

LIST OF SUPERVISORS Study at the University of Pardubice

Discover your identity



UNIVERSITY OF PARDUBICE

The University of Pardubice is one of the best public universities in the Czech Republic. It was founded in 1950 and its 7 faculties provide education to nearly 7 thousand students. The University offers 40 study programmes in English for international students, the vast majority of which are doctoral programmes. To make it easier for you to choose the study branch, study programme and supervisor for your doctoral studies, we prepared a list of supervisors who can participate in your dissertation and guide you to the successful completion of your doctoral studies at the University of Pardubice.

Choose your field of study



FACULTY OF CHEMICAL TECHNOLOGY FACULTY OF ARTS AND PHILOSOPHY FACULTY OF ECONOMICS AND ADMINISTRATION FACULTY OF ELECTRICAL ENGINEERING AND INFORMATICS FACULTY OF TRANSPORT ENGINNERING





FACULTY OF CHEMICAL TECHNOLOGY

The Faculty of Chemical Technology is the oldest faculty at the University of Pardubice; it has an seventy-year long tradition of excellence. The Faculty is held in high esteem in both the Czech Republic and abroad. It has become an important centre of research and education in the fields of chemistry and technical chemistry, materials science, chemical technologies, nanotechnology, both biological and biochemical sciences, and managerial and controlling processes. Postgraduate students participate in various research projects and gain professional experience at other universities and conferences both nationwide and internationally.



CHOOSE YOUR PROGRAMME AT THE FACULTY OF CHEMICAL OF TECHNOLOGY

Select the doctoral programme you are interested in and click on it to be redirected to the supervisors who will be available.

Study Programme

Analytical Chemistry

Biochemistry

Chemical Engineering

Chemistry and Technology of Inorganic Materials

Economics and Management of Businesses with Process Manufacturing Operations Engineering of Energetic Materials Environmental Engineering Inorganic Chemistry Inorganic Technology Organic Chemistry Organic Technology Physical Chemistry Surface Engineering





ANALYTICAL CHEMISTRY



MARTIN ADAM

martin.adam@upce.cz



Martin Adam completed his doctoral studies in the group of prof. K. Ventura at the Faculty of Chemical Technology, successfully completing his studies at the University of Pardubice in 2001. In the same year, he joined the Department of Analytical Chemistry at the Faculty of Chemical Technology of the University of Pardubice, where he still works. In 2009, he was appointed Associate Professor in Analytical Chemistry.

Scientific interest -

- Food analysis and analysis of significant components in foodstuffs, food supplements, and plant matrix.
- Sample preparation methods, microextraction techniques (SPME, SDME, DLLME, MEPS, etc. followed by chromatographic techniques (GC-MS, GC-FID, and HPLC/UV).
- Methods of extraction conditions optimisation by means of the Design of Experiment Approach (CCD - central composite design, FFD - full factorial design, etc.) and surface response modelling (SRM).

Bibliometric indicators (Web of Science)

• Number of papers 33, H-index 11, Total number of citations 362 (391 Scopus)

Important projects carried out from the position of principal investigator

or co-investigator

- The implementation of new task for laboratory practice C513 Laboratory of Food Analysis, 2019, Ministry of Education, Youth and Sports, IRS_2019_006
- Task modernisation of "Laboratory of Food Analysis" course, 2015, Ministry of Education, Youth and Sports, IRS2015/037

- Havelcová M., Machovič V., Špaldoňová A., Lapčák L., Hendrych J., Adam M.: Characterization of Eocene fossil resin from Moravia, Czech Republic: Insights into macromolecular structure, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 215 (2019) 176-186.
- Adam M., Bajer T., Bajerová P., Ventura K.: Modified QuEChERS Approach for Analysis of Synthetic Food Dyes in Jellies and Smarties, Food Analytical Methods 11 (2018) 1619-1626.
- Surmová S., Wiśniewska P., Śliwińska M., Dymerski T., Wardencki W., Namieśnik J., Ventura K., Adam M., Eisner A.: Classification of the alcoholic beverages by using electronic nose technique based on ultra-fast GC, Scientific papers of the University of Pardubice, Series A 26 (2020) 147 - 156.
- Psota V., Musilová M., Sachambula L., Horáková V., Přinosil A., Šmíd F., Adámková K., Adam M.: Malting quality of winter wheat (Triticum aestivum L.), Kvasný Průmysl 64 (2018) 302-313.

Supervision of doctoral theses

- 1 student of the doctoral study programme supervisor
- 2 students of the doctoral study programme co-supervisor

Membership in professional associations and boards

- Member of the Czech Chemical Society
- Member of the Committee: Working Group of Analytical Chemistry at the Czech Chemical Society

PETRA BAJEROVÁ

petra.bajerova@upce.cz



Petra Bajerová completed successfully her doctoral studies at the University of Pardubice in 2007. In 2005, she joined the Department of Analytical Chemistry at the Faculty of Chemical Technology of the University of Pardubice, where she still works. In 2015, she was appointed Associate Professor in Analytical Chemistry.

Scientific interest

- Various type of extraction techniques (SPME, SFE, PFE, LLE, SPE, HD, SD)
- Plant matrix (herbs, spice)

Bibliometric indicators (Web of Science)

• Number of papers 42, H-index 12, Total number of citations 391

Important publications

- Bajer T., Šilha D., Ventura K., Bajerová P.: Composition and antimicrobial activity of the essential oil, distilled aromatic water and herbal infusion from Epilobium parviflorum Schreb., Industrial Crops and Products 100 (2017) 95–105.
- Bajer T., Surmová S., Eisner A., Ventura K., Bajerová P.: Use of simultaneous distillation extraction, supercritical fluid extraction and solid-phase microextraction for characterisation of the volatile profile of Dipteryx odorata (Aubl.) Willd, Industrial Crops and Products 119 (2018) 313-321.

Supervision of doctoral theses

- 4 students of doctoral study programme
- 13 students of Master degree programme

LIBOR ČERVENKA

libor.cervenka@upce.cz



Libor Červenka graduated from the University of Pardubice (Faculty of Chemical Technology) in the study programme Chemistry and Technology of Foodstuffs (in 1998). He joined the Department of Analytical Chemistry at the Faculty of Chemical Technology of the University of Pardubice where he still works. In 2002, he successfully completed his doctoral studies at the Military University of the Ground Forces Vyškov (study programme Economy and Hygiene of Nourishment). He was appointed Associate Professor in Analytical Chemistry in 2009.

Scientific interest

- moisture sorption behaviour of food
- novel food products

Bibliometric indicators (Web of Science)

• Number of papers 39, H-index 11, Total number of citations 257

Prominent international cooperation

• dr hab. Slavomir Pietrzyk, professor UR – University of Agriculture in Krakow

Important publications

- Přikryl J., Hájek T., Švecová B., Salek R. N., Černíková M., Červenka L., Buňka F.: Antioxi dant properties and textural characteristics of processed cheese spreads enriched with rutin or quercetin: The effect of processing conditions, LWT-Food Science and Technology 87 (2018), 266–271.
- Červenka, L., Stepien A., Frühbauerová M., Velichová H., Witczak M.: Thermodynamic properties and glass transition temperature of roasted and unroasted carob (Ceratonia silique L.) powder, Food Chemistry 300 (2019).

Supervision of doctoral theses

2 students

PETR ČESLA

petr.cesla@upce.cz



Petr Česla is Associated Professor at the Department of Analytical Chemistry, where he received both his Master degree in 2002 and Ph.D. degree in 2007. He finished his habilitation in 2016 in the field of liquid phase separation techniques – liquid chromatography and capillary electrophoresis. In 2005, he joined the department, first as a research associate and later as a permanent member of the academic staff. The research interest of doc. Česla is in fundamentals and application of liquid phase separation techniques, development of liquid chromatographic and capillary electrophoretic separations, and two-dimensional separations. Partly, he is interested in optimisation of LC and CE separations, processing of experimental data, and coupling of LC and CE to mass spectrometry.

Bibliometric indicators (Web of Science)

• Number of papers 40, H-index 16, Total number of citations >850

Prominent international cooperation

- prof. F. Pellati University of Modena and Reggio Emilia, Modena, Italy
- prof. S. Wiedmer University of Helsinki, Helsinki, Finland

Important projects carried out from the position of principal investigator

- Development of electromigration methods and their application in multidimensional analytical separation methods, 2009 – 2011, Czech Science Foundation, 203/09/P199.
- Development of microfluidic interfaces for multidimensional liquid phase separation/ mass spectrometry analysis of complex biological samples, 2014 – 2016, Czech Science Foundation, 14-063195
- Focusing effects in multidimensional liquid-phase separations, 2018 2020, Czech Science Foundation, 18-14893S
- Self-adaptive multidimensional separations, 2022 2024, Czech Science Foundation, 22-095565

- Česla P., Vaňková N., Křenková J., Fischer J. Comparison of isocratic retention models for hydrophilic interaction liquid chromatographic separation of native and fluorescently labelled oligosaccharides. J. Chromatogr. A 2016; 1438: 179-188. IF(2016) = 3.981
- Česla P., Křenková J. Fraction transfer process in on-line comprehensive two-dimensional liquidphase separations. Review article, J. Sep. Sci. 2017; 40: 109-123. IF(2017) = 2.415
- Česla P., Hájek T., Jandera P. Optimization of two-dimensional gradient liquid chromatography separations. J. Chromatogr. A 2008; 1216: 3443-3457. IF(2008) = 3.756

Awards/achievements

- Best Presentation Award, YISAC 2007 International conference, Zagreb, Croatia
- 3rd Best Poster Award, HPLC 2008, Baltimore, MD, USA
- István Halász Foundation Applied Physical Chemistry Award, HPLC 2009, Dresden, Germany
- Elsevier Highly Cited Author Award 2007-2009 co-author of an awarded publication
- HPLC 2010 Symposium Award for Outstanding Poster, Boston, MA, USA
- Nomination for Csaba Horváth Young Scientist Award, HPLC 2012, Anaheim, CA, USA
- Poster nominations amongst the best 30 posters, HPLC 2013, Amsterdam, Netherlands, amongst the best 20 posters, HPLC 2015, Geneva, Switzerland
- Review publication announced one of the journal's top 20 most downloaded papers (July 2016 June 2018).

Supervision of doctoral theses

- 3 students in an ongoing doctoral study programme
- 28 finished Master degree theses

LENKA ČESLOVÁ

lenka.ceslova@upce.cz



Lenka Česlová worked on her diploma and dissertation theses in the group of prof. Jandera at Department of Analytical Chemistry, University of Pardubice. She completed her doctoral studies in 2004, and in 2012 she was appointed Associate Professor in Analytical Chemistry. Since 2001, she has been working at the Department of Analytical Chemistry.

Scientific interest

 High-performance liquid chromatography and its coupling with mass spectrometry, specialisation in the analyses of biologically active compounds in natural matrices.

Bibliometric indicators (Web of Science)

• Number of papers 48, H-index 21, Total number of citations 1055

Important publications

- J. Klikarová, L. Česlová, J. Fischer, Journal of Chromatography, 1644 (2021) 462134. Rapid analysis of phenyl isothiocyanate derivatives of amino acids present in Czech meads.
- A. Arigò, P. Česla, P. Šilarová, M. L. Calabrò. L. Česlová, Food Chemistry, 245 (2018) 829-837. Development of extraction method for characterization of free and bonded polyphenols in barley (Hordeum vulgare L.) grown in Czech Republic using liquid chromatography -tandem mass spectrometry.
- L. Česlová, K. Pravcová, M. Juričová, J. Fischer, Food Control, 134 (2022) 108737. Rapid HPLC/MS/MS analysis of phenolic content and profile for mead quality assessment.

Awards/achievements

- Journal of Mass Spectrometry Award (2003)
- Czech Society for Experimental and Clinical Pharmacology of Czech Medical Society J.E. Purkyně (2003)

Supervision

- 4 students of doctoral study programme
- 23 students of Master degree programme

Membership in professional associations and boards

- Czech Chemical Society
- Joannes Marcus Marci Mass Spectrometry Society

JAN FISCHER

jan.fischer@upce.cz



Jan Fischer completed his postgraduate studies in the group of prof. Jandera at the former University of Chemical Technology in Pardubice (now the Faculty of Chemical Technology, University of Pardubice) in 1994, receiving the scientific title CSc. He has been employed at the Department of Analytical at Chemistry Faculty of Chemical Technology of the University of Pardubice since 1993, and in 2003 he was appointed Associate Professor in Analytical Chemistry. He is the Deputy Head of the Department of Analytical Chemistry.

Scientific interest

- HPLC and related methods: analysis of biologically active compounds, analysis dyes and pigments
- sample treatment: modern extraction methods for trace analysis

Bibliometric indicators (Web of Science)

• Number of papers 36, H-index 16, total number of citations >820

Important publications

- Klikarova J., Ceslova L., Fischer J.: Rapid analysis of phenyl isothiocyanate derivatives of amino acids present in Czech meads. J. Chromatogr. A 1644 (2021) 462134
- Nováková Z., Pejchal V., Fischer J., Česla P.: Chiral separation of benzothiazole derivatives of amino acids using capillary zone electrophoresis. J. Sep. Sci. 40 (2017) 798-803
- Holčapek M., Jandera P., Fischer J., Prokeš B.: Analytical monitoring of the production of biodiesel by highperformance liquid chromatography with various detection methods. J. Chromatogr. A 858 (1999) 13-31

Supervision of doctoral theses

- 2 students of doctoral study programme
- 36 students of Master degree programme

FACULTY OF CHEMICAL TECHNOLOGY

UNIVERSITY OF PARDUBICE

MICHAL HOLČAPEK

michal.holcapek@upce.cz



Michal Holčapek defended his Ph.D. thesis "Coupling of Liquid Chromatography and Mass Spectrometry" under the supervisor of Prof. Pavel Jandera in 1999. Then he continued the research work at the Department of Analytical Chemistry, where he was appointed Associate Professor in Analytical Chemistry in 2003 and Professor in Analytical Chemistry in 2009.

Scientific interest

- Mass spectrometry and its coupling with liquid chromatography or supercritical fluid chromatography
- Lipidomic analysis and biomarker research

Prominent international cooperation

- M.R. Wenk, National University of Singapore, Singapore
- G. Liebisch, Institute of Clinical Chemistry and Laboratory Medicine, University Hospital Regensburg, Germany

Bibliometric indicators (Web of Science)

• Number of papers 143, H-index 43, total number of citations > 5500

Important projects carried out from the position of principal investigator

- Prospective study on early pancreatic cancer detection and therapy monitoring using lipidomic profiling by mass spectrometry, grant project No. NU21-03-00499, 2021 - 2024, Czech Health Research Council
- Mass Spectrometry in Cancer Research: Lipid Biomarkers for Early Diagnostics, ERC CZ program, grant Project No. LL1302, 2013 - 2018, The Ministry of Education, Youth and Sports

- M. Holčapek, P. Jandera, P. Zderadička, L. Hrubá, Characterization of Triacylglycerol and Diacylglycrol Composition of Plant Oils Using High-performance Liquid Chromatography
 Atmospheric Pressure Chemical Ionization Mass Spectrometry, J. Chromatogr. A 1010 (2003) 195-215
- D. Wolrab, R. Jirásko, E. Cífková, M. Höring, D. Mei, M. Chocholoušková, O. Peterka, J. Idkowiak, T. Hrnčiarová, L. Kuchař, R. Ahrends, R. Brumarová, D. Friedecký, G. Vivo-Truyols, P. Škrha, J. Škrha, R. Kučera, B. Melichar, G. Liebisch, R. Burkhardt, M.R. Wenk, A. Cazenave -Gassiot, P. Karásek, I. Novotný, K. Greplová, R. Hrstka, M. Holčapek, Lipidomic profiling of human serum enables detection of pancreatic cancer, Nat. Com. 13 (2021) 124

- H.C. Köfeler, T. Eichmann, R. Ahrends, J.A. Bowden, N. Danne-Rasche, E.A. Dennis, M. Fedorova, W.J. Griffiths, X. Han, J. Hartler, M. Holčapek, R. Jirásko, J.P. Koelmel, C.S. Ejsing, G. Liebisch, Z. Ni, V.B. O'Donnell, O. Quehenberger, D. Schwudke, A. Shevchenko, M.J.O. Wakelam, M.R. Wenk, D. Wolrab, K. Ekroos, Quality control requirements for the correct annotation of lipidomics data, Nat. Com. 12 (2021) 4771
- D. Wolrab, R. Jirásko, O. Peterka, J. Idkowiak, M. Chocholoušková, Z. Vaňková, K. Hořejší, I. Brabcová, D. Vrána, H. Študentová, B. Melichar, M. Holčapek, Plasma lipidomic profiles of kidney, breast, and prostate cancer patients differ from healthy controls, Sci. Rep. 11 (2021) 20322
- M. Holčapek, G. Liebisch, K. Ekroos, Lipidomic Analysis, Anal. Chem. 90 (2018) 4249-4257

Awards/achievements

- 2020, 2015, and 2013 Power List 2020, 2015 and 2013 Around the World in 60 Scien tists or The Top 100 most influential people in analytical science, The Analytical Scitist
- 2020 First recipient of Rector's Plaque for Exceptional Scientific Achievement
- 2019 and 2016 Prize of V. Hanuš for best mass spectrometry paper, Czech Spectrosco pic Society J.M.M.

Supervision of doctoral theses

Supervisor of 8 defended and 4 running PhD. thesis

Membership in professional associations and boards

- 2019 now Contributing Editor, TrAC Trends in Analytical Chemistry (IF=12.30, D1)
- 2019 now Vice-President for Conferences, International Lipidomics Society
- 2019 now National Representative, Central European Group for Separation Sciences
- 2018 now Founding Member, Lipidomics Standards Initiative
- 2014 now Advisory Board, Analytical and Bioanalytical Chemistry (IF=4.16, Q1)
- 2014 2016 Features panel in Editorial advisory board, Analytical Chemistry (IF=6.99, Q1)
- 2010 now Founding Member and Member of Steering Committee, Czech Lipidomic Section

LENKA HUSÁKOVÁ

lenka.husakova@upce.cz



Lenka Husáková obtained her Ph.D. at the University of Pardubice in 2007, where she became Associate Professor of Analytical Chemistry in 2019. She currently leads the research group of Atomic Spectroscopy (AS) and her research is devoted to the investigation of the capabilities of different AS techniques for bulk and spatially resolved trace and isotopic analysis of solid samples and complex liquid materials. Her research interest focuses also on the implementation of the data science and statistical machine learning techniques in analytical chemistry. She provides elemental analyses to a global community of private industry and academic institutions. Also, she serves as a regular referee for several international journals.

Scientific interest

- Atomic spectrometry: mostly inductively coupled plasma mass spectrometry and high-resolution continuum source electrothermal atomic absorption spectrometry
- Data science and machine learning

Bibliometric indicators (Web of Science)

• Number of papers 24, H-index 10, Total number of citations > 230

Prominent international cooperation

 prof. E. Zanardi, Dr. M.O. Varrà, etc. – University of Parma, Department of Food and Drug, Italy

Important projects carried out from the position of principal investigator or co-investigator

- Application of Security Research in the Field of Explosives, 2009 2012, Ministry of Industry and Trade, FR-TI1/125.
- Introduction of a hydride generation system coupled to atomic absorption spectrometry in the Advanced instrumental analysis laboratory courses, 2018, Ministry of Education, Youth and Sports of the Czech Republic, IRS 2018/011.

Supervision of doctoral theses

Specialist tutor for 2 students

Important publications

- Husáková L., Urbanová I., Šafránková M., Šídová T.: Slurry sampling high-resolution continuum source electrothermal atomic absorption spectrometry for direct beryllium determination in soil and sediment samples after elimination of SiO interference by least-squares background correction, Talanta 175 (2017) 93–100.
- Varrà M.O., Husáková L., Patočka J., Ghidini S., Zanardi E.: Classification of transformed anchovy products based on the use of element patterns and decision trees to assess traceability and country of origin labelling, Food Chemistry 360 (2021) 129790.

Awards/achievements

- Postgraduate diploma in Interactive statistical data analysis, University of Pardubice, 2017.
- Certificate of Outstanding Contribution in Reviewing for Journal of Food Composition and Analysis, Elsevier (2017).
- Certificate in Quantitative Methods for Biology, Harvard (2021).

Membership in professional associations and boards

- 2020 2021: Guest Editor, Molecules, Multidisciplinary Digital Publishing Institute AG: Basel, Switzerland (ISSN: 1420-3049).
- 2015 to present: Editorial Board Member, Journal of Food Composition and Analysis, Elsevier (ISSN: 0889-1575)

IVAN ŠVANCARA

ivan.svancara@upce.cz



Ivan Švancara completed his doctoral studies under the supervision of Prof. K. Vytřas at the University of Pardubice (UPa) in 1995. In the same year, he started his career at the same institution as a lecturer and, one year later, as an assistant. In 2002, he was appointed Associate Professor in Analytical Chemistry. In 2007, he has become Professor of Analytical Chemistry, and he is working in this position at UPa up until now.

Scientific interest

- electroanalysis: development and application of new electrodes and sensors, especially those from the family of carbonaceous electrodes and non-mercury metal-film plated electrodes
- environmental analysis focused on toxic inorganic species and organic pollutants
- analysis of biologically important compounds and selected pharmaceuticals

Pivotal international cooperation

- prof. K. Kalcher Karl Franzens University Graz, Austria
- prof. A. Economou, prof. S. Sotiropoulos Aristotle University in Thessaloniki, Greece
- Dr. B. Ogorevc and Dr. S. Hočevar National Institute of Chemistry, Ljubljana, Slovenia

Scientific profile (based on bibliometric data in Web of Science)

• Number of papers: 122, H-index: 40, Total number of citations: > 5300

Recent important projects in the position of principal investigator or co-investigator

• Projekt "CZ.1.07/2.3.00/30.0021 "Enhancement of R&D Pools of Excellence at the University of Pardubice"; Donated by: Ministry of Education, Youth, and Sport; Czech Rep. / UPa. IV 2013 - III 2015

Pedagogical profile (selected activities)

- 6 students of doctoral study programme
- 30 students of Master degree programme

Recent important publications

- Ivan Švancara, Kurt Kalcher, Alain Walcarius, Karel Vytřas: "Electroanalysis with Carbon Paste Electrodes" (a book within the Analytical Chemistry Series; Charles H. Lochmuller, ed.) CRC Press / Taylor & Francis Group, Boca Raton (FL, USA); 2012. ISBN-13: 978-1439830192
- Hanna Sopha, Jérome Roche, Ivan Švancara, Alexander Kuhn: "Wireless Electrosampling of Heavy Metals for Stripping Analysis with Bismuth-Based Janus Particles" Anal. Chem. 86 (2014) 10515-10519
- Granit Jashari, Ivan Švancara, Milan Sýs: "Determination of Ethanol in Alcoholic Drinks: Flow Injection Analysis with Amperometric Detection Versus Portable Raman Spectrometer". Electroanalysis 32 (2020) 1949–1956



BIOCHEMISTRY



ZUZANA BILKOVA

zuzana.bilkova@upce.cz



Zuzana Bilkova graduated in Molecular Biology and Genetics from the Charles University in Prague. In 2005, she was appointed Associate Professor in Analytical Chemistry and she became the Head of the Department of Biological and Biochemical Sciences at the Faculty of Chemical Technology. She is the guarantor of two clinical study programmes preparing specialists in diagnostic medicine. In 2014, she was promoted to Professor of Clinical Immunology. Currently she is a member of the Scientific Board of the Faculty of Medicine in Hradec Kralove (CZ), Charles University. She serves on a number of scientific and advisory boards of universities and institutes.

Scientific interest

- includes immunoanalytical and separation methods combined with biofunctionalized magnetic micro- or nanoparticles and applied for clinical applications (POCT, LOC).
- Her scientific expertise can be summarized: immunochemistry, immunoassays, cell biology, bioaffinity chromatography, and structural analysis of clinically relevant biomarkers.

Bibliometric indicators (Web of Science)

- totally 138 of original papers
- 83 papers Jimp category in scientific journals with IF (WOS)
- 31 proceedings papers
- She gave more than 40 invited lectures at symposia and conferences, H index 21 (database WOS), dated to the September 2021, average citations per item Jimp 11,21.

Prominent international cooperation

- Institute Curie, Paris, France (Dr. J.-L. Viovy) microfluidic technology, cell separation.
- Catalan Institute of Nanotechnology, Barcelona, Spain, (prof. Arben Mercoci)

 biosensors.
- FRTH Hellas in Heraclion, Greece (prof. Electra Giseli).
- Institute Pasteur, Paris, France (prof. Bruno Dupuis).

Important projects carried out from the position of principal investigator or co-investigator

- TAČR, GAMA 01/021 TG361021, Magnetically active TiO2 nanomaterials for preparation of bioactive proteins and other biopolymers for biotechnological applications, principal investigator.
- Horizon 2020, LOVE-FOOD2MARKET, Contract No 687681A portable MicroNanoBio System and Instrument for ultra-fast analysis of pathogens in food: Innovation from LOVE-FOOD lab prototype to a pre-commercial instrument, partner.
- GAČR, 15-16549S, Development of ultrasensitive immunomagnetic method using Qdots for electrochemical detection of tumor markers, principal investigator.
- FP7-NMP-2009-LARGE-3, NADINE, Nanosystems for the early diagnosis of neurodegene rative diseases (Alzheimer's disease), partner.
- FP7-NMP-2012, LOVE-FOOD, Love Wave Fully Integrated Lab-on-chip Platform for Food Pathogen Detection, partner.
- OP RDE project "Strengthening interdisciplinary cooperation in research of nanomaterials and their effects on living organisms", reg. n. CZ.02.1.01/0.0/0.0/17_048/ 0007421, main coordinator.

- Papadakis et al., Micro-nano-bio acoustic system for the detection of foodborne pathogens in real samples, Biosensors and bioelectronics 2018, IF 10.2570.
- Kupčík et al., New Interface for Purification of Proteins: One-Dimensional TiO2 Nanotubes Decorated by Fe3O4 Nanoparticles, ACS Applied Materials and Interfaces 2017, IF 8.76.
- Pereiro I, Bendali A, Tabnaoui S, Alexandre L, Srbova J, Bilkova Z, et al., A new microfluidic approach for the one-step capture, amplification and label-free quantification of bacteria from raw samples, Chemistry Science 2017, 8, IF: 9.144.

ROMAN KANĎÁR

roman.kandar@upce.cz



Roman Kand'ár completed his doctoral studies at the Faculty of Pharmacy in Hradec Kralove of the Charles University in Prague in 2003. In 2011, he was appointed Associate Professor in Biochemistry at the Faculty of Pharmacy in Hradec Kralove of the Charles University in Prague. In 2018, he was appointed Professor of Analytical Chemistry at the University of Pardubice. In 1998, he joined the Department of Biological and Biochemical Sciences at the Faculty of Chemical Technology of the University of Pardubice, where he still works. Since 2018, he has been the Head of the Department of Biological and Biochemical Sciences.

Scientific interest

- analysis of biologically important compounds in different biological samples
- monitoring of oxidative stress in humans

Bibliometric indicators (Web of Science)

• Number of papers 40, H-index 16, Total number of citations > 800

Prominent international cooperation

• prof. Dr. Erwin Schleicher, Ph.D. – University of Tubingen, Germany

Important projects carried out from the position of principal investigator or co-investigator

• Screening of photochemical compounds effective in protection against cardiovascu lar disease, 2011 – 2017; COST CZ

Important publications

- Kandár R., Žáková P., Mužáková V.: Monitoring of antioxidant properties of uric acid in humans for a consideration measuring of levels of allantoin in plasma by liquid chromatography. Clinica Chimica Acta 365 (2006) 249 – 56.
- Kand'ár R., Žáková P., Lotková H., Kučera O., Červinková Z.: Determination of reduced and oxidized glutathione in biological samples using liquid chromatography with fluorimetric detection. Journal of Pharmaceutical and Biomedical Analysis 43 (2007) 1382 – 7.

Supervision of doctoral theses

7 students of doctoral study programme

MARCELA PEJCHALOVÁ

marcela.pejchalova@upce.cz



Marcela Pejchalová completed her doctoral studies at the Faculty of Food and Biochemical Technology of the University of Chemistry and Technology, Prague, in 2002. In 1997, she joined the Department of Biological and Biochemical Sciences at the Faculty of Chemical Technology of the University of Pardubice, where she still works. In 2015, she was appointed Associate Professor in Microbiology.

Scientific interest

- Food microbiology, determination of pathogenic microorganisms in food and feeds
- Determination of pathogenic microorganisms in drinking and waste water
- Evaluation of antimicrobial effects (disinfectants, coatings, probiotics)

Bibliometric indicators (Web of Science)

• Number of papers 26, H-index 11, Total number of citations 246

Prominent international cooperation

• Assoc. prof. M. Walczak – Nicolaus Copernicus University in Torun, Poland

Important projects carried out from the position of principal investigator or co-investigator

- New biocide water-based binders and coatings for exterior and interior hygienic applications, 2017 – 2019; Technology Agency of the Czech Republic TH02010140
- Supplements for the positive effect on the human microbiome, 2017 2019; Technology Agency of the Czech Republic TH02010762
- Lactic acid derivatives for disinfection application, 2020 2022; Technology Agency of the Czech Republic TP01010012/GAMA 03/001

Important publications

 Machotová J., Kalendová, A. Voleská M, Steinerová D., Pejchalová M, Knotek P., Zárybnická L. Waterborne hygienic coatings based on self-crosslinking acrylic latex with embedded inorganic nanoparticles: a comparison of nanostructured ZnO and MgO as antibacterial additives Progress in Organic Coatings,147 (2020) 1-14.

- 3 students of doctoral study programme
- 24 students of Master degree programme

TOMÁŠ ROUŠAR

tomas.rousar@upce.cz



Tomáš Roušar completed his PhD study from Medical Physiology at the Department of Physiology, Faculty of Medicine in Hradec Králové, Charles University in Prague. The PhD thesis was focused on hepatotoxicity studying in vitro in animal models. Since 2003, he has been working at the Department of Biological and Biochemical Sciences, Faculty of Chemical Technology, University of Pardubice. In 2014, he was appointed Associate Professor in Medical Physiology. He is the Head of the Cell culture laboratory, providing studies on cell toxicity in human cells.

Scientific interest

- cell toxicity (nano-, nephro-, neuro-, hepato-)
- development of fluorometric bioanalytical methods for assessment of cell injury
- oxidative stress, glutathione, ROS, apoptosis, cell growth on materials

Bibliometric indicators (Web of Science)

• Number of papers 41, H-index 14, Total number of citations > 650

Prominent international cooperation

prof. E. Gnaiger – University of Innsbruck, Austria

Important projects carried out from the position of principal investigator or co-investigator

- NANOBIO Strengthening of Interdisciplinary Cooperation in the Research of Nanomaterials and their Effects on Living Organisms – EU ERDF; 2019-2022, co-investigator
- IT4Neuro(degeneration) EU ERDF; 2019-2022, co-investigator
- Research on the Mechanism of Toxicity of Aminophenolic Drugs CSF; 2019-2021, PI

- Handl J., Malinak D., Capek J., Andrys R., Rousarova E., Hauschke M., Bruckova L., Cesla P., Rousar T., Musilek K.: Effects of Charged Oxime Reactivators on the HK-2 Cell Line in Renal Toxicity Screening, Chem Res Toxicol 34 (2021) 699-703.
- Majtnerova P., Capek J., Petira F., Handl J., Rousar T.: Quantitative spectrofluorometric assay detecting nuclear condensation and fragmentation in intact cells, Sci Rep 11 (2021) 11921.

Awards/achievements

- I. award for the Best oral presentation in the 27th Scandinavian Society for Cell Toxicology Conference (2009)
- I. award for the Best lecture on the Czech Physiology Days (2012)

Supervision of doctoral theses

- 7 students of doctoral study programme
- 26 students of Master degree programme



CHEMICAL AND PROCESS ENGINEERING - CHEMICAL ENGINEERING



PETR DOLEČEK

petr.dolecek@upce.cz



Petr Doleček joined the Department of Processes and Equipment of Chemical and Food Industry, Institute of Chemical Technology, in 1982, and completed his doctoral studies there in 1989. In 2015, he was appointed Associate Professor in Chemical Engineering.

Scientific interest

- membrane processes: pressure-driven membrane processes, electrodialysis
- Application of voltammetric methods in environmental analysis

Bibliometric indicators (Web of Science)

• Number of papers 27, H-index 9, Total number of citations > 255

Important projects carried out from the position of principal investigator or co-investigator

 Zero liquid discharge of industrial waste water using electrodialysis (EBRIT), 2019–2021; Ministry of Industry and Trade FV40062.

Important publications

- Doleček P., Cakl J.: Permeate flow in hexagonal 19-channel inorganic membrane under filtration and backflush operating modes, Journal of Membrane Science 149 (1998) 171-179.
- Doleček P., Bendová H., Šiška B., Machač I.: Fall of spherical particles through a Carreau fluid, Chemical Papers 58 (2004) 397-403.

Membership in professional associations and boards

Czech Society of Chemical Engineering

PETR MIKULÁŠEK

petr.mikulasek@upce.cz



Petr Mikulášek graduated in 1982 in the study field of Technology of Production and Processing of Polymers at the former Institute of Chemical Technology in Pardubice (VŠChT), now the University of Pardubice, Faculty of Chemical Technology. In 1991, he defended his CSc. thesis in the field of Theory of Chemical Technique, focused on the flow of non-Newtonian fluids through fluidized beds of particles. In 1997, he was appointed Associate Professor in the field of Theory of Chemical Technique. He was appointed Professor of Chemical Engineering in 2003. Since 2009, he has been the Head of the Institute of Environmental and Chemical Engineering of the Faculty of Chemical Technology and since 2014, the Head of the University Ecological Centre.

Scientific interest

- pressure driven membrane processes (micro-, ultra-, and nanofiltration, reverse osmosis): membrane testing, flux enhancement methods, description of separation mechanisms and mathematical modelling of processes
- hybrid and integrated membrane processes: introduction of membrane separations into new production technologies, resp. into wastewater treatment processes

Bibliometric indicators (Web of Science)

• Number of papers 65, H-index 14, Total number of citations > 700

Prominent international cooperation

- Prof. Georges Belfort Rensselaer Polytechnic University, Troy, USA
- Prof. Richard J. Wakeman Loughborough University, UK

Important projects carried out from the position of principal investigator or co-investigator

- Separation of hydrocarbons from water and monitoring of their quality, 2011–2013; Technology Agency of the Czech Republic TA01020730.
- Membrane Processes/MEMPRO, 2016–2019; Ministry of Industry and Trade of the Czech Republic CZ.01.1.02/0.0/0.0/15_037/0007060.
- Membrane for Life/MEM4LIFE, 2019–2022; Ministry of Industry and Trade of the Czech Republic CZ.01.1.02/0.0/0.0/17_105/0018786.

Important publications

- Mikulášek P. et al.: Pressure Driven Membrane Processes (in Czech), VŠCHT Praha, 260 pages, (2013). ISBN 978-80-7080-862-7.
- Gherasim C.-V., Mikulášek P.: Influence of operating variables on the removal of heavy metal ions from aqueous solutions by nanofiltration, Desalination 343 (2014) 67–74.
- Cuhorka J., Wallace E., Mikulášek P.: Removal of micropollutants from water by commercially available nanofiltration membranes, Science of the Total Environment 720 (2020) 137474.

Awards/achievements

 "Medal of Merit of the University of Pardubice" for scientific and pedagogical activities in the field of chemical and process engineering, focusing mainly on membrane separation methods, hydromechanical processes and bioengineering (2008)

Supervision of doctoral theses

- 15 students of doctoral study programme
- 30 students of Master degree programme

Membership in professional associations and boards

- European Membrane Society
- European Federation of Chemical Engineering, Working Party on Membranes



CHEMISTRY AND TECHNOLOGY OF INORGANIC MATERIALS



EVA ČERNOŠKOVÁ

eva.cernoskova@upce.cz



Eva Černošková completed her doctoral studies in the group of prof. M. Frumar. In 1992, she successfully completed her Ph.D. in the Department of General and Inorganic Chemistry, Faculty of Chemical Technology, University of Pardubice. In the same year, she joined this department. In 1996, she moved to the Joint Laboratory of Solid State Chemistry, Faculty of Chemical Technology, University of Pardubice where she still works. Between 2006 and 2011, she spent research fellowships at the Chalmers Technical University in Gőteborg, Sweden, the University of Cincinnati, Ohio, USA, the University of Saskatchewan, Saskatoon, Canada, IM2NP-UMR CNRS 6122, Aix Marseille Université, Francie. In 2007, she was appointed an Associate Professor in the field Chemistry and Technology of Inorganic Materials. Since 2018, she has been the Head of the Joint Laboratory of Solid State Chemistry.

Scientific interest

- materials engineering
- photostructural changes in thin films
- the structure materials with a special focus on methods of thermal analysis (DSC, DTA, TG) and also Raman spectroscopy and wettability.

Bibliometric indicators (Web of Science)

• Number of papers 108, H -index 16, total number of citations 950

Prominent international cooperation

- Assoc. prof. Rosen Todorov Institute of Optical Materials and Technologies J. Malinowski, Bulgarian Academy of sciences, Sofia, Bulgaria
- Assoc. prof. Zoja Ivanova Institute of Solid State Physics, Bulgarian Academy of Sciences, Sofia, Bulgaria
- prof. Petr Viscor Embedded and Intelligent Systems Laboratory, Jystrup, Denmark

- Smolík J., Knotek P., Schwarz J., Černošková E., Kutálek P., Tichý L.,: Laser direct writing into PbO-Ga2O3 glassy system: Parameters influencing microlenses formation Applied Surface Science 540 (2021) 148368.
- Kutálek P., Knotek P., Šandová A., Vaculovič T., Černošková E., Tichý L.: Ablation of binary As2S3, As2Se3, GeS2, GeSe2 and GeSe3 bulk glasses and thin films with a deep ultraviolet nanosecond laser, Applied Surface Science 554 (2021) 149582.

Supervision of doctoral theses

- materials engineering
- photostructural changes in thin films
- the structure materials with a special focus on methods of thermal analysis (DSC, DTA, TG) and also Raman spectroscopy and wettability.

Membership in professional associations and boards

- The Czech Chemical Society
- The Czech Glass Society
- The Society of Thermodynamics

ČESTMÍR DRAŠAR

cestmir.drasar@upce.cz



Čestmír Drašar defended his doctoral thesis on layered semiconductors in the group of prof. Ing. Petr Lošťák, DrSc. in 1997 after completing his studies at the University of Pardubice in 1993. As a postdoc he spent 22 months in German Aerospace Centre (Cologne) in the group of Prof. Eckhard Mueller. Since 2002, he has been working in Institute of Applied Physics and Mathematics of the Faculty of Chemical Technology of the University of Pardubice. In 2007, he was appointed Associate Professor in Applied Physics at the Czech Technical University in Prague. In 2015, he was appointed Professor of Chemistry and technology of inorganic materials at the University of Pardubice. He has been the Head of the Institute of Applied Physics and Mathematics since 2013.

Scientific interest

- Layered (2D) semiconductors; crystal growth and properties
- Transport, magnetic and magneto-transport properties of solids
- Thermoelectrics
- Defects in solids

Bibliometric indicators (Web of Science)

• Number of papers 100, H-index 25, Total number of citations > 2200

Prominent international cooperation

- prof. Francisco Javier Manjón Herrera (University of Valencia, Spain)
- prof. Ctirad Uher (University of Michigan, USA)
- prof. Eckhard Mueller (German Aerospace center)

Important projects carried out from the position of principal investigator or co-investigator

 Transition metal doped Bi2O2Se layered semiconductors: correlation of transport, magnetic and thermoelectric properties, 22-05919S

- K. Sraitrova, J. Cizek, V. Holy, J. Kasparova, T. Plechacek, V. Kucek, J. Navratil, A. Krejcova, C. Drasar: Vacancies in SnSe single crystals in a near equilibrium state, Phys. Rev. B 99 (2019) 035306.
- P. Ruleova, C. Drasar, P. Lostak, C. P. Li, S. Ballikaya, C. Uher: Thermoelectric properties of Bi2O2Se, Mat. Chem. Phys. 109 (2010) 299-302.

Awards/achievements

- Supervisor of Martin Kloz "České hlavičky" award (2011)
- Supervisor of Patrik Čermak , "Young scientists" AMAVET (CZ) and the ISEF competition (USA), 3rd place in this category (2010)

Supervision of doctoral theses

- 6 students of doctoral study programmen)
- 5 students of Master degree programme

Membership in professional associations and boards

- Member of the Czech Society for New Materials and Technologies
- Member of the board of the European Thermoelectric Society

JANA HOLUBOVÁ

jana.holubova@upce.cz



Jana Holubová graduated at the Faculty of Science, Charles University in Prague, in 1985. Her doctoral studies were completed at the University of Pardubice in 1996. In 1985, she joined the Department of General and Inorganic Chemistry at the Faculty of Chemical Technology of the University of Pardubice, where she still works. In 2004, she was appointed Associate Professor in Inorganic Chemistry.

Scientific interest

• Since 1997, her research has been focused on the study of non-crystalline materials (chalcogenide and oxide glasses). She is specialized in investigation of thermal properties using differential scanning calorimetry (DSC) and thermomechanical analysis (TMA) and the structural study of non-crystalline material using MAS NMR and EPR, Raman and UV-VIS spectroscopy.

Bibliometric indicators (Web of Science)

• Number of papers 81, H-index 15, Total number of citations - 625

Prominent international cooperation

- prof. Marek Liška Fun Glass –Vitrum Laugaricio –Joint Glass Center of IIC SAS, TnU AD, and FChPT STU, Trenčín, Slovakia
- prof. Martin Orendáč Institute of Physics, P. J. Safarik University, Park Angelinum 9, 041 54, Kosice, Slovakia

Important projects carried out from the position of principal investigator or co-investigator

- Centralised development project of the Ministry of Education, Youth and Sports, 2016, 1. The Programme of Support of the Collaboration of Higher Education Institutions – "Modernisation of instrumentation for the improvement of teaching doctoral students" Holubová, Černošková, Černošek.
- Centralised development project of the Ministry of Education, Youth and Sports, 2017,
 The Programme of Support of the Collaboration of Higher Education Institutions

 "Increasing the quality of doctoral students teaching through the modernisation of the instrumentation" Holubová, Černošková, Černošek.

Important publications

- J. Holubová, Z. Černošek, P. Hejda: The influence of niobium on the structure of Nb2O5– ZnO–P2O5 glasses, J. Non-Cryst. Solids 502 (2018) 35 - 43.
- Z. Černošek, S. Brázdová, J. Holubová: Binding possibilities of calcium, zinc and copper in metaphosphate glasses - a more detailed study, J. Non-Cryst. Solids 546 (2020) 120264.

Supervision of doctoral theses

- 3 students of doctoral study programme
- 9 students of Master degree programme

Membership in professional associations and boards

• Member of the Czech Glass Society
PETR MOŠNER

petr.mosner@upce.cz



Petr Mošner graduated in 1990 at the Department of Inorganic Technology of the University of Chemical Technology and continued there in his PhD studies. In 1995, he joined the Department of General and Inorganic Chemistry, Faculty of Chemical Technology of the University of Pardubice. In 2004, he was appointed Associate Professor and in 2014, Professor of Materials Chemistry and Technology.

Scientific interest

- preparation and characterization of phosphate and borophosphate glassy and crystalline materials
- study of the relationships between the composition of the glassy and crystalline materials, their structure, thermal behaviour and various physicochemical properties
- application of the various thermoanalytical techniques to the study of thermal behaviour of glasses, including studies of critical cooling rate, nucleation rate and crystal growth processes in super-cooled glass-forming liquids

Bibliometric indicators (Web of Science)

• Number of papers 88, H-index 18, Total number of citations > 900

Prominent international cooperation

- prof. L. Montagne University of Lille, France
- prof. A. Mogus-Milankovic Ruder Boskovic Institute, Zagreb, Croatia

Important projects carried out from the position of principal investigator or co-investigator

- New prospective phosphate and borophosphate glasses and glass-ceramics, 2018 – 2020; Czech Science Foundation GA18-019765
- Multicomponent phosphate and borophosphate glasses, 2013 2016; Czech Science Foundation GA13-003555

Important publications

- Sklepić K., Vorokhta M., Mošner P., Koudelka L. Moguš-Milanković A.: Electrical mobility of silver-ion in Ag2O-B2O3-TeO2-P2O5 glasses. J. Phys. Chem. B 118 (2014) 12050-12058.
- Tricot G., Ben Tayeb K., Koudelka L., Mošner P., Vezin H.: Insertion of MoO3 in borophosphate glasses investigated by magnetic resonance spectroscopies. J. Phys. Chem. C 120 (2016) 9443-9452.

Supervision of doctoral theses

- 4 students of doctoral study programme
- 21 students of Master degree programme

Membership in professional associations and boards

- Member of the Board of Czech Glass Society
- Member of the Czech Society of Industrial Chemistry
- Member of the Czechoslovak Association for Crystal Growth

PETR NĚMEC

petr.nemec@upce.cz



Petr Němec completed his doctoral studies in the group of Prof. Frumar at the Faculty of Chemical Technology, University of Pardubice in 2002. From 2006, he worked as Associate Professor at the Faculty of Chemical Technology, University of Pardubice. He became full Professor in the field of Chemistry and Technology of Inorganic Materials in 2015.

Scientific interest

- Amorphous materials, inorganic glasses
- Thin films
- Optics, photonics

Bibliometric indicators (Web of Science)

• Number of papers >120, H-index 26, Total number of citations > 2200

Prominent international cooperation

• Université de Rennes 1, Université de Lille, Université de Bordeaux, University of Debrecen, etc.

Important projects carried out from the position of principal investigator or co-investigator

- Amorphous chalcogenide thin films: photoinduced phenomena, 2015 2017; Czech Science Foundation 15-02634S.
- Advanced methods of fabrication of chalcogenide thin films and their modifications, 2018 2020; Czech Science Foundation 18-038235.

Important publications

- T.Kuriakose, G.Renversez, V.Nazabal, M.M R.Elsawy, N.Coulon, P.Němec, M.Chauvet: Nonlinear self-confined plasmonic beams: experimental proof. ACS Photon. 7 (2020) 2562-2570.
- R.Mawale, T.Halenkovič, M.Bouška, J.Gutwirth, V.Nazabal, P.L.Bora, L.Pečinka, L.Prokeš, J.Havel, P.Němec: Mass spectrometric investigation of amorphous Ga-Sb-Se thin films, Sci. Rep. 9 (2019) 10213.
- M.Bouška, S.Pechev, Q.Simon, R.Boidin, V.Nazabal, J.Gutwirth, E.Baudet, P.Němec: Pulsed laser deposited GeTe-rich GeTe-Sb2Te3 thin films. Sci. Rep. 6 (2016) 26552.

Supervision of doctoral theses

- 2 students of doctoral study programme
- 11 students of Master degree programme

Membership in professional associations and boards

• Editorial board member of Scientific Reports

TOMÁŠ WÁGNER

tomas.wagner@upce.cz



Tomáš Wágner graduated in 1982 in the field of chemical technology of metallic and special inorganic materials at the former University of Chemical Technology in Pardubice (VŠChT), now the University of Pardubice, Faculty of Chemical Technology. He completed his doctoral studies in the field of Inorganic Chemistry with a focus on thin layers of chalcogenide glasses in 1990, and in 2001, he obtained his habilitation in the field of Chemistry and Technology of Inorganic Materials. He was appointed Professor of inorganic chemistry in 2005. In 2009-2011, he worked as the Director of the Materials Research Centre of the University of Pardubice. He received the scientific degree of Doctor of Chemical Sciences (DrSc.) at the Slovak Academy of Sciences in Bratislava in 2016.

Scientific interest

 chemical synthesis and study of properties of new non-crystalline bulk materials, especially in the field of chalcogenide glasses, their thin films, optically induced solid state reactions and promising high-tech nanomaterials for applications in photonics, optics and electronics.

Bibliometric indicators (Web of Science)

• Number of papers 238, H-index 32, Total number of citation > 3300 (without self-citation)

Prominent international cooperation

 Prof. Safa O. Kasap - University of Saskatchewan, Canada • Prof. Koichi Shimakawa University of Gifu, Japan.

Important projects carried out from the position of principal investigator or co-investigator

- 2011-2019 Project Flexprint TE01020022, Technology Agency of the Czech Republic. Development of low-cost printed flexible electronics, especially for the areas of smart packaging, smart textiles and holographic security features.
- 2012-2014 EU Operational Funds OP EC project called Research Team for Advanced Non-Crystalline Materials (CZ.1.07 / 2.3.00 / 20.0254).

- M. Bardošová, Wágner T. : Nanomaterials and Nanoarchitectures (A complex review of current hot topics and their applications), NATO Science for Peace and Security Series C, Springer – Netherlands, 2015, 343 pages. ISBN 978-94-017-9937-9.
- Kolar J., Macak J., Terabe K., Wágner T.: Down-scaling of resistive switching to nanoscale using porous anodic alumina membranes, J. Mater. Chem. C 2 (2014) 349-355. IF:6.641.
- Zhang B., Cicmancova V., Kupcik J., Slang S., Pereira J. R., Svoboda R., Kutalek P., Wágner T.: A layered Ge2Sb2Te5 phase change material, Nanoscale, 2020, 12, 3351-3358. IF:6.970

Awards/achievements

- Royal Society Fellowship at the University of Edinburgh, United Kingdom (2 years)
- NSERC-NATO Fellowship at the University of Saskatchewan, Canada (2.5 years)

Supervision of doctoral theses

- 17 students of doctoral study programme
- 23 students of Master degree programme

Membership in professional associations and boards

 Member of the Solid State Chemistry Division of the European Chemical Society; Materials Research Society and American Chemical Society; member Solid State Chemistry Division of the European Chemical Society; International boards of conferences ECSSC; ISNOG; ICOOPMA; ECSSC; SSC



ECONOMICS AND MANAGEMENT OF BUSINESSES WITH PROCESS MANUFACTURING OPERATIONS



LENKA BRANSKÁ

lenka.branska@upce.cz



Lenka Branská joined the Department of Economy and Management of Chemical and Food Industries, at the Faculty of Chemical Technology, University of Pardubice in 1996. She still works there today. In 2001, she successfully completed her doctoral studies at the University of Pardubice, Faculty of Chemical Technology in the field of Business Management and Economics; in 2011, she was appointed Associate Professor at Tomas Bata University in Zlín in the same area. Her habilitation thesis was focused on the Implementation of the Quick Response Method in Supply Chains Involving Chemical Continuous Productions. From 2007 to 2015, she was the Head of the department, from 2015 to 2018 she was the Deputy Head of the department.

Scientific interest

- Implementing modern material flow management methods (Quick Response, CPFR, VMI, etc.) and barriers to this implementation; cooperation of supply chain members
- specifics of implementation of quality management systems in chemical enterprises; sustainable supply chain management and sustainable packaging with a focus on consumer chemicals

Bibliometric indicators (Web of Science)

• Number of papers 38, H-index 3, Total number of citations: 35

Prominent international cooperation

 assoc. prof. K. Vojvodic etc. – Department of Economics and Business, University of Dubrovnik, Croatia

Important projects carried out from the position of principal investigator or co-investigator

- Tools for strengthening the long-term relationships with customers based on integration and cooperation of value network subjects, 2012 – 2014; Czech Science Foundation GA403/12/1279.
- Increase of Company Performance Efficiency through Differentiated CRM on a Basis of Customer Actual and Potential Value to a company, 2006 – 2008; Czech Science Foundation GA402/06/0577.

- Patak M., Branska L., Pecinova Z.: Importance of Reverse Logistics Services as an Antecedent for Building a Green Supply Chain, Ekonomski Vjesnik, 33 (2020) 165-174.
- Branská L., Paták M., Pecinová Z. Preference logistických služeb v dodavatelských systémech s rychloobrátkovými produkty (Preferences of logistics services in supply chains with FMCG). 1. ed. Pardubice: Univerzita Pardubice, 2019. 112 p. ISBN 978-80-7560-265-7, in Czech.

Supervision of theses

• 25 students of Master degree programme

Membership in professional associations and boards

- Departmental Board of the doctoral study programme Economics and Management of Businesses with Process Manufacturing Operations, University of Pardubice, Faculty of Chemical Technology (2021- present)
- Departmental Board of the doctoral study programme Chemical and Process Engineering, field of study Enterprise Management and Economics, University of Pardubice, Faculty of Chemical Technology (2008 – 2011, 2013 – 2018)
- Czech Industrial Chemistry Society (2017 present)

MICHAELA KOTKOVÁ STŘÍTESKÁ

michaela.kotkovastriteska@upce.cz



Michaela Kotková Stříteská completed her doctoral studies at the Faculty of Economics and Administration, University of Pardubice in 2009. She defended her dissertation entitled Balanced Scorecard as an innovative tool for strategic management of municipalities and regions in the study field of regional and public economics. In 2007, she joined the Institute of Economy and Management at the Faculty of Economics and Administration of the University of Pardubice, where she still works as the head of department. In 2021 she was appointed Associate Professor in Management and Economics at the Faculty of Management and Economics, Tomas Bata University in Zlin.

Scientific interest

- strategic business performance measurement and management
- responsible business management: business ethics, corporate culture and innovation

Bibliometric indicators (Web of Science)

• number of papers 17, H-index 5, total number of citations > 55

Important projects carried out from the position of principal investigator or co-investigator

- Towards a dynamic knowledge-based business model for open innovations, 2020-2022, Czech Science Foundation GA20-03037S.
- Modelling dynamics and determinants of national and regional productivity based on knowledge and cooperative effects, 2017-2019, Czech Science Foundation GA17-20737S. GA17-11795S.

Important publications

- Prokop, V., Gerstlberger, W., Zapletal, D., & Kotkova Striteska, M. (2022). The doubleedged role of firm environmental behaviour in the creation of product innovation in Central and Eastern European countries. Journal of Cleaner Production, 331, 129989.
- Prokop, V., Kotkova Striteska, M. & Stejskal, H. (2021). Fostering Czech firms' innovation performance through efficient cooperation. Oeconomia Copernicana, 12(3), 671-700.

Supervision of doctoral theses

- 1 student of doctoral study program
- 35 students of master of science

Membership in professional associations and boards

- advisory board Optimum Journal of Economics and Management Sciences
- member of the CEEPUS Committee of National Experts

LIBĚNA TETŘEVOVÁ

libena.tetrevova@upce.cz



Liběna Tetřevová completed her doctoral studies at the Faculty of Chemical Technology of the University of Pardubice in 1999. In 1999, she joined the Department of Economics at the Faculty of Economics and Administration of the University of Pardubice. In 2009, she joined the Department of Economy and Management of Chemical and Food Industries at the Faculty of Chemical Technology of the University of Pardubice, where she still works. In 2004, she was appointed Associate Professor in Economics and Management of Enterprises at the Faculty of Economics of the Technical University of Liberec.

Scientific interest

- · social responsibility: corporate social responsibility and university social responsibility
- sharing economy
- triple helix model of partnership

Bibliometric indicators (Web of Science)

• Number of papers 52, H-index 8, Total number of citations > 100

Prominent international cooperation

- prof. A. Midttun BI Norwegian Business School, Norway
- assoc. prof. W. Sroka WSB University, Poland
- assoc. prof. S. Ručinská Pavol Jozef Šafárik University in Košice, Slovak Republic

Important projects carried out from the position of principal investigator or co-investigator

- Programme for exchange of best practices in social responsibility, 2020 2022; Fund for Bilateral Relations within the framework of the EEA and Norway Grants 2014-2021, EHP-BFNU-OVNKM-3-134-01-2020.
- Economic, social and environmental aspects of collaborative economy from the point of view of the Czech Republic, 2019 2021; COST Action CA16121 From sharing to caring: Examining socio-technical aspects of the collaborative economy.

- Tetřevová L., Paták M.: Web-based communication of socially responsible activities by gambling operators, Journal of Gambling Studies 35 (2019) 1441-1455.
- Tetřevová L.: Communicating CSR in high profile industries: Case study of Czech chemical industry, Inzinerine Ekonomika-Engineering Economics 29 (2018) 478-487.

Awards/achievements

• Grada Publishing Award in the category "Economic Literature" (2009)

Supervision of doctoral theses

• 7 students of doctoral study programme



ENGINEERING OF ENERGETIC MATERIALS



ZDENĚK JALOVÝ

zdenek.jalovy@upce.cz



Zdeněk Jalový completed his doctoral studies at the Institute of Energetic Materials, University of Pardubice in 2001. In 2000-2001, he worked at the Institute of Industrial Chemistry, Explosia a.s., Czech Republic. In 2001, he joined the Institute of Energetic Materials at the Faculty of Chemical Technology of the University of Pardubice, where he still works. In 2013, he was appointed Associate Professor in Organic technology.

Scientific interest

- Synthesis and characterization of high nitrogen compounds
- Infrared and Raman spectroscopy of energetic materials

Bibliometric indicators (Web of Science)

• Number of papers 19, H-index 7, Total number of citations 133

Prominent international cooperation

FOI, Totalförsvarets forskningsinstitut, Stockholm

Important projects carried out from the position of principal investigator or co-investigator

- Preparation and properties diethylene glycol esters with selected acids, 2019-2021, contract research, Explosia a.s., Czech Republic
- Advanced chemical gas generators, not only for the automotive industry, 2016-2019, Ministry of Industry and Trade, Czech Republic

Important publications

- Vodochodský O., Jalový Z., Matyáš R., Novotná M.: Determination of triacetone triperoxide and hexamethylene triperoxide diamine in various matrices using infrared spectroscopy. Applied Spectroscopy 73/2 (2019) 195-202.
- Matyáš R., Lyčka A., Jirásko R., Jalový Z., Maixner J., Mišková L., Künzel M.: Analytical characterization of erythritol tetranitrate (ETN), an improvised explosive. Journal of Forensic Sciences 61 (2016) 759-764.

Supervision of doctoral theses

- 1 student of doctoral study programme
- 15 students of Master degree programme

Prominent international cooperation

• Society for Applied Spectroscopy

BŘETISLAV JANOVSKÝ

bretislav.janovsky@upce.cz



Břetislav Janovský completed his doctoral studies at the University of Pardubice in 1998. In 1998, he joined the Institute of Energetic Materials at the Faculty of Chemical Technology of the University of Pardubice, where he still works. In 2004, he was appointed Associate Professor in Safety of the Industry, Ventilation and Fire Safety.

Scientific interest

- gas, dust and hybrid mixture explosion
- boiling liquid expanding vapour explosion
- consequence analysis

Bibliometric indicators (Web of Science)

• Number of papers 10, H-index 5, Total number of citations 69

Prominent international cooperation

 doc. R. Kuracina – Slovak University of Technology in Bratislava, Faculty of Materials Science and Technology in Trnava

Important projects carried out from the position of principal investigator or co-investigator

- Development of the circuit for the measurement of the real ignition energy of capacitance discharge, 2017 – 2019; Czech Ministry of Industry and Trade CZ.01.1.02/0.0/0.0/ 15_019/0005067.
- Dynamics of the gas explosible systems deflagration's spreading in piping, tunnels and mines and protection against their destructive consequences, 2005-2007; Czech Science Foundation 105/05/0729.

Important publications

- B. Janovsky, J. Skrinsky, J. Cupak, J. Veres; Coal dust, Lycopodium and niacin used in hybrid mixtures with methane and hydrogen in 1 m(3) and 20 l chambers, Journal of Loss Prevention in the Process Industries 62 (2019)
- J. Sustek, B. Janovsky: Comparison of empirical and semi-empirical equations for vented gas explosion with experimental data, Journal of Loss Prevention in the Process Industries 26 (2013), 1549-1557.
- S.H.Spitzer, E. Askar, A. Benke, B. Janovsky, U. Krause, A. Krietsch; Influence of pre-ignition pressure rise on safety characteristics of dusts and hybrid mixtures, Fuel, Volume 311, (2022)

Supervision of doctoral theses

- 4 students of doctoral study programme
- 13 students of Master degree programme

ROBERT MATYÁŠ

robert.matyas@upce.cz



Robert Matyáš completed his doctoral study at the Institute of Energetic Materials of the University of Pardubice in 2005. After his post-doctoral period in the Nanyang Technology University in Singapore (2006-2007), he became Assistant Professor at the Institute of Energetic Materials of the University of Pardubice where he has been working ever since. In 2014, he was appointed Associate Professor in Technology of Organic Materials. Since 2013, he has been giving an annual lecture at the NATO Centre of Excellence in Slovakia for NATO country specialists in the field of improvised explosives.

Scientific interest

- improvised explosives: study of the conditions of their preparation, investigation of their properties and explosive characteristics
- primary explosives: study of the conditions of their preparation, research their properties and explosive characteristics
- explosives with application potential: experimental study of explosives with application potential in collaboration with manufacturing sector

Bibliometric indicators (Web of Science)

• Number of papers 43, H-index 13, Total number of citations 327

Prominent international cooperation

FOI, Totalförsvarets forskningsinstitut, Stockholm

Important projects carried out from the position of principal investigator or co-investigator

- Propellants with increased a specific impulse, 2018-2021, Technological Agency of Czech Republic TH03020263.
- Research of improvised explosives detection by dogs, 2010- 2014, Ministry of interior of Czech Republic VG20102014032.

Important publications

- Matyáš R., Pachman J.: Primary explosives. Springer Berlin, Heidelberg, 1 edition, 2013.
- Matyáš R., Šelešovský J., Musil T.: Sensitivity to friction for primary explosives, Journal of Hazardous Materials 213-214 (2012) 236-241.

Awards/achievements

• Commemorative medal of the Centre of Excellence for Explosive Ordnance Disposal, NATO, Slovakia (2015).

Supervision of doctoral theses

- 1 student of doctoral study programme
- 9 students of Master degree programme

JIŘÍ PACHMAN

jiri.pachman@upce.cz



Jiří Pachman completed his doctoral study at the Institute of Energetic Materials, University of Pardubice in 2005. Following the successful graduation, he took a position of research fellow at the Energetic Materials Research Centre, Nanyang Technological University, Singapore. In 2007, he returned to Pardubice and joined the Institute of Energetic Materials at the Faculty of Chemical Technology of the University of Pardubice, where he has been working ever since. In 2018, he was appointed Associate Professor in Technology of Organic Materials.

Scientific interest

- detonation phenomena processes taking place inside detonating energetic material
- effects of detonation on environment surrounding the detonating charge
- device and methodology development for characterization of detonation and blast phenomena

Bibliometric indicators (Web of Science)

• Number of papers 31, H-index 12, Total number of citations 370

Prominent international cooperation

- Faculty of Civil Engineering, Czech Technical University in Prague, CR
- Faculty of Civil Engineering, Czech Technical University in Prague, CR
- Faculty of Electrical Engineering and Communication, Brno University of Technology, CR
- Surfaces, Microstructure and Fracture Group, University of Cambridge, Cavendish Laboratory, Cambridge, UK
- Institute of Shock Physics, Imperial Colleague London, UK
- Bulgarian Defence Institute "Professor Tsvetan Lazarov", Sofia, Bulgaria
- Ecole Nationale Superieure de Techniques Avancees Bretagne, Brest, France
- University of Defence, Brno, CR.

Important projects carried out from the position of principal investigator or co-investigator

- Perspective methods of production and testing of emulsion explosives, Technological Agency of Czech Republic, FV40140, 2019-2021
- Performance of concrete under severe loading conditions, Czech Science Foundation 13-30441S, 2013-2015
- OPTIMEX Optical measurement of explosions, Technological Agency of Czech Republic, 2012-2015
- Research of improvised explosives detection by dogs, VG20102014032, Ministry of interior of Czech Republic, 2010- 2014

- Robert Matyas and Jiri Pachman. Primary explosives. Springer Berlin, Heidelberg, 1 edition, 2013.
- Marek Foglar, Radek Hajek, Josef Fladr, Jiri Pachman, Jiri Stoller, Full-scale experimental testing of the blast resistance of HPFRC and UHPFRC bridge decks, Construction and Building Materials, 145, 558-601, 2017.
- Jiri Pachman, Martin Kunzel, Karel Kubat, Jakub Selesovsky, Roman Marsalek, Martin Pospisil, Michal Kubicek, and Ales Prokes. OPTIMEX: Measurement of Detonation Velocity with a Passive Optical Fibre System. Central European Journal of Energetic Materials, 14(1):233–250, 2017.

Supervision of doctoral theses

- 6 students of doctoral study programme
- 7 students of Master degree programme
- 2 students Bachelor degree programme
- 5 students international exchange programme



CHEMICAL AND PROCESS ENGINEERING - ENVIRONMENTAL ENGINEERING



ANNA KREJČOVÁ

anna.krejcova@upce.cz



Anna Krejčová graduated in 1987 in the field of study Technical Physical and Analytical Chemistry at the former Institute of Chemical Technology in Pardubice (VŠChT), now the University of Pardubice, Faculty of Chemical Technology. In 2004, she defended her dissertation in the field of Analytical Chemistry, focused on matrix effects in optical emission spectrometry with inductively coupled plasma and in 2014, she was appointed as an Associated Professor in the field of Chemistry and Environmental Protection Technology (VŠChT Praha, thesis "Use of spectrometric methods in determining for the quality of the environment").

Scientific interest

- the elemental analysis (inductively coupled plasma optical emission spectrometry and inductively coupled plasma mass spectrometry) applied in practical environmental research and monitoring
- the fate of substances in the environment and possible ways of entering food chains, focusing on gadolinium-based contrast agents
- life cycle assessment: assessment of impacts of products and technologies in the Environment

Bibliometric indicators (Web of Science)

• Number of papers 48, H-index 16, Total number of citations > 590

Prominent international cooperation

Prof. Martín Resano – University of Zaragoza, Spain

Important projects carried out from the position of principal investigator or co-investigator

- Corrosion of prosthetic materials in the oral cavity, 2008–2010; Internal grant agency of the Ministry of Agriculture of the Czech Republic NS 9744-3.
- Use of cryogenic grinding in direct analysis of powder materials using ICP OES and XRF analysis, 2006–2008; Czech Science Foundation 203/06/0134.

Membership in professional associations and boards

- Ioannes Marcus Marci Spectroscopic Society
- Member of Programme Board of the doctoral study program "Chemical and process Engineering"

- Kolář F., Dortová M., Lepš J., Pouzar M., Krejčová A., Štech M.: Serpentine ecotypic differentiation in a polyploid plant complex: shared tolerance to Mg and Ni stress among di- and tetraploid serpentine populations of Knautia arvensis (Dipsacaceae), Plant and Soil 374 (2014) 435–447.
- Krejčová A., Návesník J., Jičínská J., Černohorský T.: An Elemental Analysis of conventionally, organically and self-grown carrots, Food Chemistry 192 (2016) 242–249.
- Patočka J., Bendakovská L., Krejčová A., Černohorský T., Resano, M., Bělina, P.: Thallium in spruce needles: A comparison of the analytical capabilities of spectrochemical methods, Analytical Methods 9 (2017) 705–715.
- Patočka J., Černohorský T., Krejčová A., Šlang S.: Carbon microparticles as a physical carrier for ETV-ICP-MS, Talanta 204 (2019) 555–560.

Supervision of doctoral theses

- 2 students of doctoral study programme
- 27 students of Master degree programme

MILOSLAV POUZAR

miloslav.pouzar@upce.cz



Miloslav Pouzar carried out his doctoral studies in the Laboratory of Atomic Spectrometry under the supervision of Dr. T. Černohorský and successfully defended his doctoral thesis in the field of analytical chemistry at the University of Pardubice in 2002. In 2001, he joined the Department of Environmental Protection (afterwards transformed into the Institute of Environmental and Chemical Engineering) at the Faculty of Chemical Technology of the University of Pardubice, where he still works. In 2013, he was appointed Associate Professor in Analytical Chemistry. In 2020, he was appointed Professor of Environmental Chemistry and Engineering. Since 2017, he has also been affiliated to the Centre of Materials and Nanotechnologies – CEM-NAT, at the University of Pardubice.

Scientific interest

- non-destructive techniques of elemental analysis
- · ecotoxicity of nanomaterials and particulate materials
- mechanical procedures for the preparation of micro- and nanoparticles
- health risk assessment of pharmaceuticals

Bibliometric indicators (Web of Science)

• Number of papers 49, H-index 11, Total number of citations > 380

Prominent international cooperation

 Prof. Kristin Schirmer - EAWAG (Swiss Federal Institute of Aquatic Science and Technology), Switzerland

Important projects carried out from the position of principal investigator or co-investigator

 investigation of detecting methods for nanomaterials effects on reproduction of aquatic organisms, 2011–2013; Ministry of Industry and Trade of the Czech Republic FR-TI3/288.

Important publications

 Pouzar, M., Kratochvíl, T., Kaski, S., Kaiser, J., Knotek, P., Čapek, L. and Černohorský, T., 2011. Effect of particle size distribution in laser-induced breakdown spectroscopy analysis of mesoporous V–SiO 2 catalysts. Journal of Analytical Atomic Spectrometry, 26(11), pp.2281-2288. • Opršal, J., Knotek, P., Zickler, G.A., Sigg, L., Schirmer, K., Pouzar, M. and Geppert, M., 2021. Cytotoxicity, Accumulation and Translocation of Silver and Silver Sulfide Nanoparticles in contact with Rainbow Trout Intestinal Cells. Aquatic Toxicology, 237, p.105869.

Supervision of doctoral theses

- 3 students of doctoral study programme
- 19 students of Master degree programme

RENATA ŠELEŠOVSKÁ

renata.selesovska@upce.cz



Renata Šelešovská completed her doctoral studies in the group of Prof. L. Novotný at J. Heyrovsky Institute of Physical Chemistry, successfully completing her studies at the University of Pardubice in 2004. In the same year, she joined the Institute of Environmental Protection, later the Institute of Environmental and Chemical Engineering, at the Faculty of Chemical Technology of the University of Pardubice, where she still works. In 2016, she was appointed Associate Professor in Analytical Chemistry.

Scientific interest

- analytical chemistry focused on the environmental analysis, electroanalytical chemistry, especially voltammetric methods
- the testing of new electrode materials, the study of voltammetric behavior of bioactive compounds and environmental pollutants
- the evaluation of new voltammetric methods for determination of dangerous contaminants in the environment, pesticides and bioactive compounds (e.g. drugs, vitamins).

Bibliometric indicators (Web of Science)

• Number of papers 79, H-index 18, Total number of citations > 900

Prominent international cooperation

• Ing. Marian Vojs, Ph.D. – Slovak University of Technology in Bratislava, Slovakia

Important projects carried out from the position of principal investigator or co-investigator

- New methods of electrochemical monitoring of biologically active organic com pounds in environmental, biological and food matrices, 2017–2019; Czech Science Foundation 17-038685.
- New strategies for improving sensing properties of novel electrode materials via their surface pretreatment or modification, 2020–2022; Czech Science Foundation 20-015895.

- Šelešovská R., Schwarzová-Pecková K., Sokolová R., Krejčová K., Martinková-Kelíšková P.: The first study of triazole fungicide difenoconazole oxidation and its voltammetric and flow amperometric detection on boron doped diamond electrode, Electrochimica Acta 381 (2021) 138260.
- Šelešovská R., Kranková B., Štěpánková M., Martinková P., Janíková L., Chýlková J., Vojs M.: Influence of boron content on electrochemical properties of boron-doped diamond electrodes and their utilization for leucovorin determination, Journal of Electroanalytical Chemistry 821 (2018) 2–9.

Supervision of doctoral theses

- 3 students of doctoral study programme
- 13 students of master degree programme

Membership in professional associations and boards

- Member of the International Society of Electrochemistry (ISE)
- Member of the Czech Chemical Society (CSCH), group of Analytical Chemistry (OSACH); since 2017, she has been a member of the OSACH committee; since 2022 member of the main committee of the CSCH

TOMÁŠ WEIDLICH

tomas.weidlich@upce.cz



Tomáš Weidlich completed his doctoral studies in the group of Prof. V. Macháček at the Department of Organic Chemistry, successfully completing his studies at the University of Pardubice in 2004. In 2005, he joined the Institute of Environment Protection (from 2009, the Institute of Environmental and Chemical Engineering) at the Faculty of Chemical Technology of the University of Pardubice, where he still works. In 2015, he was appointed Associate Professor in Organic Technology. Since 2020, he has been the Head of the excellent research group (Chemical Technology Group) at the Institute of Environmental and Chemical Engineering.

Scientific interest

- sustainable chemistry and chemical technology
- waste water treatment focusing on removal of non-biodegradable contaminants
- separation of mobile recalcitrant contaminants from aqueous effluents using sorption and ion exchange
- reductive degradation of non-biodegradable halogenated organic compounds leading to biodegradable products using transition metal catalysts based on Cu and Ni alloys

Bibliometric indicators (Web of Science)

• Number of papers 34, H-index 12, Total number of citations > 330

Prominent international cooperation

- Dr. Gerhard Steiner ESIM GmbH, Linz, Austria
- Mgr. Marcela Achimovičová, Ph.D. SAV Košice, Slovakia
- Prof. Laurent Plasseraud Institut de Chimie Moleculaire, Université de Bourgogne, France

Important projects carried out from the position of principal investigator or co-investigator

- Effective removal of halogenated aromatic contaminants (AOX) from local industrial sources, 2016–2019; Technology Agency of the Czech Republic TH02030200.
- Effective removal of problematic contaminants from technological waste and wastewater, 2016–2018; Technology Agency of the Czech Republic GAMA2-01/005, TG02010058.

- Weidlich T., Kamenická B., Beneš L., Čičmancová V., Komersová A., Čermák J., Švec P.: Cu-catalyzed hydrodehalogenation of brominated aromatic pollutants in aqueous solution, Catalysts 11(6) (2021) Article No.: 699.
- Hegedus M., Gaborova K., Weidlich T., Kalivoda P., Briancin J., Tothova E. Rapid hydrodehalogenation of chlorinated benzoic acids using mechano-thermally prepared Raney alloy with enhanced kinetics. JOURNAL OF ENVIRONMENTAL AND CHEMICAL ENGINEERING, Vol. 9, Issue: 4, Article Number: 105764, Published: 2021.
- Weidlich T.: Applicability of nickel-based catalytic systems for hydrodehalogenation of recalcitrant halogenated aromatic compounds. CATALYSTS, 2021, Vol. 11, Article No.: 1465.
- Weidlich, T. The Influence of Copper on halogenation/dehalogenation reactions of aromatic compounds and its role on the destruction of polychlorinated aromatic contaminants. CATALYSTS 2021, Vol. 11, Issue: 3, Pages: 1-35, Published: 2021.
- Weidlich T., Kamenická B., Melánová K., Čičmancová V., Komersová A., Čermák J.: Hydrodechlorination of Different Chloroaromatic Compounds at Room Temperature and Ambient Pressure – Differences in Reactivity of Cu- and Ni-based Al Alloys in an Alkaline Aqueous Solution, Catalysts 10 (2020) Article No.: 994.
- Kamenická B., Matějíček P., Weidlich T., Pohořelý M.: Application of Biochar for Treating the Water Contaminated with Polar Halogenated Organic Pollutants. In Application s of Biochar for Environmental Safety, Edited by A.A. Abdelhafez and M.H.H. Abbas, IntechOpen, London, UK, 2020, ISBN: 978-1-78985-896-9.

Licencing of patent

• Weidlich T.: Reducing dehalogenation process of aromatic halo derivatives. CZ2014367 (A3) 2015 in cooperation with companies Geotest, a.s. and ASIO, s.r.o.

Awards/achievements

• Award of TOP 2018 conference for "Progressive Idea", Štrbské Pleso, Slovakia.

Supervision of doctoral theses

4 students of doctoral study programme

Membership in professional associations and boards

- International Humic Substances Society
- Czech Society of Industrial Chemistry







LIBOR DOSTÁL

libor.dostal@upce.cz



Libor Dostál completed PhD in 2005 in the group of prof. J. Holeček at the Department of General and Inorganic Chemistry. He was awarded for his dissertation by the Rector of the University. In 2004, he joined the same department and since that time, he has been working and lecturing at this Department.

Scientific interest

 Organometallic chemistry of p-block elements, low-valent compounds, unusual element-element bonds, aromatic heterocyclic systems with heavy elements, activation of small molecules by low-valent p-block elements including elementligand synergic cooperation approach

Bibliometric indicators (Web of Science)

• Number of papers 168, H-index 26, Total number of citations > 2200

Prominent international cooperation

- prof. J. Beckmann, University of Bremen, Bremen, Germany
- prof. S. Ketkov G.A.Razuvaev Institute of Organometallic Chemistry RAS, Nizhny Novgorod, Russian Federation
- assoc. prof. Z. Benkö, Department of Inorganic and Analytical Chemistry, Budapest University of Technology and Economics, Budapest, Hungary

Important projects carried out from the position of principal investigator or co-investigator

- N,C,N Chelated Chalcogenides of Heavier Group 14 and 15 Elements, Czech Science Foundation, 2010– 2012, P207/10/0130.
- Heteroboroxines A new Class of Boroxine based compounds, Czech Science Foundation, 2013–2015, GA13-00289S.
- Stibinidenes and Bismuthinidenes A new class of Ligands for transition metals, 2015–2017; Czech Science Foundation GA15-06609S.
- From simple precursors to unprecedented heterocyclic systems containing heavier Group 15 elements, 2018 – 2020; Czech Science Foundation GA18-10222S.

- Dostál, L. et al.: Organoantimony(I) and Organobismuth(I) Compounds Stabilized by an NCN Chelating Ligand: Syntheses and Structures. Angew. Chem., Int. Ed. 49 (2010) 5468-5471.
- Dostál, L. et al.: From Dibismuthenes to Three and Two Coordinated Bismuthinidenes by Fine Ligand Tuning: Evidence for Aromatic BiC3N Rings through a Combined Experimental and Theoretical Study. Chem. Eur. J. 21 (2015) 16917-16928.
- Dostál, L.: Quest for stable or masked pnictinidenes: Emerging and exciting class of group 15 compounds. Coord. Chem. Rev. 353 (2017) 142-158.
- Dostál, L. et al.: Reversible C=C Bond Activation by an Intramolecularly Coordinated Antimony(I) Compound. Chem. Eur. J. 25 (2019) 12884-12888.

Awards/achievements

- Bronze medal of the Dean of the Faculty of Chemical Technology, University Pardubice, 2017
- Rector's award of the University of Pardubice for outstanding scientific work. Twice in 2013 and 2019.

Supervision of doctoral theses

- 7 students of doctoral study programme
- 13 students of Master degree programme

MILAN ERBEN

milan.erben@upce.cz



Milan Erben finished his doctoral studies under the supervision of Prof. Ivan Pavlík in 2004, defending the dissertation "Spectroscopic study of monocyclopentadienyl complexes". In 2001, he was appointed as an assistant at the Department of General and Inorganic Chemistry of the Faculty of Chemical Technology of the University of Pardubice, where he works to date. In 2012, he was appointed as Associate Professor in General Chemistry.

Scientific interest

- Infrared and Raman spectroscopy
- Synthesis and study of properties of organometallic compounds
- Organometallic catalysis
- Metallocene compounds

Bibliometric indicators (Web of Science)

• Number of papers 76, H-index 17, sum of times cited: 764

Important projects carried out from the position of principal investigator or co-investigator

 Metallocenes as new driers for oxidative air-drying coating compositions, 2009 – 2011; Czech Science Foundation GA104/09/0529.

Important publications

- M. Mlateček, L. Dostál, Z. Růžičková, J. Honzíček, J. Holubová and M. Erben: The first scorpionate ligand based on diazaphosphole, Dalton Trans., 2015, 44, 20242-20253.
- V. Kremláček, M. Erben, R. Jambor, A. Růžička, J. Turek, E. Rychagova, S. Ketkov and L. Dostál: From a 2,1-Benzazaarsole to Elusive 1-Arsanaphthalenes in One Step, Chem.-Eur. J., 2019, 25, 5668-5671.
- P. Kozáček, L. Dostál, M. Hejda, T. Mikysek, A. Růžička and M. Erben: Synthesis and properties of 1,2,3-diazapnictol-5-yl substituted ferrocenes, New J. Chem., 2021, 45, 18171-18182.

Supervision of theses

- 2 student of doctoral study programme
- 7 students of Master degree programme
- 11 students of Bachelor degree programme

ROMAN JAMBOR

roman.jambor@upce.cz



Roman Jambor successfully completed his doctoral studies in the group of prof. J. Holeček at the University of Pardubice, Department of General and Inorganic Chemistry in 2002. In 2002, he joined the Department of General and Inorganic Chemistry at the Faculty of Chemical Technology of the University of Pardubice, where he still works. In 2006, he was appointed Associate Professor in Inorganic Chemistry. In 2018, he was appointed Professor of Inorganic Chemistry.

Scientific interest

- Main group metal complexes and organometallic compounds: chelating ligands
- Material science: synthesis of thin layers of inorganic materials from organometallic compounds

Bibliometric indicators (Web of Science)

• Number of papers 174, H-index 27, Total number of citations > 2500

Prominent international cooperation

- prof. K. Jurkschat University of Dortmund, Germany
- prof. J. Beckmann University of Bremen, Germany
- prof. S. Herres-Pawlis University of Aachen, Germany

Important projects carried out from the position of principal investigator or co-investigator

- Auto-ionizated cations of main group elements as catalysts for ROP reactions, 2020 2022; Czech Science Foundation GA20-104175.
- Non-catalysed hydrosilylations induced by N Si coordination, 2015 2017; Czech Science Foundation GA15-07091S.

Important publications

- Jambor R., Dostál L.; The Chemistry of Pincer Complexes of 13-15 Main Group Elements in Topics in Organometallic Chemistry 40, Organometallic Pincer Chemistry, Koten G., Milstein D (eds.), Book Chapter 175-203, Springer 2013
- Jambor R., Dostál L.; The Pincer Complexes of Group 13-15 Elements: Recent Developments in Pincer Compounds: Chemistry and Applications, Morales D. (eds.), Book Chapter 3, Elsevier 2018
Supervision of doctoral theses

- 8 students of doctoral study programme
- 15 students of Master degree programme

Membership in professional associations and boards

• member of International Advisory Board of European Journal of Inorganic Chemistry

ALEŠ RŮŽIČKA

ales.ruzicka@upce.cz



He obtained his Ph.D. degree under the supervision of Professor Jaroslav Holeček at the Department of General and Inorganic Chemistry, University of Pardubice in 2001. He joined parent department as a research fellow in 2000. During 2002-2003, he spent a year in the group of Professor Michael F. Lappert at the Sussex University, Brighton, as NATO-RSC fellow. In 2005, he completed his habilitation, and became Professor of Inorganic Chemistry in 2011. As a part of his responsibilities, he is leading courses of lectures on aspects of Organometallic Chemistry, Advanced Inorganic Chemistry, NMR spectroscopy, Catalysis and Crystallography.

Scientific interest

- preparation of organometallic and coordination compounds with unconventional geometries, bonding patterns and oxidation states of central atoms
- emphasis on the study of the relationships between structure, their static properties and reactivity as well as possible applications in catalytically controlled processes and materials area
- stabilizing unconventional clusters of elements
- development of variety of ligands, especially nitrogen and carbene based ones
- focus on the chemistry of non- and main group metals, from alkali metals through boranes, aluminum/tin compounds to halogens

Bibliometric indicators (Web of Science)

• Number of papers 374, H-index 34, Total number of citations > 5500, 4 patents

Prominent international cooperation

- prof. Matthias Driess TU Berlin, Germany chemistry of boranes and silylenes
- prof. Frank DeProft VUB Brussels, Belgium theoretical chemistry
- dr. Laurent Plasseraud University of Burgundy, Dijon, France high pressure synthesis
- prof. Thomas Strassner TU Dresden, Germany theory, chemistry of carbenes

Prominent international cooperation

Projects were and are currently supported by Czech Science Foundation and Technology Agency of the Czech Republic, just to name a few: Multideprotonable, amphiphilic and hybrid ligands with electron pool suitable for complexation of various low valent metals (2016-2019); Hybrid ligands for low valent metal centres stabilization/ specific activation (2011-2016). Use of Carbon Dioxide as C1 Building Block for Organic Compounds Catalyzed by Metal Containing Compounds (2009-2011). Nitrogen Ligands for Main-Group Elements - Becoming Bulkier, More Conjugated and Guilty (2021-2023).

JAROMÍR VINKLÁREK

jaromir.vinklarek@upce.cz



Jaromír Vinklárek completed his doctoral studies in the group of prof. I. Pavlík at University of Chemical Technology Pardubice. In 1996, he joined the Department of General and Inorganic Chemistry at the Faculty of Chemical Technology of the University of Pardubice, where he still works. In 2006, he was appointed Associate Professor in Inorganic Chemistry. In 2016, he was appointed Professor of Inorganic Chemistry.

Scientific interest

- syntheses, structure and spectroscopic properties of transition metals complexes
- ab initio calculations, EPR, NMR, IR and Raman spectroscopic, interpreting of spectra and study of reaction mechanisms
- technological application of organotransition compounds in polymerization of olefins and unsaturated organic binders
- research of biological activity of cyclopentadienyl complexes of group 5 and 6.

Bibliometric indicators (Web of Science)

• Number of papers 91, Patents 1, H-index 16, Total number of citations 357

Prominent international cooperation

- prof. Carlos C. Romão (ITQB, Portugal)
- Dr. Neil Simpson (Borchers)

Important projects carried out from the position of principal investigator or co-investigator

• Modernization of teaching possibilities of student workplaces for preparation, characterization and biological tests of cancerostatically active compounds, 2011; Ministry of Education, Youth and Sports of the Czech Republic, C17.

- Honzíček J., J. Vinklárek, Chemical curing of alkyd resin catalysed by benzoylferrocene: Performance, kinetics, and thickness effects, Journal of Applied Polymer Science, 135, 46184(1-6), 2018
- Mrózek O., Melounová L., Smržová D., Machálková A., Vinklárek J., Němečková Z., Komárková B., Ecorchard P., Salt-washed graphene oxide and its cytotoxicity.
 J. Hazard. Mater., 398 (2020) 123114
- Mrózek, L. Melounková, L. Dostál, I. Císařová, A. Eisner, R. Havelek, E. Peterová,
 J. Honzíček, J. Vinklárek: Enhanced cytotoxicity of indenyl molybdenum(II) compounds bearing a thiophene function. Dalton Trans. 48 (2019), 11361-11373

Awards/achievements

- 6 students of doctoral study programme
- 33 students of Master degree programme



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INORGANIC TECHNOLOGY



ŽANETA DOHNALOVÁ

zaneta.dohnalova@upce.cz



Žaneta Dohnalová completed her doctoral studies in the group of prof. Miroslav Trojan at the Department of Inorganic Technology, the Faculty of Chemical Technology of the University of Pardubice in 2004. Since 2004, she has been working at the same department at the Faculty of Chemical Technology of the University of Pardubice. In 2019, she was appointed Associate Professor in Chemistry and Technology of Inorganic Materials.

Scientific interest

- Synthesis of inorganic pigments: high temperature synthesis, solid state reaction, wet methods of synthesis
- Characterization of inorganic materials: colour parameters; NIR reflectivity; granulometric composition; thermal behaviour; chemical and light stability; phase composition
- Application tests: application into organic matric, application into ceramic glazes

Bibliometric indicators (Web of Science)

• Number of papers 37, H-index 10, Total number of citations > 240

Prominent international cooperation

• prof. E. Filipek, et al. – West Pomeranian University of Technology Szczecin, Poland

Important publications

- Gorodylova N., Kosinová V., Dohnalová Ž., Bělina P., Šulcová P.: New purple-blue ceramic pigments based on CoZr4(PO4)6, Dyes and Pigments 98 (2013) 393–404.
- Dohnalová Ž., Šulcová P., Bělina P., Vlček M., Gorodylová N.: Brown pigments based on perovskite structure of BiFeO3, Journal of Thermal Analysis and Calorimetry 133 (2018) 421–428.

Supervision of doctoral theses

- 1 student of doctoral study programme
- 11 students of Master degree programme

PAVLA HONCOVÁ

pavla.honcova@upce.cz



Pavla Honcová completed her doctoral studies in the group of prof. J. Málek at the University of Pardubice in 2004. In 2002, she joined the Department of Inorganic Technology at the Faculty of Chemical Technology of the University of Pardubice, where she still works. In 2017, she was appointed Associate Professor in Chemistry and Technology of Inorganic Materials.

Scientific interest

- thermodynamics and kinetic description of inorganic materials and phase transitions, mainly focused on crystallization of chalcogenide glasses
- use of phase change materials (inorganic salt hydrates) for heat storage
- characterisation of materials by thermal analysis and calorimetry

Bibliometric indicators (Web of Science)

Number of papers 37, H-index 14, Total number of citations 527

Prominent international cooperation

- Dr. L. A. Perez-Maqueda Instituto de Ciencia de Materiales de Sevilla, Universidad de Sevilla, Spain
- Dr. J. Seidel TU-Bergakademie Freiberg, Germany

Important projects carried out from the position of principal investigator or co-investigator

 Testing of physical ageing prediction for non-crystallized materials, 2007-2009; Czech Science Foundation GA 104/07/P106

Important publications

- Honcová P., Sádovská G., Patvová J., Koštál P., Seidel J., Sazama P., Pilař R.: Improvement of thermal energy accumulation by incorporation of carbon nanomaterial into magnesium chloride hexahydrate and magnesium nitrate hexahydrate, Renewable Energy 168 (2021) 1015-1026.
- Honcová P., Shánělová J., Barták J., Málek J., Koštál P., Stehlík S.: General approach to the nucleation and crystal growth in Sb0.5Se99.5 glass explaining shape of DSC curves, Crystal Growth and Design 16 (2016) 2904-2911.

Supervision of doctoral theses

- 1 student of doctoral study programme
- 12 students of Master degree programme

PETRA ŠULCOVÁ

petra.sulcova@upce.cz



Petra Šulcová completed her doctoral studies in the group of prof. Miroslav Trojan at the Department of Inorganic Technology, the Faculty of Chemical Technology of the University of Pardubice in 1997. In 1997, she joined the Department of Inorganic Technology at the Faculty of Chemical Technology of the University of Pardubice, where she still works. In 2002, she was appointed Associate Professor in Chemistry and Technology of Inorganic Materials. In 2009, she was appointed Professor of Chemistry and Technology of Inorganic Materials. Since 2015, she has been the Head of the Department of Inorganic Technology.

Scientific interest

- chemistry and synthesis of inorganic materials, especially the research of high performance inorganic pigments and powder materials, their application possibilities for ceramic glazes, organic binders and building materials
- high-temperature syntheses of pigments and evaluation of their colour and optical properties, thermal behaviour and stability
- utilization of methods of thermal analysis for solid-state reaction

Bibliometric indicators (Web of Science)

Number of papers 118, H-index 17, Total number of citations > 953 (745 without auto-citation)

Prominent international cooperation

- prof. Elzbieta Filipek West Pomeranian University of Technology Szczecin, Poland
- Dr. Mario Llusar Universitat Jaume, Spain

Important projects carried out from the position of principal investigator or co-investigator

- Mixed perovskites as multifunctional materials in pigment study, 2022-2024, Czech Science Foundation, 22-113975.
- Synthesis and characterization of new coloured mixed metal oxides, 2016-2018, Czech Science Foundation, 16-066975.
- Development of a Strategic Cluster for Effective Instrumental Technological Methods of Forensic Authentication of Modern Artworks, 2021-2025, Ministry of Interior of the Czech Republic, VJ01010004

- Llusar M., Vitásková L., Šulcová P.; Tena M. A., Badenes J.A., Monros G.: Red ceramic pigments of terbium-doped ceria prepared through classical and non-conventional coprecipitation routes, Journal of the European Ceramic Society, 30/1 (2010) 37-52.
- Gorodylova N., Kosinová V., Dohnalová Ž., Bělina P., Šulcová P.: New purple-blue ceramic pigments based on CoZr4(PO4)6, Dyes and Pigments, 98 (2013) 393–404.

Supervision of doctoral theses

- 13 students of doctoral study programme
- 49 students of Master degree programme

- chairwoman of the Czech Group for Thermal Analysis, Czech Chemical Society (since 2008)
- member of the executive board of the Czech Chemical Society (since 2013)
- Associate editor of "Journal of Thermal Analysis and Calorimetry" (since 2008)





ORGANIC CHEMISTRY



FILIP BUREŠ

filip.bures@upce.cz



Filip Bureš finished his Master and doctoral studies in organic chemistry at the University of Pardubice in 2002 and 2005. In 2003 and 2005, he pursued a short internship in Hungary and Slovakia, 3-month internship at the LMU (Germany) and 14-months postdoctoral fellowship at ETH Zűrich (Switzerland) under the guidance of Prof. P. Knochel and Prof. F. Diederich. After his return to Pardubice, he was habilitated in 2010 and subsequently, he was awarded a full professorship in December 2017.

Scientific interest

- organic p-conjugated molecules and their fundamental physicochemical properties
- (non)linear optics, organic electronics, swhitches, sensors, batteries
- photoredox catalysis
- organometallics for atomic layer deposition

Bibliometric indicators (Web of Science)

• Number of papers 135, H-index 30, Total number of citations 3000

Prominent international cooperation

- Dr. Sylvain Achelle (ISCR Rennes, France)
- prof. Santanu Bhattacharya (Indian Institute of Science Bangalore, India)
- Dr. Mihalis Fakis (Laser Laboratory, Department of Physics, University of Patras, Greece)
- prof. Fréderic Castet (Universiy of Bordeaux, Francie)

Important projects carried out from the position of principal investigator or co-investigator

- ORGBAT Organic redox couple based batteries for energetics of traditional and renewable resources, 2018-2022; OP VVV project of the Ministry of Education, Youth and Sport of the Czech Republic No. CZ.02.1.01/0.0/0.0/16_025/0007445.
- Carbon-Conjugated 2D-Covalent Organic Frameworks Based on Alternative D-A-D/A -D-A Systems with Exceptional Optoelectronic Properties, Inter-action of the Ministry of Education, 2020-2022; Youth and Sport of the Czech Republic LTAIN19101.

- Bureš F.: Fundamental Aspects of Property Tuning in Push-Pull Molecules, RSC Advances 4 (2014), 58826–58851.
- Charvot J., Zazpe R., Macák J. M., Bureš F.: Organoselenium Precursors for Atomic Layer Deposition, ACS Omega 6 (2021), 6554–6558.

Awards/achievements

- Alfred Bader Prize in Organic Chemistry (2012)
- Thieme Chemistry Award (2012)

Supervision of doctoral theses

- 2 postdoctoral students
- 8 students of doctoral study programme
- 18 students of Master degree programme

- Member of the Czech Chemical Society.
- Vice-chairman and Chairman within the structure of the Student's Professional Activities.
- Member of the editorial boards of Dyes & Pigments and Organics.

PAVEL DRABINA

pavel.drabina@upce.cz



Pavel Drabina completed his doctoral studies at the Department of Organic Chemistry, University of Pardubice under the supervision of prof. Miloš Sedlák in 2006. In 2004, he joined the Department of Organic Chemistry (since 2008 the Institute of Organic Chemistry and Technology) at the Faculty of Chemical Technology of the University of Pardubice, where he still works. In 2012, he was appointed Associate Professor in Organic Chemistry.

Scientific interest

- Enantioselective catalysis: design of new chiral ligands; application of enantioselective catalysts; evaluation of non-racemic mixtures
- Synthesis of biologically active compounds: preparation of small molecules exhibiting cytotoxic activity and inhibitory activity against specific enzymes

Bibliometric indicators (Web of Science)

• Number of papers 50, H-index 11, Total number of citations > 500

Important projects carried out from the position of principal investigator or co-investigator

• Synthesis and catalytic properties of new chiral ligands containing carboxylic group, Czech Science Foundation; 2008–2010, 203/08/P010

Bibliometric indicators

- Nováková G., Drabina P., Brůčková L., Báčová J., Handl J., Svoboda J., Vrbický M., Roušar T., Sedlák M.: Enantioselective Synthesis of Clavaminol A, Xestoaminol C and their Stereoisomers Exhibiting Cytotoxic Activity, European Journal of Organic Chemistry (2020) 3671–3679.
- Drabina P., Feixová V., Sedlák M.: New synthetic strategy for preparation of the anti coagulant drug Rivaroxaban via an asymmetric Henry reaction. Tetrahedron Letters 60 (2019) 99–101.
- Nováková G., Drabina P., Frumarová B., Sedlák M.: Recyclable Enantioselective Catalysts Based on Copper(II) Complexes of 2-(Pyridine-2-yl)imidazolidine-4-thione: Their Application in Asymmetric Henry Reactions. Advanced Synthesis & Catalysis 358 (2016) 2541–2552.

Bibliometric indicators

- 2 students of doctoral study programme
- 7 students of Master degree programme

JIŘÍ HANUSEK

Jiri.Hanusek@upce.cz



Jiří Hanusek completed his doctoral studies under the supervision of prof. Miloš Sedlák at the Department of Organic Chemistry (Faculty of Chemical Technology, University of Pardubice) in 2001. In the same year, he joined the Department of Organic Chemistry (since 2008 Institute of Organic Chemistry and Technology) at the Faculty of Chemical Technology of the University of Pardubice, where he works until now. In 2006, he was appointed Associate Professor in Organic Chemistry and in 2018, he was appointed Professor of Organic Chemistry. Since 2008, he has been the Deputy Head of the Institute of Organic Chemistry and Technology.

Scientific interest

- Organic reaction mechanisms: detailed investigation of the reaction course using all available methods of physical organic chemistry (reaction kinetics, isotope effects, type of catalysis, linear free energy relationships).
- Structure-reactivity studies involving ring transformation reactions.
- Organic synthesis: synthesis of heterocyclic compounds with significant biological activity.

Bibliometric indicators (Web of Science)

• Number of papers 76, H-index 13, Total number of citations 637.

Prominent international cooperation

• prof. A. Laws – University of Huddersfield, United Kingdom.

Important projects carried out from the position of principal investigator or co-investigator

• Intramolecular nucleophilic substitution – Kinetics and mechanism of tandem recyclization reaction, 2002-2004, Czech Science Foundation 203/02/D170.

Important publications

- Váňa J., Bartáček J., Hanusek J., Roithová J., Sedlák M.: C–H Functionalizations by Palladium Carboxylates: The Acid Effect. J. Org. Chem. 84 (2019) 12746–12754.
- Marek L., Kolman L., Váňa J., Svoboda J., Hanusek J.: Synthesis of (Z)-3-[amino(phenyl) methylidene]-1,3-dihydro-2H-indol-2-ones using an Eschenmoser coupling reaction. Beilstein J. Org. Chem. 17 (2021) 527–539.

Awards/achievements

• Alfred Bader Award for Organic Chemistry (2007).

Supervision of doctoral theses

- 4 students of doctoral study programme
- 10 students of Master degree programme

- Alfred Bader Award Committee for Organic Chemistry.
- Alfred Bader Award Committee for Bioinorganic and Bioorganic Chemistry.
- Member of the Czech Chemical Society (since 1998).

JIŘÍ KULHÁNEK

jiri.kulhanek@upce.cz



Jiří Kulhánek finished his doctoral studies at the University of Pardubice in 1996. In 2002, he worked 4 months at Ludwig-Maximillians University, Munich, Germany, in the group of Prof. Knochel. In 2002, he was appointed Associate Professor in Organic Chemistry. In 2012, he was appointed Professor of Organic Chemistry. In 2006-2007, he held the post of Vice-Dean of the Faculty of Chemical Technology, University of Pardubice. In 2014-2018, he was appointed the Vice-Rector for Research of the University of Pardubice.

Scientific interest

 Organic and heterocyclic chemistry: synthesis, study of properties and application of organic dipolar push pull systems and their as charge-transfer chromophores for optoelectronic.

Bibliometric indicators (Web of Science)

• Number of papers 64, H-index 20, Total number of citations > 980

Prominent international cooperation

• prof. Nilanjan Dey, Department of Organic Chemistry, Indian Institute of Science, Bangalore, India

Important projects carried out from the position of principal investigator or co-investigator

• Modulation of properties of C-T chromophores: type donor-imidazole-acceptor. Czech Science Foundation, 203/08/0076, 2008-2010

Important publications

- Dey N., Kulhánek J., Bureš F., Bhattacharya S.: Simultaneous Detection of Cu2+ and Hg2+ via Two Mutually Independent Sensing Pathways of Biimidazole Push–Pull Dye. J. Org. Chem. 2019, 84, 1787-1796.
- Kulhánek J., Pytela O., Bureš F., Klikar M: Small Heterocyclic D-p-D-p-A Push-Pull Molecules with Complex Electron Donors. Eur. J. Org. Chem. 2021, 22, 3223-3233.

Supervision of doctoral theses

- 2 students of doctoral study programme
- 9 students of Master degree programme

- Member of the Czech Chemical Society
- Member of the Scientific Board of the Faculty of Chemical Technology, University of Pardubice

MILOŠ SEDLÁK

milos.sedlak@upce.cz



Miloš Sedlák 1990 completed his postgraduate study in Organic Chemistry at VŠCHT Pardubice, Postdoc position in 1994-1995 at the Max-Planck-Institute, Colloid Chemistry Department, Potsdam (Germany). From 1990, he worked as Assistant Professor at the Department of Organic Chemistry of VŠCHT Pardubice (at present time University of Pardubice) and from 1998, as Associate Professor. In 2007, he obtained DrSc. at the Slovak Technical University (Slovakia). Since 2008, has been in the position of Full Professor of Organic Chemistry (University of Pardubice) and the Head of the Institute of Organic Chemistry and Technology.

Scientific interest

- chemistry of heterocyclic compounds
- enantioselective catalysis
- recyclable catalysts

Bibliometric indicators (Web of Science)

• Number of papers 121, H-index 19, Total number of citations > 1000

Prominent international cooperation

prof. Dr. Helmut Cölfen – University Konstanz Germany

Important projects carried out from the position of principal investigator or co-investigator

- Phosgene Derivatives for Nanotechnology, 2011-2013, Czech Science Foundation P106/11/0058.
- Recyclable Catalysts for Sustainable Technology of Advanced Organic Intermediates, 2017 -2019, Czech Science Foundation 17-08499S.

Awards/achievements

• Werner von Siemens Award 2012 (mentor of the Ph.D. thesis), Synfact Journal Award 2014

- Nováková G., Drabina P., Frumarová B., Sedlák M.: Recyclable Enantioselective Catalysts Based on Copper(II) Complexes of 2-(Pyridine-2-yl)imidazolidine-4-thione: Their Application in Asymmetric Henry Reactions. Advanced Synthesis & Catalysis 358 (2016) 2541-2552;
- Keckeis P., Drabinová E., Ruiz-Agudo C., Avaro J., Glatt L., Sedlák M., Cölfen H.: Multifunctional Block Copolymers for Simultaneous Solubilization of Poorly Water--Soluble Cholesterol and Hydroxyapatite Crystals, Advanced Functional Materials 29 (2019) 1808331;
- Bartáček J., Váňa J., Drabina P. Svoboda J., Kocúrik M., Sedlák M.: Recoverable polystyrene-supported palladium catalyst for construction of all-carbon quaternary stereocenters via asymmetric 1,4-addition of arylboronic acids to cyclic enones, Reactive and Functional Polymers 153 (2020) 104615.

Supervision of doctoral theses

- 9 students of doctoral study programme
- 22 students of Master degree programme
- 2 postdoctoral students

- Editorial Board international impacted journal of synthetic Organic Chemistry and Chemistry of natural substance "Molecules"
- Czech Chemical Society
- member of the Scientific Board of Faculty of Chemical Technology, University of Pardubice
- member of the Scientific Board of Faculty of Chemical Technology, University of Chemistry and Technology Prague

PETR ŠIMŮNEK

petr.simunek@upce.cz



Petr Šimůnek finished his Ph.D. study under the supervision of Prof. Vladimír Macháček at the Department of Organic Chemistry, University of Pardubice in 2003. In the same year, he joined the Department of Organic Chemistry at the Faculty of Chemical Technology of the University of Pardubice where he still works. In 2006, he was appointed Associate Professor.

Scientific interest

- Organic boron materials: synthesis, characterization, application as luminescence materials
- Organic materials having AIE (aggregation induced emission), TADF (thermally activated delayed fluorescence), AIDF (aggregation induced delayed fluorescence)

Bibliometric indicators (Web of Science)

• Number of papers 49, H-index 17, Total number of citations 497 (without self-citations)

Prominent international cooperation

- Dr. Giovanni Valenti University of Bologna, Italy
- Dr. Damiano Genovese, University of Bologna, Italy

Important publications

- Josefík F., Mikysek T., Svobodová M., Šimůnek P., Kvapilová H., Ludvík J.: New Triazaborine Chromophores, their Synthesis via Oxazaborines, Electrochemical and DFT Study of their Fundamental Properties. Organometallics 33, (2014), 4931–4939.
- Mikysek T., Nikolaou P., Kafexholli M., Šimůnek P., Váňa J., Marková A., Vala M., Valenti G.: Photophysical and Electrochemiluminescence of novel coumarin-based oxazaborines. ChemElectroChem 7 (2020), 1550–1557.

Awards/achievements

• Milos Hudlicky Award for important paper published in the journal of EUChemSoc (2002)

Supervision of doctoral theses

- 2 students of doctoral study programme
- 11 students of Master degree programme

Membership in professional associations and boards

Member of the Czech Chemical Society

JIŘÍ VÁŇA

jiri.vana@upce.cz



Jiří Váňa completed his doctoral studies in the group of prof. Miloš Sedlák at the Institute of Organic Chemistry and Technology at the University of Pardubice in 2012. For his dissertation he was awarded by the "Siemens prize". Between 2013 and 2015 he spent two years as a postdoc in the group prof. Roithová at Department of Organic Chemistry of Charles University in Prague. After that he joined the Institute of Organic Chemistry and Technology at the Faculty of Chemical Technology of the University of Pardubice, where he still works. In 2021 he was appointed Associate Professor in Organic Chemistry.

Scientific interest

- Reaction kinetics and mechanisms: transition metals catalysed C-H functionalizations, ring transformations of heterocycles
- Tools for mechanistic studies: computational chemistry, mass spectrometry, NMR

Bibliometric indicators (Web of Science)

• Number of papers 34, H-index 10, Total number of citations > 260

Prominent international cooperation

- prof. I. J. S. Fairlamb University of York, UK
- prof. J. Roithová Radboud University, Netherlands

Important publications

- Váňa J., Bartáček J., Hanusek J., Roithová J., Sedlák M.: C–H Functionalizations by Palladium Carboxylates: The Acid Effect J. Org. Chem. 84 (2019) 12746–12754.
- Váňa J., Lang J., Šoltésová M., Hanusek J., Růžička A., Sedlák M., Roithová J.: The role of trinuclear species in a palladium acetate/trifluoroacetic acid catalytic system Dalton Trans. 46 (2017) 16269–16275.

Awards/achievements

• Siemens award (2012)

Supervision of doctoral theses

• 5 students of master of science





ORGANIC TECHNOLOGY



ALEŠ IMRAMOVSKÝ

ales.imramovsky@upce.cz



Aleš Imramovský completed his doctoral studies in the group of Prof. J. Vinšová at the Faculty of Pharmacy, Charles University in Prague in 2007. His dissertation was entitled "Preparation and evaluation of new potential antimicrobial drugs and prodrugs" In 2008, he joined the Institute of Organic Chemistry and Technology, Department of Technology at the Faculty of Chemical Technology of the University of Pardubice, where he still works. In 2013, he was appointed Associate Professor in Technology of organic compounds. Since 2015, he has been the Head of the Department of Technology.

Scientific interest

- Synthesis of organic compounds with promising biological (antiproliferative, proteasomal inhibitors, antibacterial compounds with novel mechanism of action) and material properties.
- Technology of organic compounds: research and development of technology for the production of organic specialties and their impurities ev. side products.

Bibliometric indicators (Web of Science)

• Number of papers 56, H-index 19, Total number of citations > 900 (WOS June 21st, 2021)

Prominent international cooperation

• prof. K. Kranjc – University of Ljubljana, Slovenia

Important projects carried out from the position of principal investigator or co-investigator

- 2019 Czech Science Foundation Project 19-22783S, Title: Molecular materials for overcoming the Shockley-queisser limit (project period 1 March 2019 - 31 December 2021). Function - principal investigator for the University of Pardubice.
- 2013 Technology Agency of Czech Republic, Project TA03010819, Title: Development of Technology for non-Halogenated Veterinary Prostaglandins and Their Intermediates. (2013-2016). Function principal investigator

- Pauk, K.; Imramovský, A. et. al. Green, red and infrared emitting polymorphs of sterically hindered push-pull substituted stilbenes. Chemistry – A European J. 2021, 27(13), 4341–4348.
- Monteiro, S.; Imramovský, A. et. al. Synthesis of Alfaprostol Key Intermediate Ynol via Br/Mg Exchange. Organic Preparations and Procedures International 2020, 52(2), 127-138.
- Jorda, R.; Imramovský, A. et.al. Novel modified leucine and phenylalanine dipeptides modulate viability and attachment of cancer cells. Eur. J. Med. Chem. 2020, 188, 112036.

Awards/achievements

- Alfred Bader Award for Bioorganic and Bioinorganic Chemistry 2015 (CAB II).
- Josef Hlávka Award, Prague, November 16th 2007. Foundation of Josef, Marie a Zdeňka Hlávka

Supervision of doctoral theses

- 5 students of doctoral study programme (3 in process)
- > 10 students of Master degree programme

Membership in professional associations and boards

Czech Chemical Society (ČSCH)





PHYSICAL CHEMISTRY



ROMAN BULÁNEK

roman.bulanek@upce.cz



Roman Bulánek has been working at the Department of Physical Chemistry, the Faculty of Chemical Technology of the University of Pardubice since 1998. He completed his doctoral studies in Physical Chemistry at the Faculty of Chemical Technology of the University of Pardubice under the supervision of prof. J. Tichý and Ing. B. Wichterlová, DrSc. (J.Heyrovsky Institute of Physical Chemistry, Academy of Sciences of the Czech Republic) in 1999. In 2004, he was appointed Associate Professor in Physical Chemistry and in 2015, he was appointed Professor of Physical Chemistry. In the years 2008-2015 he worked as the Head of the Department of Physical Chemistry and since 2008, he has been the guarantor of the doctoral study programme in Physical Chemistry.

Scientific interest

- Thermodynamics of adsorption phenomena in porous materials (especially zeolites and MOFs)
- Heterogeneously catalysed reactions of gaseous reactants (especially selective oxidations)
- Acido-basic properties of solids (mainly zeolites and zeolite like materials)

Bibliometric indicators (Web of Science)

• Number of papers 119, 2 patents, H-index 24, Total number of citations > 2000

Prominent international cooperation

- prof. C. O. Areán, Dr. M. R. Delgado University of the Balearic Islands, Mallorca, Spain
- Dr. F. Ayari Université de Tunis El Manar, Tunisia
- Prof. G. Delahay Institute Charles Gerhardt Montpellier, France

Important projects carried out from the position of principal investigator or co-investigator

- Boron-containing catalysts for alkane oxidative dehydrogenation, 2022-2024 Czech Science Foundation.
- Intelligent design of nanoporous adsorbents and catalysts, 2012 2018; Czech Science Foundation P106/12/G015.

- Areán C.O., Delgado, M.R., Nachtigall P., Thang H.V., Rubeš M., Bulánek R., Chlubná-Eliášová P.: Measuring the Bronsted acid strength of zeolites - does it correlate with the O-H frequency shift probed by a weak base?, Physical Chemistry Chemical Physics 16 (2014) 10129–10141.
- R. Bulánek, J. Vaculík, O. Veselý, J. Pøech, M. Kubù, M. Rubeš, O. Bludský, Reactivity of internal vs. external Brønsted acid sites in nanosponge MFI: H/D exchange kinetic study, Microporous and Mesoporous Materials, 332 (2022) 111717

Awards/achievements

- Award of the Rector of the University of Pardubice for beneficial cooperation with industry (2018) •
- TechConnect 2017 Innovation Award received at TechConnect World Innovation 2017, Washington DC for highly porous SiO2 microfibers production (2017)

Supervision of doctoral theses

- 6 students of doctoral study programme with the defended thesis + 4 students currently studying
- 15 students of Master degree programme and 11 Bachelor degree students

- Member of International Adsorption Society, International Zeolite Association and the Czech Chemical Society
- Member of editorial board of the journals Scientific Reports (Nature research) and Catalysts (MDPI Publisher)

LIBOR ČAPEK

libor.capek@upce.cz



Libor Čapek completed his doctoral studies in the group of Dr. B. Wichterlová at J. Heyrovsky Institute of Physical Chemistry, successfully completing his studies at the University of Pardubice in 2004. For his dissertation, he was awarded the "Award of Ministry of Education for Excellent Students and Graduates". In 2005, he joined the Department of Physical Chemistry at the Faculty of Chemical Technology of the University of Pardubice, where he still works. In 2009, he was appointed Associate Professor in Physical Chemistry. In 2017, he was appointed Professor of Physical Chemistry. Since 2018 to 2022, he has been the Head of the Department of Physical Chemistry.

Scientific interest

- photocatalysis: water splitting, characterization of optical and electronic properties of photocatalysts
- heterogeneous catalysis: redox catalysis (oxidative dehydrogenation of light alkanes, deoxygenation), basic catalysis (aldol condensation, analysis of basic sites, layered double hydroxide based catalysts)

Bibliometric indicators (Web of Science)

• Number of papers 93, H-index 30, Total number of citations > 2300

Prominent international cooperation

- prof. L. Chmielarz, prof. A. Kotarba, prof. P. Kustrowski etc. Jagiellonian University Krakow, Poland
- prof. A. Caballero Universidad de Sevilla, Spain

Important projects carried out from the position of principal investigator or co-investigator

- Heterojunction photocatalysts and simultaneously metal and non-metal doped TiO2 photocatalysts for environmental photocatalytic reactions, 2020-2022; Czech Science Foundation, 20-09914S
- Quantifying the basicity of reconstructed layered double hydroxides and correlating this with their performance in base-catalysed reactions, 2019 – 2021; Czech Science Foundation GA19-229785.

- Smoláková L., Dubnová L., Kocík J., Endres J., Daniš S., Priecel P., Čapek L.: In-situ characterization of the thermal treatment of Zn-Al hydrotalcites with respect to the formation of Zn/Al mixed oxide active in aldol condensation of furfural, Applied Clay Science 157 (2018) 8–18.
- Dubnová L., Zvolská M., Edelmannová M., Matějová L., Reli M., Drobná H., Kuśtrowski P., Kočí K., Čapek L.: Photocatalytic decomposition of methanol-water solution over N-La/ TiO2 photocatalysts, Applied Surface Science 469 (2019) 879-886.

Awards/achievements

• Award of Ministry of Education for Excellent Students and Graduates (2004)

Supervision of doctoral theses

- 5 students of doctoral study programme
- 15 students of Master degree programme

PAVEL ČIČMANEC

pavel.cicmanec@upce.cz



Pavel Čičmanec completed his doctoral studies at the University of Pardubice in 1998. In 1995, he joined the Department of Physical Chemistry at the Faculty of Chemical Technology of the University of Pardubice as a lecturer of Physical Chemistry courses and he still works there. In 2008, he was appointed Associate Professor in Physical Chemistry.

Scientific interest

- heterogeneous catalysis: redox catalysis (oxidative dehydrogenation of light alkanes, deoxygenation), acid-base catalysis (dehydration of alcohols) on supported oxide catalysts or zeolitic catalysts
- Study of kinetic of co/adsorption and diffusion of gases in solid sorbents.

Bibliometric indicators (Web of Science)

• Number of papers 43, H-index 14, Total number of citations > 500

Important publications

- Bulanek R., Capek L., Setnicka M., Cicmanec P.: DR UV-vis Study of the Supported Vanadium Oxide Catalysts, J. Phys. Chem. C 115(25) (2011) 12430-12438.
- Setnicka M., Bulanek R., Capek L., Cicmanec P.: n-Butane oxidative dehydrogenation over VO(X)-HMS catalyst, J. Mol. Catal. A-Chem. 344(1-2) (2011) 1-10.

Supervision of doctoral theses

- 3 students of doctoral study programme
- 7 students of Master degree programme

MARTIN HÁJEK

martin.hajek@upce.cz



Martin Hájek successfully completed his doctoral studies at the Department of Physical Chemistry, University of Pardubice in 2006. In 2007, he joined the Department of Physical Chemistry at the Faculty of Chemical Technology of the University of Pardubice, where he still works. In 2015, he was appointed Associate Professor in Physical Chemistry with the habilitation thesis: "Theory and practice of vegetable oil transesterification".

Scientific interest

- Use of oil in transport and its transformation to fuel, especially esters
- Transesterification carried out by homogeneous and heterogeneous catalysts, description of the reaction conditions including separation and purification of the final product
- · Epoxidation of oils or esters to form biolubricants or monomers for bioplastic
- Ethanol validation to valuable products by heterogeneous catalyst
- Heterogeneous catalysis: basic catalysis, layered double hydroxide based catalysts

Bibliometric indicators (Web of Science)

• Number of papers 41, H-index 15, Total number of citations 620

Prominent international cooperation

• doc. P. Hudec – Slovak University of Technology in Bratislava, Slovakia

Important projects carried out from the position of principal investigator or co-investigator

- The relations between activity and structure of Mg-Al/Fe mixed oxides including post-treatment for transesterification and Guerbet reaction, 1/2019-12/2021, Czech Science Foundation GA19-006695.
- The innovation and modernization of educational practices in physical chemistry at the University of Pardubice, 3/2012-2/2015, European Social Fund CZ.1.07/2.2.00/28.0269.

Important publications

- A. Vávra, M. Hájek, F. Skopal: Acceleration and Simplification of Separation by Addition of Inorganic Acid in Biodiesel Production, Journal of Cleaner Production 192 (2018) 390-395.
- K. Frolich, A. Vávra, J. Kocík, M. Hájek, A. Jílková: The long-term catalytic performance of mixed oxides in fixed-bed reactors in transesterification, Renewable Energy 143 (2019) 1259-1267.

 Mück, J. Kocik, M. Hájek, Z. Tišler, K. Frolich, A. Kašpárek: Transition metals promoting Mg-Al mixed oxides for conversion of ethanol to butanol and other valuable products: reaction pathways, Applied Catalysis A: General, 626, 118380 (2021)

Supervision of doctoral theses

- 2 students of doctoral study programme
- 11 students of Master degree programme

- Member of the Research, Development and Innovation Council for the evaluation of research outcomes in the Czech Republic for the Engineering and Technology
- Member of the Scientific Advisory Board of SDEWES

ALENA KOMERSOVÁ

alena.komersova@upce.cz



Alena Komersová completed her doctoral studies in the group of prof. Karel Vytřas, DrSc. at the Department of Analytical Chemistry, successfully completing her studies at the University of Pardubice in 2002. In 2002, she joined the Department of Physical Chemistry at the Faculty of Chemical Technology of the University of Pardubice, where she still works. In 2018, she was appointed Associate Professor in Physical Chemistry.

Scientific interest

- applied kinetics (kinetics of enzymatic reactions, solid drug forms (dissolution and quantitative evaluation of the dissolution profile), pharmacokinetics
- 3D printing in pharmaceutical technology

Bibliometric indicators (Web of Science)

• Number of papers 32, H-index 9, Total number of citations 253

Prominent international cooperation

- SOTAX Group (Switzerland) and SOTAX Pharmaceutical Testing (Czech Republic, Ing. Iva Martincová)
- SPS Pharma Services, Orléans, France (Samir Haddouchi, Managing Director)

Important publications

- SKALICKÁ, B.; MATZICK, K.; KOMERSOVÁ, A.; SVOBODA, R.; BARTOŠ, M.; HROMÁDKO, L. 3D-Printed Coating of Extended-Release Matrix Tablets: Effective Tool for Prevention of Alcohol-Induced Dose Dumping Effect. Pharmaceutics 13(12), (2021), 2123-2150.
- LOCHAŘ V., KOMERSOVÁ A., MATZICK K., SLEZÁKOVÁ B., BARTOŠ M., MUŽÍKOVÁ J., HADDOUCHI S.: The effect of alcohol on ionizing and non-ionizing drug release from hydrophilic, lipophilic and dual matrix tablets. Saudi Pharmaceutical Journal 2020 (28), 187–195.

Supervision of doctoral theses

- 2 students of doctoral study programme
- 10 students of Master degree programme

Supervision of doctoral theses

- Field Board of Biochemistry, FCHT University of Pardubice
- The Czech Chemical Society (ČSCH)

JIŘÍ MÁLEK

jiri.malek@upce.cz



Professor Jiří Málek completed his doctoral studies in the Joint Laboratory of Solid State Chemistry of the Czechoslovak Academy of Sciences and the Institute of Chemical Technology in Pardubice under the supervision of Professor Ladislav Tichý in 1986. After graduation, he spent a couple of years abroad at the University of Seville, Spain (1988 – 1990), the Institute for Research in Inorganic Materials, Tsukuba, Japan (1994 – 1995) and Catalonian Polytechnic University in Barcelona (1996 – 1997). In 2002, he joined the Department of Physical Chemistry at the Faculty of Chemical Technology of the University of Pardubice, where he still works. From 2015 to 2017, he was serving as the Head of the Department of Physical Chemistry and as the national councillor in the International Confederation for Thermal Analysis and Calorimetry. Professor Málek is also engaged in R&D Evaluation process in the Czech Republic, being also a member of scientific boards of several universities.

Scientific interest

- Structural relaxation of non-crystalline materials
- · Kinetics of crystal growth in supercooled liquids
- Viscosity of chalcogenide glass-forming systems

Bibliometric indicators (Web of Science)

• Number of papers 206, H-index 38, Total number of citations > 7 000

Prominent international cooperation

- Supervisor of "International Cooperative Graduate Program" with the National Institute for Materials in Tsukuba, Japan
- C.S.I.C., Sevilla, Spain (Dr. Luis Pérez-Maqueda), Hiroshima University, Japan (Prof. Nobuyoshi Koga), Tokyo Institute of Technology, Japan (Prof. Hitoshi Kawaji), University of Wisconsin, Madison, U.S.A (Prof. Mark Ediger).

Important projects carried out from the position of principal investigator or co-investigator

- Reversible crystallization and structural relaxation in amorphous materials for data recording media, 2011 2015; Czech Science Foundation GA P106/11/1152
- Viscosity and kinetic phenomena in glass-forming systems, 2016 2018; Czech Science Foundation GA19-22978S

- Košťál, P., Shánělová, J. Málek, J.: Viscosity of chalcogenide glass-formers., Int. Mater. Rev. 65 (2020) 63 – 101
- Málek, J., Podzemná, V., Shánělová, J.: Crystal Growth Kinetics in GeS2 Glass and Viscosity of Supercooled Liquid, J. Phys. Chem. B 125 (2021) 7515 – 7526

Awards/achievements

- Young Scientist Award, International Confederation for Thermal Analysis (1992)
- Distinguished TA&C Researcher in Central and Eastern Europe, CEEC-TAC (2013)
- Eugen Segal Award, European Symposium on Thermal Analysis and Calorimetry (2018)

- International Confederation for Thermal Analysis and Calorimetry, vice president
- The Comenius Academic Club, member
- The Engineering Academy of the Czech Republic, member


FACULTY OF CHEMICAL TECHNOLOGY UNIVERSITY OF PARDUBICE





FACULTY OF CHEMICAL TECHNOLOGY UNIVERSITY OF PARDUBICE

MAREK BOUŠKA

marek.bouska@upce.cz



Marek Bouška completed his doctoral studies in the group of prof. R. Jambor at the Department of General and Inorganic Chemistry, Faculty of Chemical Technology, University of Pardubice, successfully completing his studies at the University of Pardubice in 2014. In 2014, he joined the Department of Graphic Arts and Photophysics, Faculty of Chemical Technology, University of Pardubice, where he still works. In 2020, he was appointed Associate Professor in Surface engineering.

Scientific interest

 Preparation and characterization of thin chalcogenides films by co-sputtering and PLD methods, optical properties of nanomaterials, phase change materials, synthesis and characterization of new organometallic single source precursors for III-VI, IV-VI materials, deposition and characterization of chalcogenides thin films by spin coating method

Bibliometric indicators (Web of Science)

• Number of papers 37, H-index 10, Total number of citations > 370

Prominent international cooperation

- Dr. Virginie Nazabal, Institut des Sciences Chimiques de Rennes, France,
- Dr. Christophe Cardinaud, Dr. Aurélie GirardInstitut des Matériaux Jean Rouxel (IMN), Nantes, France
- Prof. Sandor Kokenyesi, University of Debrecen, Hungary

Important publications

- Bouška, M.; Pechev, S.; Simon, Q.; Boidin, R.; Nazabal, V.; Gutwirth, J.; Baudet, E.; Němec, P., Pulsed laser deposited GeTe-rich GeTe-Sb2Te3 thin films. Scientific Reports, 2016, 6, 26552.
- Řičica, T.; Milasheuskaya, Y.; Růžičková, Z.; Němec, P.; Švanda, P.; Olmrová Zmrhalová,
 Z.; Jambor, R.; Bouška, M., Synthesis and application of monomeric chalcogenolates of 13 group elements, Chemistry - An Asian Journal, 2019, 14, 4229-4235.
- Bouška, M.; Dostál, L.; Padělková, Z.; Lyčka, A.; Herres-Pawlis, S.; Jurkschat, K.; Jambor, R., Intramolecularly Coordinated Organotin Tellurides: Stable or Unstable? ANGEWAN-DTE CHEMIE-INTERNATIONAL EDITION 2012, 51, 3478-3482.

Awards/achievements

- Rector's Award of the University of Pardubice (prof. Ing. Miroslav Ludwig, CSc.) for a publication in a journal with a high impact factor
- Commemorative medal of the faculty awarded by the Dean of the Faculty of the Chemical Technology of University of Pardubice for an excellent result

Supervision of doctoral theses

• 6 students of Master degree programme

FACULTY OF CHEMICAL TECHNOLOGY UNIVERSITY OF PARDUBICE

PETR JANICEK

petr.janicek@upce.cz



Petr Janicek completed his doctoral studies in the group of prof. P. Lostak at the Faculty of Chemical Technology, successfully completing his studies at the University of Pardubice in 2009. He also successfully studied at the Faculty of Mathematics and Physics of the Charles University in Prague, (RNDr. in 2009). In 2003, he joined the Institute of Applied Physics and Mathematics at the Faculty of Chemical Technology of the University of Pardubice, where he still works. From 2015, he has also been partially involved in the Centre of Materials and Nanotechnology, Faculty of Chemical Technology of the University of Pardubice as Senior Researcher. In 2020, he was appointed Associate Professor in Surface Engineering. Since 2016, he has been the Deputy Head of the Institute of Applied Physics and Mathematics.

Scientific interest

- optical properties of different types of materials (inorganic, organic, bulk, layers, multilayers) determined by spectroscopic ellipsometry
- · electric, magnetic and thermoelectric properties of materials
- numerical simulations using COMSOL

Bibliometric indicators (Web of Science)

• Number of papers 29, H-index 10, Total number of citations 285

Prominent international cooperation

- prof. S.-H. Kim, prof. H.Y. Lee etc. Yeungnam University, Republic of Korea
- prof. F. Poletti University of Southampton, United Kingdom

Important publications

- Ansari M. Z., Nandi D. K., Janicek P., Ansari S. A., Ramesh R., Cheon T., Shong B., Kim S.-H.: Low-Temperature Atomic Layer Deposition of Highly Conformal Tin Nitride Thin Films for Energy Storage Devices. ACS Appl. Mater. Interfaces 11 (2019) 43608–43621.
- Janicek, P., Putri, M., Kim, K.H., Lee, H.J., Bouska, M., Slang, S., Lee, H.Y: Spectroscopic ellipsometry characterization of as-deposited and annealed non-stoichiometric indium zinc tin oxide thin film. Materials 14 (2021) 578.

Supervision of doctoral theses

- student of doctoral study programme
- 4 students of Master degree programme

FACULTY OF CHEMICAL TECHNOLOGY UNIVERSITY OF PARDUBICE

ANDRÉA KALENDOVÁ

andrea.kalendova upce.cz



Andréa Kalendová graduated from the University of Pardubice, Faculty of Chemical Technology in the field of "Chemical and Technical Environment Protection", and she obtained the scientific rank of Ph.D. in the field of "Inorganic Technology" at the University of Pardubice, Faculty of Chemical Technology in 1997 (title of dissertation thesis "Study of Anticorrosive Properties of Spinel-Type Pigments"). She was habilitated at TU Ostrava in the field of "Engineering Technology - Surface Protection of Materials" in 2001 (the title of habilitation thesis "Study of Corrosion-Inhibitory Efficiency of Coating Systems for Surface Treatment of Steel Structures"). In 2009, she was appointed Professor in the field of "Chemistry and Technology of Materials" (the title of the professor's lecture "Corrosion protection of metallic materials"). Since 2010, she has been working as professor at the Institute of Chemistry and Technology of Macromolecular Materials.

Scientific interest

- Research and development of advanced organic coatings
- Synthesis and study of conditions for application of conductive polymers in protective polymeric films

Bibliometric indicators (Web of Science)

• Number of papers 124, H-index 23, Total number of citations >1650

Prominent international cooperation

- Ing. Felipe Wolff-Fabris, European Centre for Dispersion Technologies, Bildung & Forschung, Selb, GERMANY
- prof. P.P .Deshpande, College of Engineering Pune (COEP), INDIA

Important projects carried out from the position of principal investigator or co-investigator

- Preparation of conductive and semiconducting polymers doped with carbon-based nanoparticles and nanotubes, 2005-2009 (Ministry of Industry and Trade)
- "New biocidal water-soluble binders and coatings for outdoor and hygienic interior applications, 2018-2020 (Ministry of Industry and Trade)

Important publications

- Kalendová A., Sapurina I., Stejskal J., Veselý D.:Anticorrosion properties of polyanilinecoated pigments in organic coatings, Corrosion Science 50 (2008) 3549-3560.
- Kalendová A., Ryšánek P., Nechvílová K.: Investigation of the anticorrosion efficiency of ferrites Mg1–xZnxFe2O4 with different particle morphology and chemical composition in epoxy-ester resin-based coatings. Progress in Organic Coatings 86 (2015) 147-163.

Awards/achievements

 Award for Excelence 2008 for Outstanding Paper Award in Pigment & Resin Technology "Synthesis and Properties of Pigments Based on XxZnyFe2O4 Ferrites With Nonisometric Particles" Pigment & Resin Technology.

Supervision of doctoral theses

- 15 students of doctoral study programme
- >70 students of Master degree programme

Membership in professional associations and boards

 Member of Editorial Board of Pigment & Resin Technology, Anti-Corrosion Methods and Materials, Ochrona przed Korozja (Corrosion Protection), Paints and Varnishes, etc.

FACULTY OF CHEMICAL TECHNOLOGY UNIVERSITY OF PARDUBICE

ŠTĚPÁN PODZIMEK

stepan.podzimek@upce.cz



Štěpán Podzimek completed his doctoral studies at the Institute of Macromolecular Chemistry, the Czech Academy of Sciences, Prague in 1989. He works as the head of Analytical and Physical Chemistry Department of research and development company SYNPO, Pardubice and as a professor at the Institute of Chemistry and Technology of Macromolecular Materials of the University of Pardubice. He joined the University in 1995 as an assistant and he was appointed as the professor of macromolecular chemistry in 2004.

Scientific interest

- Analysis and characterization of synthetic and natural polymers with size exclusion chromatography, asymmetric flow field flow fractionation, light scattering and dilute solution viscometry.
- Determination of molar mass distribution and polymer branching.

Bibliometric indicators (Web of Science)

• Number of scientific papers over 60; one book; H-index 12; total number of citations > 900.

Prominent international cooperation

• Scientific consultant for Wyatt Technology, leading manufacturer of light scattering and related instrumentation.

Important projects carried out from the position of principal investigator or co-investigator

· Author and co-author of numerous reports from research projects.

Important publications

- S. Podzimek and C. Johann: Asymmetric Flow Field-Flow Fractionation: Current Status, Possibilities, Analytical Limitations and Future Trends, Chromatographia, 84, 531–534 (2021).
- S. Podzimek: Truths and Myths about the Determination of molar Mass Distribution of Synthetic and Natural Polymers by Size Exclusion Chromatography, J. Appl. Polym. Sci., 131, 40111 (2014).
- S. Podzimek: Light Scattering, Size exclusion chromatography and asymmetric flow field flow fractionation. Book by John Wiley and Sons, 2011.
- S. Podzimek, T. Vlcek, C. Johann: Characterization of Branched Polymers by Size Exclusion Chromatography Coupled with Multiangle Light Scattering Detector. I. Size Exclusion Chromatography Elution Behavior of Branched Polymers, J. Appl. Polym. Sci., 81, 1588 (2001).

FACULTY OF CHEMICAL TECHNOLOGY UNIVERSITY OF PARDUBICE

TOMÁŠ SYROVÝ

tomas.syrovy@upce.cz



T. Syrový completed his doctoral studies at the Department of Analytical Chemistry, University of Pardubice, and successfully graduated in 2006. Since 2005 he was employed at the Department of Graphic Arts and Photophysics. Since 2009 he has been the Deputy Head of the Department of Polygraphy and Photophysics. In 2018 he was appointed Associate Professor in Surface Engineering.

Scientific interest

- Material printing: printed electronics (displays, printed antennas, passive and active devices, smart labels), printed sensors (electrochemical, large area, medical, environmental sensing)
- Additive manufacturing: conventional printing and coating techniques, digital printing techniques, 2D, 2.5D and 3D functional printing, conformal printing
- Battery research: Li-ion, Na-ion batteries, organic and flexible batteries for printed electronics

Bibliometric indicators (Web of Science)

• Number of papers - 46, H-index 15, Total number of citations > 500

Prominent international cooperation

- WCPC, Swansea University, United Kingdom
- National Institute of Chemistry, Ljubljana, Slovenia
- Infinity PV, Denmark
- EuraCat, Spain
- PVI, United Kingdom

Important projects carried out from the position of principal investigator or co-investigator

- H2020 862492 New materials and processing in organic electronics (MADRAS), 2020-2023
- Horizon Europe 101058732 Joint Industrial Data Exchange Pipeline (JIDEP), 2022-2025
- TK04030083 Advanced Materials for Electrolytes for Lithium and post Lithium Batteries, 2022 2025
- TE01020022 Flexible Printed Microelectronics Based on Organic or Hybrid Materials "Flexprint", 2012 – 2019

Important publications

- T. Syrový, T. Kazda, L. Syrová, J. Vondrák, L. Kubáč, M. Sedlaříková, Journal of Power Sources, Volume 309, 31 March 2016, Pages 192–201
- T. Syrový, T. Kazda, J. Akrman, L. Syrová, Towards roll-to-roll printed batteries based on organic electrodes for printed electronics applications, Journal of Energy Storage, 40, 2021
- Kuberský, P., Navrátil, J., Syrový, T., Nešpůrek, S., Hamáček, A. An electrochemical amperometric ethylene sensor with solid polymer electrolyte based on ionic liquid, Sensors, 2021, 21(3), pp. 1–14, 711

Awards/achievements

- 2016, University of Pardubice Rector's Award
- 2019, CzechInno award "Vizionář 2019" for medical care sensors innovation

Supervision of doctoral theses

• 43 students of master of science

Membership in professional associations and boards

• Member of board of the International Association of Research Organizations for the Information, Media and Graphic Arts Industries - Iarigai

FACULTY OF CHEMICAL TECHNOLOGY UNIVERSITY OF PARDUBICE

DAVID VESELÝ

david.veselý@upce.cz



David Veselý, successfully completed his doctoral studies at the University of Pardubice in 2005 in the field of Technology of Macromolecular Compounds. In 2005 he joined the Department of Chemistry and Technology of Macromolecular Compounds at the Faculty of Chemical Technology of the University of Pardubice, where he still works. In 2018 he was appointed Associate Professor in Macromolecular Chemistry. Since 2015 he has been the head of the Department of Chemistry and Technology of Macromolecular Compounds.

Scientific interest

- Formulation of paints and organic coatings: anticorrosive pigments, core-shell pigments, special fillers
- Binders drying by oxypolymerization: mechanism of oxypolymerization reactions, catalyst
 of oxypolymerization

Bibliometric indicators (Web of Science)

• Number of papers 54, H-index 17, Total number of citations 797

Important projects carried out from the position of principal investigator or co-investigator

- Ecological coatings containing non-toxic catalysts and anticorrosive pigments respecting EU legislation; Ministry of Industry and Trade, TIP FT-TA4/064.
- Effective corrosion resistant and special paints with a low zinc for surface protection of structural materials, 2011 – 2014; Technologiacal Agency of Czech republic TA01010183.

Important publications

- Kalendova A., Sapurnina I., Stejskal J., Veselý D.: Anticorrosion properties of polyanilinecoated pigments in organic coatings, Corrosion Science 50 (2088) 3549-3560.
- Kalendova A., Veselý D., Kalenda P. : Properties of paints with hematite coated muscovite and talc particles, Applied Surface Science 48 (2010) 581-588.

Supervision of doctoral theses

• 22 students of master of science

Awards/achievements

- Emerald Literati Network Higly commended award (2007), Kalendova, A; Vesely, D; Kalenda, P.: Nanoparticles of soluble alkaline silicates as flash rusting inhibitors in water-borne paints. ANTI-CORROSION METHODS AND MATERIALS. 2006, 53(2), pp. 79-87. ISSN: 0003-5599
- Emerald Literati Network Outstanding Paper award (2008), Kalendova, A.; Vesely, D.: Synthesis and properties of pigments based on XxZnyFe2O4 ferrites with non-isometric particles. PIGMENT & RESIN TECHNOLOGY. 2007, 36(4), pp. 195-215. ISSN: 0369-9420
- Emerald Literati Network Higly commended award (2009), Stava, V.; Vesely, D.; Kalenda, P.: Catalytic effects of transition metals in the form of the salts of organic acids in the cross linking of alkyds. PIGMENT & RESIN TECHNOLOGY. 2008, 37(2), pp. 67-72. ISSN: 0369-9420
- Emerald Literati Network Higly commended award (2010), Schmidova, E.; Svanda, P.; Vesely, D.; Kalendova, A.: Mechanism of degradation of stabilized corrosion-resistant steel during the welding cycle. ANTI-CORROSION METHODS AND MATERIALS. 2009, 56(4), pp. 206-217. ISSN: 0003-5599



FACULTY OF ARTS AND PHILOSOPHY

The Faculty of Arts and Philosophy completes the mosaic of the scientific fields at the University of Pardubice, and reflects European academic traditions. The Institute of Foreign Languages came into existence in 1992 in order to provide a sufficient number of qualified language teachers for elementary schools. The range of study programmes on offer has gradually expanded thanks to new interdisciplinary and arts programmes in the field of philology, history, philosophy, and sociology.



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PHILOSOPHY



NIKLAS FORSBERG

niklas.forsberg@upce.cz

J

Docent (≈ Associate Professor) in Philosophy, The University of Helsinki. Awarded June 16, 2016.

Docent (≈ Associate Professor) in Theoretical Philosophy, Uppsala University. Awarded October 8, 2013.

Scientific interest

- Ethics
- Aesthetics
- Philosophy of Language
- Ordinary Language Philosophy
- Phenomenology
- Philosophy and Literature
- Philosophy and Film

Prominent international cooperation

• Centre for ethics (upce.cz)

Important projects carried out from the position of principal investigator or co-investigator

- (2015) Centre for Ethics as Study in Human Value. Operational Programme Research, Development and Education (OP VVV/OP RDE), "Centre for Ethics as Study in Human Value," registration No. CZ.02.1.01/0.0/0.0/15_003/0000425, co-financed by the European Regional Development Fund and the state budget of the Czech Republic.
- (2015) Erik Allardt Research Fellowship at Helsinki Collegium for Advanced Studies, (for 2016-2017)

Important projects

- Lectures on a Philosophy Less Ordinary: J. L. Austin and the Return to the Realities We Use Words to Talk About, forthcoming (New York: Routledge, 2021.)
- Language Lost and Found: On Iris Murdoch and the Limits of Philosophical Discourse (New York: Bloomsbury 2013 [paperback 2015]).

Awards/achievements

• 14/05/2018 - Young Scientist Award granted by the Learned Society of the Czech Republic for excellent work in the field of philosophy and ethics

Supervision of doctoral theses

Supervisor for Irem Güven

- (Centre for Ethics, Department of Philosophy, University of Pardubice). Dissertation topic: The Concept of the Flesh in Merleau-Ponty and Deleuze. Starting date: October 2020.
- Supervisor for Diana Kalášková

(Centre for Ethics, Department of Philosophy, University of Pardubice). Dissertation topic: The Moral Powers of Literature: Literature as a Way of Argumentation that can Directly Influence our Moral Thought. Starting date: October 2017.

ONDŘEJ BERAN

ondrej.beran@upce.cz



2018 Ph.D. in Systematic Philosophy, Faculty of Arts, Charles University in Prague, Thesis "Causes of the Creation of the World in Plato's Timaeus"

Scientific interest

- Areas: Ethics and moral philosophy, philosophical psychology, philosophy of mind, environmental ethics, feminist philosophy, philosophy and literature
- Topics: Moral luck, addiction, akrasia, expertise and ideology, artificial intelligence, private language, rules and normativity
- Authors: Ludwig Wittgenstein, Martin Heidegger, Rush Rhees, Iris Murdoch

Prominent international cooperation

- Tony Milligan (King's College London)
- Kai Marchal (National Chengchi University)
- Kenneth Shockley (Colorado State University)
- Camilla Kronqvist (Åbo Akademi)

Important projects

 2017-2022 Centre for Ethics as Study in Human Value (project no. CZ.02.1.01/0.0/0.0/15 _003/0000425 in the operational programme Research, Development and Education of the Ministry of Education of the Czech Republic)

Membership in professional associations and boards

- Member of the editorial board of the book series Dnešní svět (published by Filosofia)
- Member of the editorial board of the journal Filosofie dnes

Supervision of doctoral theses

• Mira Reyes

"Otherwise than Anthropocentrism: Levinas Face-to-Face with the Animal" since 2017

Patrick Keenan

",The Challenge Creative Computers Present to the Good Life" (since 2018)

David Rozen

"Attitudes towards the Environment, their Ethical Relevance and the Possibilities of their Transformation" (since 2020)

Important publications

- Examples and Their Role in Our Thinking, New York: Routledge, 2021.
- Living with Rules, Berlin: Peter Lang, 2018.
- O. Beran, V. Kolman, L. Koreň (eds.), From Rules to Meanings, Routledge, 2018.
- "The Wisdom of Insight", Philosophy East and West, 71 (2021): 562-581.
- "To Each Incel According to His Needs?", SATS, https://doi.org/10.1515/sats-2020-0007
- "Addiction as degradation of Life", Ethics and Medicine 35 (2019): 171-190.
- "Love in the Absence of Judgment", Philosophy and Literature 43 (2019): 519-534.
- "Give Me an Example': Peter Winch and Learning from the Particular", Nordic Wittgenstein Review 7.2 (2018): 49-75.
- "An Attitude Towards an Artificial Soul? Responses to the ,Nazi Chatbot", Philosophical Investigations 41 (2018): 42-69.
- "Misunderstanding the Talk(s) of the Divine", Sophia 56 (2017): 183-205.

TOMÁŠ HEJDUK

Tomas.Hejduk@upce.cz



- 2019 Associate Professor in Philosophy, Faculty of Humanities, Charles University in Prague
- 2007 Doctorate diploma Ph.D., Department of Philosophy and Natural Sciences, Faculty of Science, Charles University in Prague. Dissertation on "The transfor mation of Eros at crossing from the realm of religion to the realm of philosophy. The character of philosophy from the eros aspect".
- 2000 Diploma in Philosophy (equivalent to M.A.). Institute of Philosophy and Religious Studies, Faculty of Philosophy and Arts, Charles University in Prague. Thesis on "Plato's Phaedrus".

Scientific interest

• Ethics, Ancient Philosophy, Political Philosophy

Prominent international cooperation

• Centre for ethics (upce.cz)

Important publications

- "Charter 77 still allive: The Concept of Nonpolitical Politics in the Work of Ladislav Hejdánek." Comenius (Journal of Euro-American Civilization), 2017, Vol. 4, No. 1, pp. 67-85.
- "Moral Education in Secondary Schools: What, how, and why?" Pedagogika 69 (4), 2019, s. 444-462.
- "Socrates and Theognis on True Love." The International Journal of the Platonic Tradition 13 (2019), 23-50.
- Hejduk, T., Chotaš, J., Prázný, A. (eds.). Modern university, Ideal and reality. Prague: Filosofia, 2015. ISBN 978-80-7007-419-0. 458 p. (CZ)
- "What Did Socrates Love?", in Ch. Maurer, T. Milligan, K. Pacovská (eds.), Love and Its Objects, What Can We Care For? Palgrave Macmillan, London 2014, s. 56-74.
- "Bernard Williams and Ancient Greek Tragedy", in: Aither, International Issue, 1 (2010), pp. 139-172.
- Bernard Williams, In the Beginning was the Deed, Princeton University Press 2006. Translation to Czech + epilogue: Pavel Mervart Press, 2011.

Awards/achievements

• The Fulbright-Masaryk Scholarship, Brown University, Department of Classics, Providence RI, USA, September 2008 – May 2009.

Important projects carried out from the position of principal investigator or co-investigator

- 2017-2022 Centre for Ethics as Study in Human Value (project no. CZ.02.1.01/0.0/0.0/15 _003/0000425 in the operational programme Research, Development and Education of the Ministry of Education of the Czech Republic), researcher
- 2013 2016 Love and Friendship in Ancient and Contemporary Philosophy, Grant no. 13-14510S of the Czech Science Foundation. Principal investigator, researcher

Supervision of doctoral theses

- Veronika Janečková
 - topic: "The notion of liberty, democracy and politics in between philosophers of first Czech-Slovak Republic"
 - beginning of study: 2019

Membership in professional associations and boards

- Board of experts in Philosophy, Religious Studies and Theology, Grant Agency
 of the Czech Republic
- Editorial board of the journal Kuděj
- Scientific board Faculty of Arts, University of Pardubice
- Board of PhD studies, Department of Philosophy, Faculty of Arts, University of Pardubice

ONDŘEJ KRÁSA

ondrej.krasa@upce.cz



2018 Ph.D. in Systematic Philosophy, Faculty of Arts, Charles University in Prague, Thesis "Causes of the Creation of the World in Plato's Timaeus"

Scientific interest

• Ancient Philosophy and Ethics, particularly Plato and scepticism

Prominent international cooperation

Centre for ethics (upce.cz)

Important publications

- "Two Concepts of a Lie: Václav Havel on Living in a Communist Regime".
 Filosofický časopis. 2022, To appear.
- "Bodies and Space in the Timaeus". in Chad Jorgenson, Filip Karfik and Stepan Spinka (eds.). Plato's Timaeus: Proceedings of the Tenth Symposium Platonicum Pragense. Leiden/Boston 2020, p. 131–148. Open access.
- "Sókratés a bohové" [Socrates and gods]. in Jinek, J. (et. al.). Platónova Obrana Sókrata. Praha 2016, p. 118–129.
- "Nutnost a účelnost v Platónově Timaiovi" [Necessity and Teleology in Plato's Timaeus]. Aithér. 2014, vol. VI, No. 11, p. 6–19.
- "Štěstí lze dosáhnout jen jakoby náhodou: etická intepretace skepticismu Sexta Empirika" [Happiness can be achieved only as if by accident: an ethical interpretation of Sextus Empiricus' skepticism]. In Špinka, Š. (et al.). Přístupy k etice I. Praha 2014, p. 119–142. [Revised version of previously published article "Sladká nevědomost …"]
- Ondřej Krása (ed.). Smrt a umírání v náboženských tradicích současnosti. [Death and dying in the contemporary religious traditions] Cesta domů: Praha, 2010.
- "Sladká nevědomost: Sextos Empeirikos o lidském štěstí" [Sweet Ignorance: Sextus Empiricus on human happiness]. Reflexe. 2009, No. 36, p. 3–22.

Membership in professional associations and boards

- Czech Plato Society (since 2021 President)
- International Plato Society

KAMILA PACOVSKÁ

Kamila.Pacovska@upce.cz



Kamila Pacovská completed her PhD study in philosophy at the Charles University in Prague under the supervision of Dr. Marina Barabas in 2013, after a one year scholarship at the University of Edinburgh. In 2011, she joined the Department of Philosophy at the University of Pardubice. As Principal Investigator, she won the founding grant of the Centre for Ethics as Study in Human Value in 2016 and now she acts as its Deputy Head of Research. In 2018, she was awarded the Young Scientist Award by the Learned Society of the Czech Republic for excellent work in the field of philosophy and ethics.

Scientific interest

- Areas: Ethics and moral philosophy, moral psychology, theory of action, philosophy of emotions, Platonic-Wittgensteinian ethics, virtue ethics, philosophy and literature
- Topics: Self-deception, nature of responsibility, moral luck, philosophy of love, moralism, pride and humility, moral ambition, perfectionism, guilt, shame, remorse, admiration, ethics of fame, philosophy of power
- Authors: Plato, Aristotle, David Hume, Immanuel Kant, Søren Kierkegaard, Simone Weil, Ludwig Wittgenstein, Iris Murdoch, Peter Winch

Prominent international cooperation

- Christopher Cordner (University of Melbourne)
- John Lippitt (University of Notre Dame, Australia)
- Alfred Archer (Tilburg University)
- Christian Maurer (University of Lausanne)
- Ruth Tietjen (University of Copenhagen)

Important projects

- 2017-2022 Centre for Ethics as Study in Human Value (project no. CZ.02.1.01/0.0/0.0/15 _003/0000425 in the operational programme Research, Development and Education of the Ministry of Education of the Czech Republic)
- 2022-2024 ECEGADMAT, Grant no. 22-15446S of the Czech Science Foundation

Awards/achievements

- 14/05/2018 Young Scientist Award granted by the Learned Society of the Czech Republic for excellent work in the field of philosophy and ethics
- 12/11/2021 The University of Pardubice Rector's Award for young scientists

Important publications

- "Remorse and Self-love: Kostelnička's Change of Heart", "The Journal of Ethics 25, 2021, 467–486."
- Wanting to be better: On the self-defeating character of moral perfection", in Campbell, M., Reid, L. (eds), Ethics, Society and Politics: Themes from the Philosophy of Peter Winch, Springer, Nordic Wittgenstein Studies, vol. 6, 2020, p. 167–182.
- "Moral Character and the Significance of Action: Judging Dmitri Karamazov", Philosophical Investigations, 42 (4), 2019, p. 333–349.
- "Love and the Pitfall of Moralism", Philosophy 93 (2), 2018, p. 231–249.
- "Banker Bulstrode Doesn't Do Wrong Intentionally. A Study of Self-deceptive Wrongdoing", The Journal of Value Inquiry, 50(1), 2016, p. 169–184.
- "Loving Villains: Virtue in Response to Wrongdoing", in Ch. Maurer, T. Milligan, K. Pacovská (eds.), Love and Its Objects. What Can We Care For? Palgrave Macmillan 2014.

Supervision of doctoral theses

- Current Ph.D. students (main supervisor): Mattimai Bakor Syiem
 - thesis: The Role of Shame and Guilt in the Moral Development of Children,
- Graduates (main supervisor): Vojtěch Janů, Ph.D.
 - thesis: Searle's Conception of Biological Naturalism, defended 29th June 2021

Membership in professional associations and boards

- Associate Editor of Organon F, international journal of analytic philosophy
- · Council member of the Institute of Philosophy, Czech Academy of Sciences.
- Associate Editor of The Journal of Ethics, an International Philosophical Review.

ALEŠ PRÁZNÝ

ales.prazny@upce.cz



- 2016 habilitation in Philosophy, Charles University in Prague.
- 2005 Ph.D. in Philosophy at the Charles University in Prague; Doctoral thesis: Friedrich Nietzsche and his Philosophy of Education.
- 2000 M. A. in Theology and Philosophy at the Charles University.

Scientific interest

- Philosophy of Education
- Political Philosophy
- Ethics

Important projects carried out from the position of principal investigator or co-investigator

• 2012–2014 "The Idea of the University", Project No. CZ.1.07/2.2.00/28.0270 OP VK, Operational programme "Education for Competitive Advantage", European Structural Funds – Principal Investigator

Important publications

- New Education and Dewey's Pragmatism. In: Pragmatism Today, Vol. 12, 1/2021, ISSN 1338-2799, p. 91-98.
- Nietzsche jako vychovatel: výchova proti duchu doby (Nietzsche as Educator: Education against the Zeitgeist). In: Chavalka, J., Sikora, O. (eds.), Nietzsche o ctnosti. Mimořádné číslo Filosofického časopisu 2/2018, ročník 66, ISSN 0015-1831; s. 113–130.
- O smyslu politiky. Politická filosofie Hannah Arendtové (The Meaning of Politics. The Political Philosophy of Hannah Arendt). Pardubice 2014. ISBN 978-80-7395-843-5, 202 p.
- Comenius² Concept of Politics. In: Wouter Goris, Meinert A. Meyer, Vladimír Urbánek (eds.) Gewalt sei ferne den Dingen! Contemporary Perspectives on the Works of John Amos Comenius. Springer VS, Wiesbaden, 2016. ISBN 978-2-658-08260-4; s. 357–367.
- Pedagogický základ filosofie v myšlení Jana Patočky (The Educational Basis of Philosophy in the Thought of Jan Patočka) (co-author: R. Palouš), in: Journal of Education, 2/2007, p. 108-113.

Supervision of doctoral theses

• Ladislava Baxant-Cejnar

- Topic: Theory of Education by Wilhelm von Humboldt
- Beginning of study: 2021

Markéta Kábrová

- Topic: Conception of Freedom by Hannah Arendt
- Beginning of study: 2019
- Vladimír Zeman
 - Topic: Philosophical and Theological Contribution of Josef Pospíšil
 - Study: 2015-2019
- Vlastmil Súkup
 - Topic: Socrates and Patočka's Philosophy
 - Study: 2016-2020



The Faculty facilitates a first-rate education in economics. Along with its dedication to scientific and research activities, the Faculty's primary mission is to produce experts in economic disciplines, focusing on public administration, regional development and public sector economics, business economics, and the management of non-financial and financial entities. Where information science is concerned, we produce experts in the fields of public administration, regional development, business economics, and the insurance industry.



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Study Programme

Applied Informatics Informatics in Public Administration Regional and Public Economics



INFORMATICS IN PUBLIC ADMINISTRATION



PETR HÁJEK

petr.hajek@upce.cz



Petr Hajek received his Ph.D. degree in system engineering and informatics at the University of Pardubice, Czech Republic, in 2006. In 2012, he was appointed Associate Professor in system engineering and informatics. He is currently a Professor and the Head of the Science and Research Centre, Faculty of Economics and Administration, University of Pardubice, Czech Republic.

Scientific interest

- business decision making, financial forecasting
- soft computing, text mining, knowledge-based systems

Bibliometric indicators (Web of Science)

• Number of papers 109, H-index 17, Total number of citations > 1000

Prominent international cooperation

- Prof. Vanneschi, dr. Henriques, dr. Castelli Universidade Nova de Lisboa, Portugal
- prof. Froelich University of Silesia, Poland
- prof. M. Kabir Hassan Universidad of New Orleans, United States

Important projects carried out from the position of principal investigator or co-investigator

- Topic and sentiment analysis of multiple textual sources for corporate financial decision-making, 2016 2018; Czech Science Foundation GA16-19590S.
- Modelling emotions in verbal and nonverbal managerial communication to predict corporate financial risk, 2019 2021; Czech Science Foundation GA19-15498S.

Important publications

- Hájek, P., Henriques, R. Mining corporate annual reports for intelligent detection of financial statement fraud A comparative study of machine learning methods, Knowledge-Based Systems 128 (2017) 139-152.
- Hájek, P., Froelich, W. Integrating TOPSIS with interval-valued intuitionistic fuzzy cognitive maps for effective group decision making, Information Sciences 485 (2019) 394-412.

Awards/achievements

- Rector's Award for Scientific Excellence (2018, 2019)
- six best paper awards at international scientific conferences

Supervision of doctoral theses

- 2 students of doctoral study programme
- 29 students of Master degree programme

Membership in professional associations and boards

• ACM, KES, AIS

MILOSLAV HUB

miloslav.hub@upce.cz



Miloslav Hub completed his doctoral studies in the group of prof. Ing. Jan Čapek, CSc., at the Faculty of Economics and Administration, University of Pardubice in 2005 with the thesis "Data security – authentication". He has been working as an Associate Professor of Systems Engineering and Informatics at the University of Pardubice, Faculty of Economics and Administration, Institute of System Engineering and Informatics since 2013, after defending his habilitation thesis on the topic "Methods of usability testing and evaluation of public administration information systems user interfaces".

Scientific interest

- security and privacy of information technology
- biometric authentication
- usability engineering

Bibliometric indicators (Web of Science)

• Number of papers 25, H-index 5, Total number of citations 59

Prominent international cooperation

- prof. RNDr. Michal Munk, PhD., doc. Ing. Zoltán Balogh, PhD. Constantine the Philosopher University in Nitra, Slovakia
- Mislav Balković, PhD Visoko učilište Algebra, Croatia

Important projects carried out from the position of principal investigator or co-investigator

• The Czech Science Foundation (GACR) grant No.402/08/P202 "Testing and evaluation of usability of public administration information systems"

Supervision of doctoral theses

3 students of doctoral study programme

Prominent international cooperation

- ČAPEK, Jan, HUB, Miloslav. Keystroke Dynamics Authentication Using a Small Number of Samples. E+M: *Economics and Management*, 2020, vol. 23, no. 4, p. 215-226. ISSN 1212-3609. https://doi.org/10.15240/tul/001/2020-4-014
- PŘÍHODOVÁ, Kateřina, HUB, Miloslav. Hand-Based Biometric Recognition Technique Survey. Advances in Science, Technology and Engineering Systems Journal, 2020, vol. 5, no. 6, p. 689-698. ISSN: 2415-6698. https://dx.doi.org/10.25046/aj050683
- PŘÍHODOVÁ, Kateřina, HUB, Miloslav. Hand-Based Biometric System Using Convolutional Neural Networks. *Acta Informatica Pragensia*, 2020, vol. 9, iss. 1, p. 48-57. doi: 10.18267/j.aip.131
- MÁCHOVÁ, Renáta, HUB, Miloslav, LNĚNIČKA, Martin. Usability evaluation of open data portals: Evaluating data discoverability, accessibility, and reusability from a stakeholders' perspective, Aslib Journal of Information Management, 2018. https://doi.org/10.1108/ AJIM-02-2018-0026
- MORAVEC, Jaroslav, HUB, Miloslav. Automatic correction of barrel distorted images using a cascaded evolutionary estimator. *Information Sciences*, 2016, no. 366, p. 70–98. ISSN 0020-0255.

JITKA KOMÁRKOVÁ

jitka.komarkova@upce.cz



Jitka Komárková completed her doctoral studies at the University of Pardubice in the study field Applied and Landscape Ecology in 2001. She started to focus on geoinformation technologies during the studies, thus she joined the Department of Information Systems (Institute of System Engineering and Informatics at present) at the Faculty of Economics and Administration in 1997. She was appointed Associate Professor in Systems Engineering in 2009.

Scientific interest

- utilization of geoinformation technologies with focus on UAV-borne remote sensing and usability of web-based geographic information systems
- participatory technologies as a part of smart cities infrastructure

Bibliometric indicators (Web of Science)

• Number of papers 46, H-index 7, Total number of citations 128

Prominent international cooperation

- Prof. Piero Boccardo Politecnico di Torino
- Prof. Marko Nieminen Aalto University

Important projects carried out from the position of principal investigator or co-investigator

- Utilization of data and information technologies as means supporting evidence-based decision making in development of a smart region, 2021, University of Pardubice
- Security of Citizens Crisis Management, 2011 2015, The Ministry of the Interior of the Czech Republic

Important publications

- Lnenicka, M., & Komarkova, J.: Developing a government enterprise architecture framework to support the requirements of big and open linked data with the use of cloud computing. International Journal of Information Management, 46 (2019) 124-141.
- Kopackova, H., & Komarkova, J.: Participatory technologies in smart cities: What citizens want and how to ask them. Telematics and Informatics, 47 (2020) 101325.
- Kopackova, H. Komarkova, J. & Horak, O. (2022). Enhancing the diffusion of e-participation tools in smart cities. Cities, Vol. 125(June 2022), 103640

Supervision of doctoral theses

- 1 postdoctoral researcher
- 6 students of doctoral study programme
- 79 students of Master degree programme

HANA KOPÁČKOVÁ

hana.kopackova@upce.cz



Hana Kopackova has been working as an Associate Professor of Systems Engineering and Informatics at the University of Pardubice, Faculty of Economics and Administration, Institute of System Engineering and Informatics since 2020. She completed her doctoral studies in 2003 with the thesis "Interconnection of information sources at the regional level". Since 2020, she has been the Deputy Head of the Institute of System Engineering and Informatics at the Faculty of Economics and Administration.

Scientific interest

- information system in public and private sector
- e-government and e-participation issues, especially on the design and adoption phase
- process modelling and management
- system dynamics and simulation
- security and privacy of information technology

Bibliometric indicators (Web of Science)

• Number of papers 17, H-index 4, Total number of citations 59

Prominent international cooperation

- Dr. Gonçalo Marques, Polytechnic of Coimbra, Portugal
- Dr. Alfonso González-Briones, Universidad Complutense de Madrid, Spain

Important projects carried out from the position of principal investigator or co-investigator

 The Czech Science Foundation (GACR) grant No. 402/05/P155 (2005 – 2007) "Support of managerial decision-making using machine learning methods"

Important publications

- KOPÁČKOVÁ, H., KOMÁRKOVÁ, J. (2020). Participatory technologies in smart cities: What citizens want and how to ask them. Telematics and Informatics, 47(April): 101325.
- KOPÁČKOVÁ, H. (2019). Reflexion of citizens' needs in city strategies: The case study of selected cities of Visegrad group countries. Cities, 84 (January): 159-171.
- LNĚNIČKA, M., KOPÁČKOVÁ, H., KOMÁRKOVÁ, M., MÁCHOVÁ, R. (2020). Identifying stakeholders, their roles and skills needed to work with big and open linked educational data. International Journal of Educational Technology in Higher Education. In press, available in August.
- MÁCHOVÁ, R., KOMÁRKOVÁ, J., KOPÁČKOVÁ, H., LNĚNIČKA, M. (2018). Benchmarking smart egovernment development: Insights from a national perspective Scientific Papers of the University of Pardubice - Series D, Faculty of Economics and Administration, 25(42): 152-164.





APPLIED INFORMATICS



PETR HÁJEK

petr.hajek@upce.cz



Petr Hajek received his Ph.D. degree in system engineering and informatics at the University of Pardubice, Czech Republic, in 2006. In 2012, he was appointed Associate Professor in system engineering and informatics. He is currently a Professor and the Head of the Science and Research Centre, Faculty of Economics and Administration, University of Pardubice, Czech Republic.

Scientific interest

- business decision making, financial forecasting
- soft computing, text mining, knowledge-based systems

Bibliometric indicators (Web of Science)

• Number of papers 109, H-index 17, Total number of citations > 1000

Prominent international cooperation

- Prof. Vanneschi, dr. Henriques, dr. Castelli Universidade Nova de Lisboa, Portugal
- prof. Froelich University of Silesia, Poland
- prof. M. Kabir Hassan Universidad of New Orleans, United States

Important projects carried out from the position of principal investigator or co-investigator

- Topic and sentiment analysis of multiple textual sources for corporate financial decision-making, 2016 2018; Czech Science Foundation GA16-19590S.
- Modelling emotions in verbal and nonverbal managerial communication to predict corporate financial risk, 2019 2021; Czech Science Foundation GA19-15498S.

Important publications

- Hájek, P., Henriques, R. Mining corporate annual reports for intelligent detection of financial statement fraud A comparative study of machine learning methods, Knowledge-Based Systems 128 (2017) 139-152.
- Hájek, P., Froelich, W. Integrating TOPSIS with interval-valued intuitionistic fuzzy cognitive maps for effective group decision making, Information Sciences 485 (2019) 394-412.

Awards/achievements

- Rector's Award for Scientific Excellence (2018, 2019)
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MILOSLAV HUB

miloslav.hub@upce.cz



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Scientific interest

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- biometric authentication
- usability engineering

Bibliometric indicators (Web of Science)

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Prominent international cooperation

- prof. RNDr. Michal Munk, PhD., doc. Ing. Zoltán Balogh, PhD. Constantine the Philosopher University in Nitra, Slovakia
- Mislav Balković, PhD Visoko učilište Algebra, Croatia

Important projects carried out from the position of principal investigator or co-investigator

• The Czech Science Foundation (GACR) grant No.402/08/P202 "Testing and evaluation of usability of public administration information systems"

Supervision of doctoral theses

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Prominent international cooperation

- ČAPEK, Jan, HUB, Miloslav. Keystroke Dynamics Authentication Using a Small Number of Samples. E+M: *Economics and Management*, 2020, vol. 23, no. 4, p. 215-226. ISSN 1212-3609. https://doi.org/10.15240/tul/001/2020-4-014
- PŘÍHODOVÁ, Kateřina, HUB, Miloslav. Hand-Based Biometric Recognition Technique Survey. Advances in Science, Technology and Engineering Systems Journal, 2020, vol. 5, no. 6, p. 689-698. ISSN: 2415-6698. https://dx.doi.org/10.25046/aj050683
- PŘÍHODOVÁ, Kateřina, HUB, Miloslav. Hand-Based Biometric System Using Convolutional Neural Networks. *Acta Informatica Pragensia*, 2020, vol. 9, iss. 1, p. 48-57. doi: 10.18267/j.aip.131
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- MORAVEC, Jaroslav, HUB, Miloslav. Automatic correction of barrel distorted images using a cascaded evolutionary estimator. *Information Sciences*, 2016, no. 366, p. 70–98. ISSN 0020-0255.

JITKA KOMÁRKOVÁ

jitka.komarkova@upce.cz



Jitka Komárková completed her doctoral studies at the University of Pardubice in the study field Applied and Landscape Ecology in 2001. She started to focus on geoinformation technologies during the studies, thus she joined the Department of Information Systems (Institute of System Engineering and Informatics at present) at the Faculty of Economics and Administration in 1997. She was appointed Associate Professor in Systems Engineering in 2009.

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- participatory technologies as a part of smart cities infrastructure

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• Number of papers 46, H-index 7, Total number of citations 128

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- Prof. Piero Boccardo Politecnico di Torino
- Prof. Marko Nieminen Aalto University

Important projects carried out from the position of principal investigator or co-investigator

- Utilization of data and information technologies as means supporting evidence-based decision making in development of a smart region, 2021, University of Pardubice
- Security of Citizens Crisis Management, 2011 2015, The Ministry of the Interior of the Czech Republic

Important publications

- Lnenicka, M., & Komarkova, J.: Developing a government enterprise architecture framework to support the requirements of big and open linked data with the use of cloud computing. International Journal of Information Management, 46 (2019) 124-141.
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- Kopackova, H. Komarkova, J. & Horak, O. (2022). Enhancing the diffusion of e-participation tools in smart cities. Cities, Vol. 125(June 2022), 103640

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- 1 postdoctoral researcher
- 6 students of doctoral study programme
- 79 students of Master degree programme

HANA KOPÁČKOVÁ

hana.kopackova@upce.cz



Hana Kopackova has been working as an Associate Professor of Systems Engineering and Informatics at the University of Pardubice, Faculty of Economics and Administration, Institute of System Engineering and Informatics since 2020. She completed her doctoral studies in 2003 with the thesis "Interconnection of information sources at the regional level". Since 2020, she has been the Deputy Head of the Institute of System Engineering and Informatics at the Faculty of Economics and Administration.

Scientific interest

- information system in public and private sector
- e-government and e-participation issues, especially on the design and adoption phase
- process modelling and management
- system dynamics and simulation
- security and privacy of information technology

Bibliometric indicators (Web of Science)

• Number of papers 17, H-index 4, Total number of citations 59

Prominent international cooperation

- Dr. Gonçalo Marques, Polytechnic of Coimbra, Portugal
- Dr. Alfonso González-Briones, Universidad Complutense de Madrid, Spain

Important projects carried out from the position of principal investigator or co-investigator

 The Czech Science Foundation (GACR) grant No. 402/05/P155 (2005 – 2007) "Support of managerial decision-making using machine learning methods"

Important publications

- KOPÁČKOVÁ, H., KOMÁRKOVÁ, J. (2020). Participatory technologies in smart cities: What citizens want and how to ask them. Telematics and Informatics, 47(April): 101325.
- KOPÁČKOVÁ, H. (2019). Reflexion of citizens' needs in city strategies: The case study of selected cities of Visegrad group countries. Cities, 84 (January): 159-171.
- LNĚNIČKA, M., KOPÁČKOVÁ, H., KOMÁRKOVÁ, M., MÁCHOVÁ, R. (2020). Identifying stakeholders, their roles and skills needed to work with big and open linked educational data. International Journal of Educational Technology in Higher Education. In press, available in August.
- MÁCHOVÁ, R., KOMÁRKOVÁ, J., KOPÁČKOVÁ, H., LNĚNIČKA, M. (2018). Benchmarking smart egovernment development: Insights from a national perspective Scientific Papers of the University of Pardubice - Series D, Faculty of Economics and Administration, 25(42): 152-164.



REGIONAL AND PUBLIC ECONOMICS



LIBĚNA ČERNOHORSKÁ

libena.cernohorska@upce.cz



Liběna Černohorská graduated from the Faculty of Economics and Administration of the University of Pardubice in 2000, with a bachelor's and master's degree in Economic Policy and Administration. From 2000 to 2004, she was a doctoral student at the Faculty of Entrepreneurship of the Brno University of Technology in the field of Economics and Business Management. She completed her doctoral studies in 2004 by obtaining the title of Ph.D. In 2019, she was appointed Associate Professor in Economic policy. She completed many stays abroad, during which she lectured mainly on monetary policy in the European Union and in the Czech Republic, the Czech banking sector, and macroeconomic developments in the euro area and Central Europe.

Scientific interest

- banks and banking systems
- economic policy: monetary policy and central banks
- economic performance of regional development

Bibliometric indicators (Web of Science)

• Number of papers 20, H-index 3, Total number of citations > 100

Prominent international cooperation

 Prof. Anatoliy Pilyavskyy, DSc. - Lviv University of Trade and Economics Faculty of International Economic Relations and Information Technology

Important projects carried out from the position of principal investigator or co-investigator

- The Czech Science Foundation (GACR) grant No. 18-05244S: Innovative Approaches to Credit Risk Management (2018 – 2020)
- The Czech Science Foundation (GACR) grant No. 20-00178S: The Impact of the Normalisation of Interest Rates on Risk Management (2020 – 2022)
- Contract research: Model of the bank multiplier of ČMZRB products and analysis of the offer of commercial banks for municipalities (2021)

Supervision of doctoral theses

- 1 student of the doctoral study programme
- 38 students of Master degree programme

Important publications

- Černohorská, L. (2021). The impacts of monetary policy of the Czech National Bank on selected economic indicators. International Journal of Monetary Economics and Finance, 14(1), 35-53.
- Černohorská, L., Kubicová, D. (2020). Risks and the influence of negative interest rates on economic activity: a case study of Sweden, Denmark, and Switzerland. Banks and Bank Systems, 15(1), 30-41.
- Černohorská, L., Pilyavskyy, A., Aaronson, W. (2017). Comparative performance of the Visegrad group banks for the period 2009-2013. E+M Ekonomie a Management, 20(2), 175-187.

Membership in professional associations and boards

 member of the editorial board of an international scientific journals American Journal of Economics, Finance and Management; International Journal Series in Multidisciplinary Research

VIKTOR PROKOP

viktor.prokop@upce.cz



Viktor Prokop received his Ph.D. degree in the field of Regional and Public Economics at the University of Pardubice, Czech Republic, in 2017. His dissertation thesis was focused on the issue of the Influence of the Knowledge Economy on the Regional Development. In 2021, he was appointed Associate Professor in Regional and Public Economics. Since 2020, he has been the Deputy Head of the Science and Research Centre.

Scientific interest

- innovation ecosystems and their efficiency, the roles of different stakeholders
- triple- and quadruple- helix cooperation and its influence on the regional development
- firm environmental innovation and its determinants

Bibliometric indicators (Web of Science)

• number of papers 42, H-index 7, Total number of citations 183

Prominent international cooperation

- prof. Wolfgang Gerstlberger, Tallinn University of Technology, Estonia
- prof. Jens Horbach, Augsburg University of Applied Sciences, Germany
- assoc. prof. Jana Hojnik, University of Primorska, Slovenia

Important projects carried out from the position of principal investigator or co-investigator

- 2020-present, Towards a dynamic knowledge-based business model for open innovations. The Czech Science Foundation (GACR) grant No. 20-03037S.
- 2017-2019, Modeling the Dynamics and Determinants of National and Regional Productivity Based on Knowledge and Cooperative Effects. The Czech Science Foundation (GACR) grant No. 17-11795S.
- 2014-2016, Modelling of knowledge spill-over effects in the context of regional and local development. The Czech Science Foundation (GACR) grant No. 14-02836S.

Important publications

- Prokop, V., Hajek, P., & Stejskal, J. (2021). Configuration Paths to Efficient National Innovation Ecosystems. Technological Forecasting and Social Change, 168, 120787.
- Prokop, V., Gerstlberger, W., Zapletal, D., & Striteska, M. K. (2022). The double-edged role
 of firm environmental behaviour in the creation of product innovation in Central
 and Eastern European countries. Journal of Cleaner Production, 331, 129989.
- Hojnik, J., Prokop, V., & Stejskal, J.(2022). R&D as bridge to sustainable development? Case of Czech Republic and Slovenia. Corporate Social Responsibility and Environmental Management, 29(1), 146–160.

Awards/achievements

- Best Paper Award International conference on IT, Communication and Technology for Better Life 2019, Bangkok.
- Best Presentation Award International conference on IT, Communication and Technology for Better Life 2019, Bangkok.
- 2021 Award of the Rector of the University of Pardubice, Czech Republic for publication in a journal with a high impact factor in the field of economics
- 2021 Award of the Dean of the Faculty of Economics and Administration, University of Pardubice, Czech Republic for the results of scientific research work

Supervision of doctoral theses

• 1 student of doctoral study programme Regional and Public Economics

Membership in professional associations and boards

- 2021-present, editorial committee scientific journal Journal of Innovation Economics & Management
- 2021-present, associate editor scientific journal Managing Global Transitions
- 2020-present, associate editor scientific journal SciPap (Scientific Papers of the University of Pardubice, Series D, Faculty of Economics and Administration)
- 2015-present, The Regional Science Association International (RSAI)

JAN STEJSKAL

jan.stejskal@upce.cz



Jan Stejskal is full Professor at the Institute of Economics, Faculty of Economics and Administration, University of Pardubice, Czech Republic. He received his PhD in public and regional economics at the University of Pardubice in 2007. His current research interests include public economy in the regional scope and view. Especially, he analyses regional policy, tools of the local and regional economic development and public services. His research has been published in leading world journals. Under his supervision, seven students have successfully completed their doctoral studies.

Scientific interest

- approaches to managing innovation activities
- influence of cooperation and knowledge transfer on innovation activities
- university-industry-government synergy
- determinants of innovation activities and SME absorption
- efficiency of national/regional innovation ecosystems
- public services, efficiency, ways to provision

Bibliometric indicators (Web of Science)

number of papers 86, H-index 12, Total number of citations 371

Prominent international cooperation

- prof. Vita Juknevičiene, Vilnius University, Lithuania
- prof. Oto Hudec, Technical university of Kosice, Slovakia
- prof. Daniel Meyer, University of Johannesburg, South Africa

Important projects carried out from the position of principal investigator or co-investigator

- 2014: Social and Political Issues at the Regional and Local Levels of the V4 Contries, International Visegrad Fund No. 21320370, International project - main researcher
- 2014-2016: Modeling the effects of knowledge spillover in the context of regional and local development, Czech Science Foundation No. 14-028365, Research project - main researcher
- 2017 2019: Modeling the dynamics of determinants of national and regional productivity based on knowledge and cooperative effects, Czech Science Foundation No. 17-11795S, Research project - main researcher
- 2020 2022: Towards a dynamic knowledge-based business model for open innovations, Czech Science Foundation No. 20-03037S, Research project - main researcher

Important publications

- Prokop, V., Hajek, P., & Stejskal, J. (2021). Configuration Paths to Efficient National Innovation Ecosystems. Technological Forecasting and Social Change, 168, 120787.
- Prokop, V., Stejskal, J., Klimova, V., & Zitek, V. (2021). The role of foreign technologies and R&D in innovation processes within catching-up CEE countries. Plos one, 16(4), e0250307.
- Stejskal, J., Hajek, P., & Cerny, P. (2020). A novel methodology for surveying children for designing library services: A case study of the Municipal Library of Prague. Journal of Librarianship and Information Science, 53(2), 307-320.

Supervision of doctoral theses

- 7 finished students of doctoral study programme
- 4 students in doctoral study programme

FACULTY OF ELECTRICAL ENGINEERING AND INFORMATICS

The Faculty was founded in January 2008 and follows in the activities of the Institute established in 2002.

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Study Programme

Electrical Engineering and Informatics



ELECTRICAL ENGINEERING AND INFORMATICS



MICHAEL BAŽANT

michael.bazant@upce.cz



Michael Bažant completed his doctoral studies at the University of Pardubice, Faculty of Transport Engineering, successfully completing his studies in 2009. In 2008, he joined the Department of Software Technologies of the University of Pardubice, where he still works. In 2018, he was appointed Associate Professor in Technology and Management in Transport and Telecommunications.

Scientific interest

discreet simulation of traffic in models of transport systems

Bibliometric indicators (Web of Science)

• Number of papers 15, H-index 4, Total number of citations > 20

Important projects carried out from the position of principal investigator or co-investigator

 Development of IoT platform for advanced data monitoring and analysis, CZ.01.1.02/ 0.0/0.0/20_321/0024830, 2021–2023; Ministry of Industry and Trade.

Important publications

- Bažant M., Bulíček J., Krýže P., Veselý P. Calculation of the capacity of switch area within railway stations with the use of simulation methods. In: 29th European Modeling and Simulation Symposium, EMSS 2017, Held at the International Multidisciplinary Modeling and Simulation Multiconference, I3M 2017 [Internet]; 20172017. p. 316-22.
- Jánošíková, L., A. Kavička, and M. Bažant. 2014. Optimal operation scheduling and platform track assignment in a passenger railway station. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit 228, no. 3: 271-284.

Supervision of doctoral theses

22 students of Master degree programme

TOMÁŠ BRANDEJSKÝ

tomas.brandejsky@upce.cz



Tomáš Brandejský completed his doctoral studies in the group of prof. Bíla at the Department of Automatic Control of the Faculty of Mechanical Engineering of the Czech Technical University in Prague in 1998. In 1996, he joined the Faculty of Transportation of the Czech Technical University in Prague. Since 2017, he has been at the Faculty of Electrical Engineering and Informatics of the University of Pardubice. In 2003, he was appointed Associate Professor in Engineering Informatics. In 2009-2016, he was the Head of the Department of Applied Informatics.

Scientific interest

- soft computing
- software safety and reliability
- genetic programming and artificial intelligence

Bibliometric indicators (Web of Science)

• Number of papers 26, H-index 2 (6 by Scopus), Total number of citations 17

Important projects carried out from the position of principal investigator or co-investigator

IT41 OPEN-6-9, "Random number generators influence onto GPA Behaviours".
 Brandejský T., 2016-2017.

Important publications

- Brandejský T.: Preconditions of GPA-ES Algorithm Application to Big Data. In book: Artificial Intelligence and Evolutionary Computations in Engineering Systems (pp.485-492), 2020. DOI:10.1007/978-981-15-0199-9_41
- Brandejský T.: Influence of (p)RNGs onto GPA-ES behaviors. January 2017, Neural Network World 27(6):593-605. DOI:10.14311/NNW.2017.27.033

Supervision of doctoral theses

- 3 students defended
- 2 students currently in PhD study programme

Membership in professional associations and boards

- IEEE
- TNK-126 Electrical Engineering in Transport, UNMZ
- National Technology Platform, the expert group on control-command and signalling (CCS)

JAN CVEJN

jan.cvejn@upce.cz



J. Cvein finished Ph.D. studies at the Technical University of Liberec, Faculty of Mechatronics and Interdisciplinary Engineering Studies in 2001. After Ph.D. graduation, he worked at the Technical University of Liberec as an assistant and since 2005 as an assistant professor. Since 2006, he has been working at University of Pardubice, Faculty of Electrical Engineering and Informatics. In 2000-2008, he also worked in parallel independently as a programmer in the area of software for industry.

Scientific interest

Process control, robotics, optimization and optimal control.

Bibliometric indicators (Web of Science)

13 papers in WOS, H-index 3, 55 citations

Important publications

- Cvejn, J. Sub-optimal PID controller settings for FOPDT systems with long dead time. Journal of Process Control 19(9), 2009, 1486-1495
- Cvejn, J. The design of PID controller for non-oscillating time-delayed plants with guaranteed stability margin based on the modulus optimum criterion. Journal of Process Control 23(4), 2013, 570-584
- Cvejn, J. Vrančić, D. The magnitude optimum tuning of the PID controller: Improving load disturbance rejection by extending the controller. Transactions of the Institute of Measurement and Control 40(5), 2018, 1669-1680

PETR DOLEŽEL

petr.dolezel@upce.cz



Petr Doležel received his Ph.D. degree from the University of Pardubice, Czech Republic, in 2009. At present, he works as an Associate Professor and Vice-dean for research and development at the Faculty of Electrical Engineering and Informatics, University of Pardubice. His research interests include neural and evolutionary computation in process control, and signal and image processing. He is the author of more than 100 scientific contributions, including 20 journal papers and lectures at CORE ranked conferences. In addition, he has been a leader or member of research teams for a dozen research and development projects. He intensively cooperates with research teams at the University of Burgos, Spain, and at the Slovak University of Technology, Slovakia.

Scientific interest

Industrial applications of : Deep learning, Image processing, Automation and process control

Bibliometric indicators (Web of Science)

Number of papers 36, H-index 4, Total number of citations 53

Prominent international cooperation

Prof. Bruno Baruque Zanón - University of Burgos, Spain

Important projects carried out from the position of principal investigator or co-investigator

- Artificial intelligence enabled smart contactless technology development for smart fencing, INTER-ACTION, 2020-2022
- An intelligent firewall for industrial networks, ZÉTA Program to support applied research, 2018-2019
- Smart system for automatized welding quality control, Programme of applied research, experimental development and innovations GAMA, 2017-2019
- Cooperation in Applied Research between the University of Pardubice and companies, in the Field of Positioning, Detection and Simulation Technology for Transport Systems (PosiTrans), Operational Programme Research, Development and Education, 2018-2022

Important publications

- DOLEZEL, Petr, Dominik STURSA, Dusan KOPECKY a Jiri JECHA. Memory Efficient Grasping Point Detection of Nontrivial Objects. IEEE Access. 2021, 9, 82130-82145. ISSN 2169-3536. doi:10.1109/ACCESS.2021.3086417.
- ŠKRABÁNEK, Pavel a Petr DOLEŽEL. Robust Grape Detector Based on SVMs and HOG Features. Computational Intelligence and Neuroscience. 2017, 2017, 1-17. ISSN 1687 -5265.

Supervision of doctoral theses

• 3 students defended

Membership in professional associations and boards

IEEE member

ALEŠ FILIP

ales.filip@upce.cz



Ales Filip received the MSc. degree in Technical Cybernetics at the Technical University of Brno, Czech Republic in 1983, and the Ph.D. degree in Electrical Engineering at the Czech Technical University in Prague in 1988. From 1993 to 1995, he was a Research Associate in the Optoelectronic Laboratory, University of Tokyo, Japan. In 1995, he joined Czech Railways (ČD) and in 1996, he initiated foundation of the Laboratory of Intelligent Systems to perform research in the field of signalling and train control based on GNSS technology and advanced communications. He was the Head of this Laboratory and he was also responsible for preparation and solution of different international and national R&D projects in this field. He habilitated at the University of Pardubice in 2004.

Scientific interest

- Safety aspects of GNSS exploitation in land transport sector (railway signalling, automated car driving, mobile robot and machine control).
- Certification of train location determination system for railway signalling ERTMS/ETCS.
- Safety approval process for GNSS-based position determination and other automated steering functions of self-driving and autonomous cars.

Prominent international cooperation

- RadioLabs, Italy
- ANSALDO STS, Italy

Important projects carried out from the position of principal investigator or co-investigator

- HELMET (High integrity EGNSS Layer for Multimodal Eco-friendly Transportation). EU H2020 project led by RadioLabs (Italy), 2020-2021
- STEMS (System Suitability Study for Train Positioning Using GNSS in ERTMS). Project
 of the European Space Agency led by Nottingham Scientific Ltd. (UK), 2018-2020
- RHINOS (Railway High-Integrity Navigation Overlay System). H2020 EU-US project focused on exploitation of EGNSS (EGNOS + Galileo + local augmentations) for ERTMS/ ETCS Level 2/3 (2016-2017) – led by RadioLabs (Italy), 2016-2017

Important publications

FILIP, A. Travelling virtual balise for etcs. International Journal of Transport Development and Integration [online]. 2017, 1(3), 578-588 [cit. 2021-9-14]. ISSN 2058-8313. Dostupné z: doi:10.2495/TDI-V1-N3-578-588.

Supervision of doctoral theses

• 1 student defended

Membership in professional associations and boards

- IEEE member
- Member of the international standardization committee RTCM SC-134

Membership in professional associations and boards

• "Winner Czech Republic 2020" – received from the GSA (European GNSS Agency) in the European Satellite Navigation Competition 2020 for the idea entitled "Certification of EGNOS SoL service for ERTMS/ETCS according to IEC 61508 and EN 50129."

SIMEON KARAMAZOV, Dr.

simeon.karamazov@upce.cz



- 1987 Ing. (M.Sc.) Faculty of Electrical Engineering, Czech Technical University, Prague
- 1994 PhD. Faculty of Chemical Technology, University of Pardubice
- 1999 assoc. prof. Faculty of Science, Masaryk University Brno
- 2009 Prof. Faculty of Materials Science and Technology, VSB Technical University of Ostrava

Scientific interest

Experimental and theoretical studies of solid crystal with tetradymite structure and their
physical and chemical properties related with concentration of antisite defects, vacancies
and impurity concentrations. Studies of semiconductor interfaces and microstructures by
scanning-tunneling spectroscopy (STS) and ballistic-electron emission microscopy (BEEM).
There will be a strong impact both on a fundamental understanding of local electronic and
optical properties of semiconductor structures and on technical details of the experiments.

Bibliometric indicators (Web of Science)

• Number of papers 42, H-index 9, Total number of citations > 250

Prominent international cooperation

- Department of Physics, University of Geneva, Switzerland, 1994
- Department of Physics, University of Michigan, Ann Arbor, USA, 1999, prof. C. Uher

Important projects carried out from the position of principal investigator or co-investigator

- Characterization of superlattices and ultra-shallow layers by the Scanning Tunnelling Microscopy. 1994 - 1996
- Study of Perspective Semiconductors and Structures by Ballistic Electron Emission Microscopy and Spectroscopy. 1997 - 1999
- Characterization and Nanometer-scale Modification of Bi2Te3 Surface via the Atomic Force Microscopy 2002 – 2004
- Tetradymite-type Crystals 1999-2000

Important publications

- Behavior of Ag admixtures in Sb2Te3 and Bi2Te3 single crystals. Navratil, J; Klichova, I; Karamazov, S; et al., JOURNAL OF SOLID STATE CHEMISTRY, 140, 1, pp. 29-37, 1998
- Characterisation of Bi2Se3 crystals highly doped with Pb. Karamazov, S; Horak, J; Navratil, J; et al., CRYSTAL RESEARCH AND TECHNOLOGY, 32, 2, pp. 249-260, 1997
- Probing of InAs/AlSb double barrier heterostructures by ballistic electron emission spectroscopy. Walachova, J; Zelinka, J; Vanis, J; et al., APPLIED PHYSICS LETTERS, 70, 26, 3588-3590, 1997
- Point-defects in Bi2-XInXTe3 single-crystals. KARAMAZOV, S; LOSTAK, P; HORAK, J; et al., PHYSICA STATUS SOLIDI A-APPLIED RESEARCH, 148, 1, 229-237, 1995
- Reflectivity spectra of TeO2-PbCl2 glasses. Karamazov, S; Navratil, J; Horak, J; et al., PHYSICS AND CHEMISTRY OF GLASSES, 43, 5, 224-228, 2002

Supervision of doctoral theses

• 5 students of doctoral study programme

Membership in professional associations and boards

European Thermoelectric society

ANTONÍN KAVIČKA

Antonin.Kavicka@upce.cz



Antonín Kavička completed his doctoral studies in the group of Assoc. Prof. V. Klima at the University of Zilina (Faculty of Management Science and Informatics), successfully completing his studies in 1998. In 2002, he joined the Faculty of Transport Engineering and in 2009, the Faculty of Electrical Engineering and Informatics (both at the University of Pardubice), where he still works. In 2003, he was appointed Associate Professor in the field of Technology and Management in Transport. In 2010, he was appointed Professor in in the field of Technology and Management in Transport. Since 2009, he has been the Head of the Department of Software Technologies.

Scientific interest

- Traffic Simulations: optimizations of transportation (rail-based) systems, architectures of simulators, capacity analysis
- Decision-making supports within transportation systems: priority planning, multicriterial evaluation of variants, nested/parallel simulations, soft computing methods

Bibliometric indicators (Web of Science)

• Number of papers 35, H-index: 7, Total number of citations: 125

Prominent international cooperation

- prof. L. Jánošíková University of Žilina, Slovakia
- prof. F. Longo University of Calabria, Italy

Important projects carried out from the position of principal investigator or co-investigator

- ERDF/ESF project: Cooperation in Applied Research between the University of Pardubice and companies, in the Field of Positioning, Detection and Simulation Technology for Transport Systems (PosiTrans) – No. CZ.02.1.01/0.0/0.0/17_049/0008394, 2018-2022.
- Grant project of international cooperation in research and development: 1P05ME727

 Simulation models of passenger railway station. Supported by the Ministry of Education, Youth and Sports of the Czech Rep. and the Ministry of Science and Technology of China. Project partners: University of Pardubice and TDJ System Research Center, Harbin, China, 2005-2007.

Important publications

- JÁNOŠÍKOVÁ, Ludmila, Antonín KAVIČKA and Michael BAŽANT. Optimal operation scheduling and platform track assignment in a passenger railway station. Journal of Rail and Rapid Transit. 2014, 228(3), 271-284. ISSN 0954-4097. DOI:10.1177/0954409712472275
- KAVIČKA, Antonin and Pavel KRÝŽE. Dynamic Automated Search of Shunting Routes within Mesoscopic Rail-Traffic Simulators. Journal of Advanced Transportation. 2021. ISSN 2042-3195. DOI:10.1155/2021/8840516

Supervision of doctoral theses

- 6 students/graduates of doctoral study programme
- 30 students/graduates of Master degree programme

Membership in professional associations and boards

Society for Modelling & Simulation International (SCS)

DUŠAN KOPECKÝ

dusan.kopecky@upce.cz



Dušan Kopecký received MSc. degree in "Measuring and Control Engineering in Chemical and Food Industry" at the University of Chemistry and Technology, Prague in 2006, and Ph.D. degree in "Measuring Technique" at the University of Chemistry and Technology, Prague, in 2009. Since 2018, he has been an Associate Professor of "Technical Cybernetics" at the University of Chemistry and Technology, Prague, and since 2021 also an Associate Professor and Senior Researcher at the University of Pardubice, Faculty of Electrical Engineering and Informatics.

Scientific interest

- synthesis and characterization of nanostructured materials for active layers of sensors
- development and testing of novel sensitive pressure sensors based on nanomaterials
- development of electromagnetic shields for wearable electronics

Bibliometric indicators (Web of Science)

• Number of papers 46, H-index 13, Total number of citations 528

Prominent international cooperation

- prof. M. M. Ayad, Egypt-Japan University of Science and Technology, Alexandria, Egypt
- Assoc. prof. Mikayel S. Aleksanyan, Yerevan State University, Republic of Armenia

Important projects carried out from the position of principal investigator or co-investigator

- P108/12/P802 Czech Science Foundation: Advanced materials for chemical sensors: one-dimensional structures of organic conductive polymers. Period: 2012–2014. Principal investigator.
- EU Erasmus+ credit research mobility between Czech Republic and Egypt. Period: 2020-2023. Principal investigator.

Important publications

- Doležel, P.; Štursa, D.; Kopecký, D.; Jecha, J. Memory Efficient Grasping Point Detection of Nontrivial Objects. IEEE Access 2021, 9, 82130–82145.
- Moučka, R.; Sedlačík, M.; Prokeš, J.; Kasparyan, H.; Valtera, S.; Kopecký, D. Electromagnetic Interference Shielding of Polypyrrole Nanostructures. Synthetic Metals 2020, 269, 116573.
- Kopecký, D.: Moisture in Solids In Instruments and Automation Engineers' Handbook, Volume II. Analysis and Analyzers (editors Lipták, B.G., Venzcel, K.), CRC Press, Boca Raton 2017, ISBN-13: 978-1-4987-2764-8

Supervision of doctoral theses

• 1 doctoral thesis (tutor), 2 ongoing; (2 diploma, 19 bachelor theses)

Membership in professional associations and boards

- D403, AD403 Molecular chemical physics and sensorics, FCHI, UCT Prague
- D405, AD405 Measurement and signal processing in chemistry, FCHI, UCT Prague
- P0788D060001 Electrical engineering and informatics, FEI, University of Pardubice

JAN MAREŠ

jan.mares@upce.cz



Jan Mareš finished his Ph.D. in the field of technical cybernetics in 2010. He joined the Department of Process Control, University of Pardubice in 2018, where he still works. In 2017, he was appointed Associate Professor in machine and process control.

Scientific interest

- Signal and image processing
- Biomedical data analysis
- Early diagnosis of rare diseases

Bibliometric indicators (Web of Science)

Number of papers 17, H-index 6, Total number of citations > 160, cumulative IF: 30,3

Prominent international cooperation

- Assoc. prof. Sanjeev Kumar Indian Institute of Technology Roorkee, India
- Assoc prof. Radoslav Paulen Slovak Technical University, Slovakia

Important projects carried out from the position of principal investigator or co-investigator

 LTAIN 19007: Development of Advanced Computational Algorithms for evaluating post-surgery rehabilitation

Important publications

- Vrba, J.; Mareš, J. Introduction to Extreme Seeking Entropy. Entropy 2020, 22, 93.
- Rozinek, O.; Mareš, J. The Duality of Similarity and Metric Spaces. Appl. Sci. 2021, 11, 1910.
- Červená, L.; Kříž, P.; Kohout, J.; Vejvar, M.; Verešpejová, L.; Štícha, K.; Crha, J.; Trnková, K.; Chovanec, M.; Mareš, J. Advanced Statistical Analysis of 3D Kinect Data: A Comparison of the Classification Methods. Appl. Sci. 2021, 11, 4572.

Supervision of doctoral theses

- 8 students of doctoral study programme
- 15 students of Master degree programme

Membership in professional associations and boards

- Member of Research Board of Ph.D. study programme "Technical Cybernetics"
- Member of Research Board of Ph.D. study programme "Measurement and Signal Processing in Chemistry"
- Member of Scientific Board of the Faculty of Chemical Engineering UCT Prague
- Member of Scientific Board of the Faculty of Nuclear Science and Physical Engineering CTU Prague

JIŘÍ TUČEK

jiri.tucek@upce.cz



Jiří Tuček completed his PhD studies at the Palacký University in Olomouc in 2008. In 2005, he joined the Department of Experimental Physics at the Faculty of Science of the Palacký University in Olomouc, where he stayed till 2019. In 2013, he was appointed Associate Professor in Applied Physics at the Palacký University in Olomouc. In 2015, he was appointed a Visiting Professor at the School of Science at the University of Tokyo. He was lecturing in Japan in the years 2015 and 2016.

Scientific interest

 Solid state physics: magnetism, characterization of magnetic properties of iron-containing compounds

Bibliometric indicators (Web of Science)

• Number of papers 163, H-index 40, Total number of citations > 7000

Prominent international cooperation

• Prof. S. Ohkoshi – Department of Chemistry, School of Science, University of Tokyo

Important publications

 TUCEK, Jiri, Piotr BLONSKI, Juri UGOLOTTI, Akshaya Kumar SWAIN, Toshiaki ENOKI a Radek ZBORIL. Emerging chemical strategies for imprinting magnetism in graphene and related 2D materials for spintronic and biomedical applications. Chemical Society Reviews. 2018, 47(11), 3899-3990. ISSN 0306-0012. Dostupné z: doi: 10.1039/c7cs00288b
 ZIOGAS, Panagiotis, Athanasios B. BOURLINOS, Jiri TUCEK, Ondrej MALINA a Alexios P. DOUVALIS. Novel Magnetic Nanohybrids: From Iron Oxide to Iron Carbide Nanoparticles Grown on Nanodiamonds. Magnetochemistry. 2020, 6(4), 73. ISSN 2312-7481. Dostupné z: doi: 10.3390/magnetochemistry6040073

Awards/achievements

 2015 - The Zasshi-kai Lectureship Award – awarded by the Tokio University (Tokio, Japan) for young scientists for the contribution in the field of magnetism of nanostructured objects.

Supervision of doctoral theses

- 5 students of doctoral study programme (2 successfully finished and 3 as co-supervisor)
- 7 students of Master degree programme

Supervision of doctoral theses

- 5 students of doctoral study programme (2 successfully finished and 3 as co-supervisor)
- 7 students of Master degree programme

The Faculty of Transport Engineering, established in 1993, provides comprehensive education in the field of transportation. It educates professionals for roles in private and state transport companies and businesses, manufacturing, construction and trade companies, research and project organizations, state administration, and educational institutions.

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Study Programme

Electrotechnical and Electronic Systems in Transport Transport Means Transport Structures Transport Technology and Management



ELECTROTECHNICAL AND ELECTRONIC SYSTEM IN TRANSPORT

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U.



TRANSPORT MEANS



BOHUMIL CULEK

bohumil.culek@upce.cz



Bohumil Culek completed his doctoral studies at the Czech Technical University in Prague, Faculty of Mechanical Engineering in 1992, branch Mechanics of rigid and flexible bodies and environments. In 1997, he was appointed Associate Professor at the Czech Technical University in Prague and in 2001, he was appointed Professor upon the proposal of the University of Pardubice in the branch Means of Transport and Infrastructure. In practice, he worked for 5 years as a designer at Bombardier Transportation Czech Republic, for 14 years at the Railway Research Institute in Prague as a researcher and the Head of the Dynamic Test Stand, and since 1993, he has been working at the Faculty of Transport Engineering, University of Pardubice as an academic.

Scientific interest

- Fatigue strength of machine parts and steel structures
- Tests of vehicles and transport structures
- Safety of operation of vehicles and transport structures

Bibliometric indicators (Web of Science)

• Number of papers 12, H-index 3, Total number of citations 11

Prominent international cooperation

• prof. Dr.-Ing. Günter Löffler, TU Dresden, Fak. Verkehrswissenschaften "Friedrich List"

Important projects carried out from the position of principal investigator or co-investigator

- Rolling Stock Research Center, Ministry of Education, No. 1M4977751302, 2005-2011,
- Competence Center of Railway Vehicles, Technology Agency of the Czech Republic, No.TE01020038, 2012-2019,
- National Center of Competence for Surface Vehicles, Technology Agency of the Czech Republic, No.TE01020026, 2019-2022,

Awards/achievements

• Leonardo da Vinci medal from the Association of Mechanical Engineers, 2011

Important publications

- Culek B. and a team of authors: Research report "Vereinheitlichung der Methoden der Lebensdauerbestimmung dynamisch beanspruchter Bauteile", ERRI C 178/RP2, Utrecht, 1992
- Culek B., Troidl J.: Research report "Messung der H-Kräfte an der Loko V 200", VÚKV TÜV No. 01-C038, Praha, 2001
- Culek B., Paščenko P., Culek B.jr., Schmidová E., Vágner J.: Research report "Realisation of tests of parts bus-body and frame special vehicle on the dynamic stand", Univerzita Pardubice, No. TN01000026 / 2 – V21, Pardubice, 2020

Supervision of doctoral theses

- 3 students of doctoral study programme
- 5 students of Master degree programme

Membership in professional associations and boards

- Member of the Committee of Experts of the European Railway Research Institute, 1992-2000
- Expert of the German Railway Authority (Eisenbahn-Bundesamt): Expert for testing railway vehicles, 2001-2009

JAN KRMELA

jan.krmela@upce.cz



Jan Krmela successfully completed his PhD studies at the University of Pardubice with the dissertation on the topic "Design of a Computational Spatial Model of a Radial Tire" in 2004. In 2010, he was appointed Associate Professor in the field of Transport Means and Infrastructure at the University of Pardubice. Since 2018, he has been working at Faculty of Transport Engineering, Department of Transport Means and Diagnostics.

Scientific interest

- testing and computational simulation of composites: FEM analyses, multiaxial stress, Ansys APDL
- computational simulation and testing of tires: pressure footprint, FEM analyses, stiffness
- specific tests of polymers: cyclic loading tests, relaxation, design of methodologies
- 3D printing: FFF type, optimization of printing parameters, new and recycled materials
- construction of vehicles: computational simulation

Bibliometric indicators (Web of Science)

Number of papers 25, H-index 4, Total number of citations 37

Prominent international cooperation

- Belarusian State Technological University, Minsk, Belarus
- Sumy State University, Sumy, Ukraine
- Graz University of Technology, Graz, Austria

Important projects carried out from the position of principal investigator or co-investigator

- Austria-Slovak international research scientific project: "Determination of Material Parameters for Computational Modeling of Next-generation Tires", Aktion Austria

 Slovakia, 2019–2022, principal investigator and project coordinator
- "The influence of temperature and other parameters on the tensile properties of polymer composites and polymers under the uniaxial and biaxial cyclic loading", KEGA, Slovak Republic, 2019–2021, principal investigator
- Krmela, J. Tire Casings and Their Material Characteristics for Computational Modeling. Scientific monograph. Czestochowa, Poland, 2017. ISBN 978-83-63978-62-4
- Kopal, I., M. Harničárová, J. Valíček, J. Krmela and O. Lukáč. Radial Basis Function Neural Network-Based Modeling of the Dynamic Thermo-Mechanical Response and Damping Behavior of Thermoplastic Elastomer Systems. Polymers-Basel. 2019, 11(6):1074, 1–20. DOI: 10.3390/polym11061074. CC, Q1
- Krmela, J. The Influence of Temperature and Other Parameters on the Tensile Properties of Polymer Composites and Polymers under Cyclic Loading. Scientific monograph. Czestochowa, Poland, 2021. ISBN 978-83-63978-91-4

Awards/achievements

- Alexander Dubček University of Trenčín: Ocenění za rozvoj a podporu vedy, výskumu a vzdelávania (award for the development and support of science, research and education), Slovak Republic (2020)
- The Bronze Medal of Maximilián Hell for the development of the Faculty of Industrial Technologies in Púchov, science and education, Púchov, Slovak Republic (2016)

Supervision of doctoral theses

6 students of doctoral study programme

- member of the selection committee of the National Scholarship Program (NŠP - https://www.stipendia.sk/) of the Slovak Republic for the period 2020–2022
- member of committee No. 3 of KEGA (Kultúrna a edukačná grantová agentúra MŠVVaŠ / Cultural and Educational Grant Agency MŠVVaŠ), Slovak Republic, 2021–2025
- Personal website: http://krmela.wz.cz/contact.html

EVA SCHMIDOVÁ

eva.schmidova @upce.cz



Eva Schmidová completed her doctoral studies at Brno University of Technology in 2002, branch of study: Materials Engineering and Limit States. In 2004, she was appointed Associate Professor at A.D. University of Trenčín, in the branch of Physical and Material Engineering and in 2012, she was appointed Professor upon the proposal of the University of Pardubice in the branch Means of Transport and Infrastructure. She worked as a designer of the development department CZ Loko a.s.; in 1994, she joined the Mechanics and Materials Department and in 2018, the Educational and Research Centre in Transport at the Faculty of Transport Engineering of the University of Pardubice.

Scientific interest

- Dynamic fracture response of high-strength steels
- Development of steels with improved contact-fatigue resistance
- Phase transformation of metallic materials at high strain rate

Bibliometric indicators (Web of Science)

• Number of papers 29, H-index 3, Total number of citations 39

Prominent international cooperation

- prof. Neelakantha V. Londe, Karnataka University, Dharawad, Indie
- Dr Joanna Borowiecka-Jamrozek Kielce University of Technology, Faculty of Mechatronics and Machine Engineering, Poland

Important projects carried out from the position of principal investigator or co-investigator

- 3D Metal Printing of the Computationally Components when the DMLS Technology is Used, 2017 2020; Ministry of Industry and Trade CR, MPO TRIO FV30149.
- Elimination of operational failures axles of rail vehicles, 2017-2019; Technology Agency of the Czech Republic, No. TH02010542.
- National Centre of Competence for Surface Vehicles, Technology Agency of the Czech Republic, No.TE01020026, 2019-2022.

Awards/achievements

• Leonardo da Vinci medal from the Association of Mechanical Engineers, 2011

- Schmidová, Eva, et al. "Premature failures of railway axles after repeated pressing." Engineering Failure Analysis 123 (2021): 105253.
- Schmidová, Eva, et al. "Role of Nb in the failure of dual-phase steel in heterogeneous welds." Engineering Failure Analysis 116 (2020): 104708.
- Schmidová, Eva, et al. "Influence of welding on dynamic fracture toughness of Strenx 700MC steel." Metals 9.5 (2019): 494.

Supervision of doctoral theses

- 6 students of doctoral study programme
- 14 students of Master degree programme

Membership in professional associations and boards

 Programme Committee of the Czech Defectoscopy Certification Centre for the qualification and certification system.

PETR VOLTR

petr.voltr@upce.cz



Petr Voltr received his PhD degree at the University of Pardubice in 2013 for his thesis on modelling of wheel-rail adhesion phenomena in dynamics of rail vehicle driving systems. Following his graduation, he worked as a research and teaching associate at the Department of Transport Means and Diagnostics and later at the Educational and Research Centre in Transport of the Faculty of Transport Engineering, University of Pardubice. In 2018, he was appointed as a researcher at NewRail – Newcastle Centre for Railway Research, Newcastle University, UK". Since his return to his home country in 2019, he has been working as an Associate Professor in the position of the Head of the Educational and Research Centre in Transport.

Scientific interest

- Theory of wheel-rail interaction and modelling of advanced rolling contact phenomena
- Experimental investigation of rail vehicle adhesion, assessment of friction modifiers for wheel-rail interface
- Rail vehicle dynamics modelling of vehicle components, multi-body simulation

Bibliometric indicators (Web of Science)

• Number of papers 21, H-index 6, Total number of citations 99 (Without self-citations 75), Citing articles 58 (Without self-citations 48) [02/07/2021]

Prominent international cooperation

- Collaboration on a series of projects on low adhesion modelling and mitigation with the University of Sheffield (UK) and the Virtual Vehicle Research Institute (Austria)
- Appointment as a Research Associate at Newcastle University (UK) in 2018–2019
- Collaboration on commercial research tasks for an industrial customer based
 in Austria

Important projects carried out from the position of principal investigator or co-investigator

- INNOWAG Innovative Monitoring and Predictive Maintenance Solutions on Lightweight Wagon, participation in 2018–2019; Shift2Rail, European Union.
- S-CODE Switch and Crossing Optimal Design and Evaluation, participation in 2016–2019; Shift2Rail, European Union.

- Buckley-Johnstone L., Trummer G., Voltr P., Six K., Lewis R.: Full-scale testing of low adhesion effects with small amounts of water in the wheel/rail interface, Tribology International, 2020, vol. 141, 16.8.2019. DOI: 10.1016/j.triboint.2019.105907.
- Voltr P., Lata M.: Transient wheel-rail adhesion characteristics under the cleaning effect of sliding, Vehicle System Dynamics, 2015, vol. 53, no. 5, p. 605–618. DOI: 10.1080/00423114.2014.961488.

Supervision of doctoral theses

• 1 PhD student (topic: Computational and Experimental Analysis of Wheel–Rail Contact Forces) + 1 PhD student as co-supervisor

- Member of the Programme Board of the Internationale Fahrzeugtagung "RAD-SCHIENE" (Germany) since 2016
- Member of the Editorial Board of the journal Railway Engineering (Turkey, ISSN 2149-1607) since 2020





TRANSPORT STRUCTURES



BOHUMIL CULEK

culek@upce.cz



Bohumil Culek completed his doctoral studies in the group of Prof. Hynek Šertler, DrSc. at Jan Perner Transport Faculty, successfully completing his studies at the University of Pardubice in 2003. In 2009, he was appointed Associate Professor in Transport Engineering at the Czech Technical University. After his study in 2001, he was employed as a researcher at the Railway Research Institute and in 2003, as a bridge construction supervisor at the Railway Infrastructure Administration. In 2004, he joined the Department of Transport Structures at the Faculty of Transport Engineering of the University of Pardubice, where he still works.

Scientific interest

- steel structures, steel bridges, lifetime estimation, fatigue
- experimental determination of physical properties of structures
- verification of dynamic properties of constructions

Bibliometric indicators (Web of Science)

• Number of papers 4, H-index 1, Total number of citations 8

Prominent international cooperation

• prof. dr. ir. Hans De Backer, Department of Civil Engineering, Bridges, Roads & Tunnels Research Group, Ghent University, Belgium

Important projects carried out from the position of principal investigator or co-investigator

- principal investigator of project ED4.1.00/04.0137 Educational and Research Centre in Transport (2011-2014, MSM/ED)
- co-investigator of 9 projects (4x GAČR GA103/08/0922, GA103/08/1340, GA103/05/2066, GA103/01/0243, 1x MPO - FR-TI1/134, 1x MSM - 1M0519, 3x TAČR - TE01020038, TA02030776, STA02018TN010))

Important publications

 B. Culek, V. Dolezel, P.: Probabilistic Assessment of a Railway Steel Bridge, 9th International Conference on Analysis of Discontinuous Deformation — New Development and Applications, Pages 347-354, Nanyang Technological University, Singapore, 25–27 November 2009 by Society for Rock Mechanics & Engineering Geology (Singapore), ISBN: 978-981-08-4455-4, GAČR 103/08/0922. Nagy, W.; Wang, B.; Culek, B.; Van Bogaert, P.; De Backer, H.: Development of a fatigue experiment for the stiffener-to-deck plate connection in Orthotropic Steel Decks, International Journal of steel Structures, Volume: 17, Issue: 4. Pages: 1353-1364, published 2017, ISSN: 1598-2351

Supervision of doctoral theses

- 3 students of doctoral study programme
- 22 students of Master degree programme

- Czech Society for Mechanics, member
- The Association of European Civil Engineering Faculties, faculty representative
- The Research Foundation Flanders (FWO), external referee

LADISLAV ŘOUTIL

ladislav.routil@upce.cz



Ladislav Řoutil completed his doctoral studies in the group of Prof. Keršner and Prof. Novák at Brno University of Technology, Faculty of Civil Engineering (Institute of Structural Mechanics). For his dissertation, he received the Award for "Excellent Dissertation in the Field of Concrete" by the Czech Concrete Society. In 2015, he joined University of Pardubice, Faculty of Transport Engineering as a full staff member at the Department of Transport Structures. In 2020, he was appointed Associate Professor in Transport Means and Infrastructure. Since 2018, he has been the Vice-dean for Research and International Cooperation.

Scientific interest

• structural mechanics; statics of building constructions; building construction reliability; stochastic analysis; fracture mechanics

Bibliometric indicators (Web of Science)

• Number of papers 22, H-index 5, Total number of citations 72

Prominent international cooperation

• Eskişehir Technical University; University of Napoli; University of Natural Resources and Life Sciences Vienna,

Important projects carried out from the position of principal investigator or co-investigator

- Centre for Integrated Design of Advanced Structures
- Complex Modelling of Fracture of Advanced Building Materials
- Basic Fatigue Characteristic and Fracture of Advanced Building Materials

Awards/achievements

- Czech Concrete Society Award for Excellent Dissertation in the Field of Concrete
- Award of Chancellor, Brno University of Technology
- Award of Faculty of Civil Engineering, Brno University of Technolog

Supervision of doctoral theses

• Yurdakul, Ö. Probabilistic nonlinear computer simulations for realistic prediction of structural response, University of Pardubice, 2019



TRANSPORT TECHNOLOGY AND MANAGEMENT



JIŘÍ KŘUPKA

jiri.krupka@upce.cz



Jiří Křupka is a Vice-dean of the Faculty of Transport Engineering, University of Pardubice. He has more than 30 years of experience in modelling of engineering, economics and social systems as well as prior teaching and research experiences (The Department of Transport Management, Marketing and Logistics, Faculty of Transport Engineering, University of Pardubice; Institute of System Engineering and Informatics, Faculty of Economics and Administration, University of Pardubice; Department of Automated Command and Control Systems, Faculty of Air Defence, Military Academy in Liptovsky Mikulas, the Slovak Republic). He has worked as the Vice-dean, Head of the Institute, Associate Professor and Assistant Professor. He received his MS in Military electronic engineering (1985), the PhD. degree in Military techniques (1995) and the Assoc. Prof. in Radars and Navigation (1997) from the Military University, Liptovsky Mikulas.

Scientific interest

• Soft Computing and Machine Learning: Modelling of social and economic systems on the basis of case-based reasoning, rough and fuzzy sets, decision trees, multiple criteria and group decision making.

Bibliometric indicators (Web of Science)

• Number of papers is 48, H-index is 5, Total number of citations is 81

Important projects carried out from the position of principal investigator or co-investigator

- Model of Sustainable Regional Development Management; 2008 2010; The Czech Science Foundation; 402/08/0849
- Indicators for Valuation and Modelling of Interactions among Environment, Economics and Social Relations; 2007 – 2011; Ministry of Environment, SP/412/60/07

Bibliometric indicators (Web of Science)

- KAZIBUDZKI, P. T., KŘUPKA, J. (2019). Pairwise judgments consistency impact on quality of multi-criteria group decision-making with AHP. E+M Economics and Management. 20(4). DOI: https://dx.doi.org/10.15240/tul/001/2019-4-013
- ŠANDA, M., KŘUPKA, J. (2018). Quality of life evaluation as decision support in public administration for innovation and regions development. Administratie si Management Public, (30), 51-66

 KAŠPAROVÁ M., KŘUPKA J. (2011). Air Quality Modeling and Metamodeling Approach. In: Olej V., Obršálová I., Křupka J. (eds.) Environmental Modeling for Sustainable Regional Development: System Approaces and Advanced Methods. IGI Global, Hershey, USA. 144-161, ISBN 978-1-60960-156-0. EISBN 978-1-60960-158-4

Supervision of doctoral theses

• 5 graduated students in doctoral study programme

LIBOR ŠVADLENKA

Libor.svadlenka@upce.cz



Libor Švadlenka graduated from doctoral study at the University of Pardubice, Faculty of Transport Engineering in 2004 with the dissertation "Specific aspects of management in the postal services". In 2004, he worked at the Board of management of the Czech Post as a Postal Transportation Expert. Since 2005, he has been working as a lecturer at the Faculty of Transport Engineering of the University of Pardubice. In 2010, he obtained the degree Assoc. Prof at the University of Zilina with the paper called "Ensuring Universal Postal Service in the Conditions of Fully Liberalised Postal Market". From 2013 till 2016, he was Head of the Department of Transport Management, Marketing and Logistics at the Faculty of Transport Engineering. Since 2016, he has been the Dean of the faculty.

Scientific interest

- Technology and management of transport and postal services, specifically regulation of transport and postal services sector, AIDC technology and its application in postal services
- City logistics problems (last mile delivery)

Bibliometric indicators (Web of Science)

• Number of papers 42, H-index 8, Total number of citations 165

Prominent international cooperation

- Assoc. Prof. Dobrodolac; Assoc. Prof. Simic, University of Belgrade, Serbia
- Prof Madleňák, University of Žilina, Slovakia
- Jean-Philippe Ducasse, U.S. Postal service, Office of Inspector general

Important projects carried out from the position of principal investigator or co-investigator

- Sustainable urban mobility plans, e-commerce and smart city logistics (main researcher), 2020 – 2023, Technology agency of the Czech Republic.
- Audit of measurement of regular transit times and audit of a study of real consignments conforming to the ČSN EN 13850 norm, and proposal of the correction leading to removal of the found shortcomings (main researcher), 2014 – present, Contract research: Czech Telecommunication Office.

- ŠVADLENKA Libor, Vladimír SIMIC, Momčilo DOBRODOLAC, Dragan LAZAREVIC and Gordana TODOROVIC. Picture Fuzzy Decision-Making Approach for Sustainable Last--Mile Delivery. IEEE ACCESS, 2020, Vol. 8.
- LAZAREVIC Dragan, Momčilo DOBRODOLAČ, Libor ŠVADLENKA a Bojan STANIVUKOVIC. A model for business performance improvement: a case of the postal company. Journal of business economics and management, 2020, vol. 21, no. 2, p. 564-592.

Supervision of doctoral theses

 3 postdoc students, 5 students of doctoral study programme, 50 students of Master degree programme

- Member of Board of Experts for the programme Transport 2020 within Technology Agency of the Czech Republic
- Member of Board of Directors, Technology platform "Interoperability railway infrastructure"
- Member of Board of Evaluators for KEGA, VEGA, APVV programs within The Ministry of Education, Science, Research and Sport of the Slovak Republic
- Member of scientific board of International Journal of Postal Commnications (IJPCOM), TCOM Ltd. and University of Belgrade, Serbia



