, 8.-20.7.
- M. Bundzel: Caritas, Coimbra, Portugalsko 9.8.-10.9.
- J. Magyar: Pisa, Taliansko, 31.8.-2.10.
- T. Tkáčik: Ženeva, Švajčiarsko, 7.-21.9.
- F. Pazdič: Ženeva, Švajčiarsko, 7.-21.9.

- D. Lišková: Ženeva, Švajčiarsko, 7.-21.9.
- P. Papcun: Visegrad, Maďarsko, 11.-14.9.
- J. Vaščák: Visegrad, Maďarsko, 11.-14.9.
- P. Papcun: Doksy, ČR, 6. 8. 9.
- J. Jadlovský: Doksy, ČR, 6.-8.9.
- F. Babič: Praha, ČR, 7.-9.9.
- M. Sarnovský: Lisabon, Portugalsko, 3.10.-3.11.
- M. Szabóová: Helsinky, Fínsko, 20.-24.9.
- M. Bundzel: Nice, Francúzsko, 3.-7.10.
- F. Babič: Olomouc, ČR, 2.-5.11.
- P. Bednár: Budapešť, Maďarsko, 12.-14. 10.
- K. Machová: Corfu, Grécko, 18.-22.10.
- M. Krupáš: Budapešť, Maďarsko, 28.-30.10.
- A. Brecko: Ostrava, ČR, 22.-24.11.
- D. Herich: Ostrava, ČR, 22.-24.11.
- I. Zolotová: Ostrava, ČR, 23.-24.11.
- E. Kajáti: Ostrava, ČR, 23.-24.11.
- M. Sarnovský: Budapešť, Maďarsko, 21.-23.11.
- M. Kolárik: Budapešť, Maďarsko, 22.11.
- T. Tkáčik: Ženeva, Švajčiarsko, 21.11.-4.12.
- D. Lišková: Ženeva, Švajčiarsko, 21.11.-4.12.
- F. Pazdič: Ženeva, Švajčiarsko, 21.11.-4.12.
- M. Kopecký: Ženeva, Švajčiarsko, 21.11.-4.12.
- P. Sinčák: Budapešť, Maďarsko, 18.11.
- M. Kolárik: Budapešť, Maďarsko, 22.11.
- P. Sinčák: Miškolc, Maďarsko, 16.12.
- J. Magyar: Miškolc, Maďarsko, 16.12.
- M. Szabóová: Miškolc, Maďarsko, 16.12.
- D. Vranay: Miškolc, Maďarsko, 16.12.

7 THESES

Thesis type	Bachelor	Master	Doctoral
Number	91	74	5

8 PUBLICATIONS

9.1. Journals

- [1] BABIČ, František BUREŠ, Vladimír ČECH, Pavel HUSÁKOVÁ, Martina MIKULECKÝ, Peter MLS, Karel NACHÁZEL, Tomáš PONCE, Daniela ŠTEKEROVÁ, Kamila TRIANTAFYLLOU, Ioanna TUČNÍK, Petr ZANKER, Marek: Review of Tools for Semantics Extraction: Application in Tsunami Research Domain. In: Information. Bazilej (Švajčiarsko): Multidisciplinary Digital Publishing Institute Roč. 13, č. 1 (2022), s. [1-30] [online]. ISSN 2078-2489 (online)
- [2] MACHOVÁ, Kristína MACH, Marián VASILKO, Matej: Comparison of machine learning and sentiment analysis in detection of suspicious online reviewers on different type of data. In: Sensors. Bazilej (Švajčiarsko):

- Multidisciplinary Digital Publishing Institute Roč. 22, č. 1 (2022), s. [1-18] [online, print]. ISSN 1424-3210
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8.1 Other publications

Publication Type	Confereces		Other
	Foreign	Home	
Number	15	41	0