List of supervisors and dissertation topics
FIS 2026/2027

Study Programme Applied Informatics

Department of information technology (KIT)

prof. Ing. Josef Basl, CSc.	• Methodological framework for innovation of information systems of enterprises and organizations • Optimization approaches to deployment and use of information systems of enterprises and organizations • Application of rationalisation methods to increase the benefits of information systems • Applying the principles of the theory of constraints (TOC) to increase the benefits of information systems • Automation, robotics and integration of information systems applications
doc. Ing. Miloš Maryška, Ph.D.	• Internet of Things and Industry 4.0 • Corporate Performance Management • Design of a model for performance management of corporate informatics with BI support • IoT system architecture • Predictive maintenance
prof. Ing. Václav Řepa, CSc.	• Business Process Management • Information Modeling • Conceptual Business Analysis
Consultants (co-supervisors) at KIT:	• **Michal Doležel, Ph.D.** • **Ing. Martin Potančok, Ph.D.**

Department of information and knowledge engineering (KIZI)

prof. Ing. Petr Berka, CSc.	• Knowledge representation and inference methods in knowledge-based systems • Machine learning methods • Rule-based and case-based reasoning in knowledge-based systems • Data pre-processing for knowledge discovery tasks
prof. Ing. Tomáš Kliegr, Ph.D.	• Utilization of psychological phenomena in machine learning

	• Bias detection in knowledge graphs using active learning • Development and evaluation of classification algorithms for interpretable machine learning
prof. RNDr. Jan Rauch, CSc.	• Knowledge discovery from databases (consultant RNDr. Petr Máša)
doc. Ing. Vilém Sklenák, CSc.	• Information retrieval
prof. Ing. Vojtěch Svátek, Dr.	• Explainable Artificial Intelligence based on ontologies and knowledge graphs • Construction and management of knowledge graphs in support of detection and explanation of misinformation • Graph visualization for misinformation explanation
doc. Ing. Mgr. Miroslav Vacura, Ph.D.	• Ontology engineering
Ing. Jiří Vomlel, Ph.D.	• Bayesian networks for Educational Applications • Bayesian Network Analysis of Conspiracy and Disinformation Narratives
doc. Ing. Ondřej Zamazal, Ph.D.	• Complex ontology alignment
Consultants (co-supervisors) at KIZI:	• **RNDr. Ing. Petr Máša, Ph.D.** • **Ing. Ondřej Vadinský, Ph.D.** • **Ing. et Ing. Stanislav Vojíř, Ph.D.**

Department of systems analysis (KSA)

doc. Ing. Mgr. Zdeněk Smutný, Ph.D.	• Research in social informatics (or related fields: computer-mediated communication; human-computer interaction; ICT and society; internet studies; science, technology and society) – *also suitable for graduates of Master's programmes in sociology, psychology, anthropology, media and communication studies or statistics* • Research on the acceptance, adoption or resistance to implementation of information and communication technologies relevant to the field of health informatics – *also suitable for graduates of health-related master programmes* • Designing a solution to a problem in a selected application area using computing, information or communication technology • Research on the acceptance or adoption of technology (based on ICT) by a selected social group or category • Research on the acceptance of ambient intelligent systems or single-purpose assistive technologies by disadvantaged people (e.g., the elderly or people with blindness)
Consultants (co-supervisors) at KSA:	• **Ing. PhDr. Antonín Pavlíček, Ph.D.**

Study Programme Econometrics and Operations Research

doc. Ing. Adam Borovička, Ph.D.	• Investment decision making under uncertainty • Portfolio modeling with fuzzy sets theory • Preference formation on capital markets
prof. Ing. Mgr. Martin Dlouhý, Dr., MSc	• Operational research applied to health service • Resource allocation and data envelopment analysis
prof. RNDr. Ing. Michal Černý, Ph.D.	• Econometric analysis of special data: symbolic, interval, high-frequency, streams etc. • Inference in partially identified models • Imprecise inputs in optimization models
doc. Ing. Jan Fábry, Ph.D.	
prof. RNDr. Ing. Petr Fiala, MBA, CSc	• Modelling and analysis of network economy • Revenue management models • Supply chain coordination
doc. Ing. Tomáš Formánek, Ph.D.	• Modelling macroeconomic impacts of the potential euro introduction in the Czech Republic • Semi-parametric methods in spatial econometric analysis applications • Hierarchical and panel data models with complex spatial and temporal dynamics
doc. Mgr. Vladimír Holý, Ph.D.	• Sports and gaming analytics • Nonlinear models of time series • Software development for quantitative analysis
doc. Moosaei Hossein, Ph.D.	
prof. Ing. Josef Jablonský, CSc	• Dynamic data envelopment analysis models and their applications • Models for ranking evaluated units • Applications of operations research in sports
prof. RNDr. Jan Pelikán, CSc. (external supervisor)	

doc. Ing. Jan Zouhar, Ph.D.	• Linear and nonlinear econometric models for short panel data • Regression modelling with multilevel data

Study Programme Statistics

doc. RNDr. Ivana Malá, CSc.	• Statistical Analysis of Interval Censored Data • Regression models for censored data • Robust models and their application in statistical modelling
doc. PhDr. Klára Kalíšková, M.A., Ph.D.	• Statistical Modelling of Labour Mobility and Its Determinants • Statistical Analysis of the Effects of Motherhood on Women's Labour Supply • Statistical Analyses of Labour Taxation with Microsimulation Model EUROMOD (in cooperation with European Joint Research Center)
doc. Ing. Jaroslav Sixta, Ph.D.	• Input-Output Accounts: Development and Extensions