



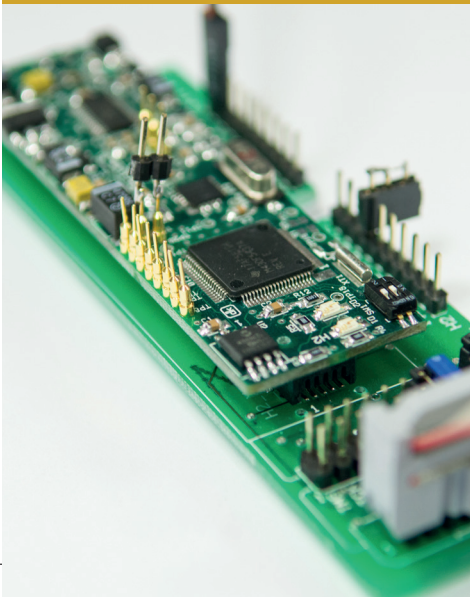
FACULTY
OF APPLIED SCIENCES
UNIVERSITY
OF WEST BOHEMIA

SCHOOL OF COMPUTING

Department of Computer Science and Engineering
NTIS Programme "Advanced Computer and Information Systems"

2017

Faculty of Applied Sciences
Univerzitní 8
306 14 Plzeň, Czech Republic
www.kiv.zcu.cz



PROFILE

Basic Facts

- Founded in 1988, origins from 1960s
- 5 full professors, 64 staff members (incl. 25 NTIS researchers), 18 full-time PhD students, 501 bachelor and master students, 27 international
- Total budget: EUR 1.8 million (government: EUR 1.3 million, grants: EUR 0.5 million)

Membership and Partners

- International Organizations: Informatics Europe, IEEE Computer Society, ACM SIGGRAPH, ISO/IEC JTC1 SC 32 Standards for Data management and Interchange, IFIP TC2 & TC 5, International Neuroinformatics Coordinating Facility (INCF), ARTEMIS
- National Organizations: GRIFO, Platform of Information Technologies, The Commission of the Research and Development Council of the Office of the Government, GACR Evaluation Panel for Computer Science
- Industrial partners: Aimtec, a. s., AŽD Praha, s. r. o., CCA Group, a. s., University hospital Plzeň, Palaxo Development, s. r. o., Sensorik-Bayern GmbH, Oracle Labs Prague, Unicorn a.s., etc.

Education

- Bachelor study branches: Computer Science, Computer Engineering, Information Systems
- Master study branches: Computer Engineering and Networks, Computer Graphics, Information Systems, Medical Informatics, Software Engineering
- Erasmus links: MDH Sweden, UPSAM Spain, UIB Spain, ULPGC Spain, INSA France, QUB United Kingdom, OTH Germany, UBT Germany, HFU Germany, HAMK Finland, etc.

Research Areas

- Medical Informatics: Medical Information Systems; Neuroinformatics
- Computer Engineering and Networks: Distributed Systems; Embedded Systems, Specialized Hardware and Computer Networks
- Computer Graphics, Data Visualisation: Geometric Algorithms and Models; Algorithms and Human-Computer Visual Interaction
- Natural Language Processing, Data Mining: Text-Mining; Natural Language Processing
- Software Engineering and Reliability: Reliable Software Architectures

Head of Department

doc. Ing. Přemysl Brada, MSc., Ph.D.

Deputy heads

doc. Ing. Pavel Herout, Ph.D. (Education, until 06/2017)
Ing. Roman Mouček, Ph.D. (Education, since 07/2017)
prof. Dr. Ing. Ivana Kolingerová (Research)

Administration Manager

Ing. Jana Krutišová

SELECTED RESULTS

Journal publications

- 19 journal publications in total
- VÁŠA, L.; ET AL. Multivariate analysis of curvature estimators. In Computer-aided design and applications.
- BŽOCH, P.; ŠAFAŘÍK, J. Algorithms for Maintaining Consistency of Cached Data for Mobile Clients in Distributed File System. In International Journal of Distributed Systems and Technologies.
- MOUČEK, R.; ET AL. Event-related potential data from a guess the number brain-computer interface experiment on school children. In Scientific Data.
- PAPEŽ, V.; MOUČEK, R. Applying an Archetype-Based Approach to Electroencephalography/Event-Related Potential Experiments in the EEGBase Resource. In Frontiers in Neuroinformatics.
- MAŇÁK, ET AL. Hybrid Voronoi diagrams, their computation and reduction for applications in computational biochemistry. In Journal of Molecular Graphics and Modelling.
- MAJDIŠOVÁ, Z.; SKALA, V. Big geo data surface approximation using radial basis functions: A comparative study. In Computers & Geosciences.
- MAŇÁK, M.; ET AL. Interactive Analysis of Connolly Surfaces for Various Probes. In Computer Graphics Forum.
- FIALA, D.; TUTOKY, G. PageRank-based prediction of award-winning researches and the impact of citations. In Journal of Informetrics.
- JEŽEK, K.; DIETRICH, J. API Evolution and Compatibility: A Data Corpus and Tool Evaluation. In The Journal of Object Technology.
- VAŘEKA, L., MAUTNER, P. Stacked Autoencoders for the P300 Component Detection. In Frontiers in Neuroscience, 2017.

Conference publications

- More than 60 contributions on national and international refereed conferences

Research Projects

- MediaGist – Summarisation and Sentiment Analysis for Evolving Multilingual Media Content, EU FP7-CIG-630786, 2014–2018, EUR 100.000 total, J. Steinberger
- Brainwave driven digital Assistance System for motor-impaired people, SFEU EUROPEAN COMMISSION, 85, 2016–2019, EUR 231.046 total,

R. Mouček

- Access to a Linguistically Structured Database of Enquiries from the Language Consulting Centre, NAKI II MKČR, DG16P02B009, 2016–2019, EUR 111.200 total, M. Dostal
- Methods of Identification and Visualization of Tunnels for Flexible Ligands in Dynamic Proteins, GA ČR, 17-07690S, 2017–2019, EUR 77.244 total, I. Kolingerová
- Meshless methods for large scattered spatio-temporal vector data visualization, GA ČR, 17-05534S, 2017–2019, EUR 101.760 total, V. Skala

Industrial Projects

- System for electrometer data synchronous gathering with implemented power consumption control algorithm, Client: EnEng, s.r.o., 2017, K. Dudáček
- Innovation of Circularo in Areas of Information Extraction and Docker Technology Employment, Client: PALAXO Development, LLC, 2017, M. Konopík
- Research, development and consultation of design and development of SPA web / mobile applications with the focus on intelligent processing of unstructured data, Client: PALAXO Technologies, LLC, 2017, M. Konopík
- Visual Interaction Methods for Improved Exploration of Large AST Graphs, Client: Oracle Labs Prague, P. Brada
- Cybersecurity for Railway Systems – analysis and design of technical solutions, Client: AŽD Praha, s.r.o., 2017, P. Brada
- Development of the Key management centrum – KMC v.3, Client: AŽD Praha, s.r.o., 2017, P. Herout

HIGHLIGHTS

Events

- Programming contest PilsProg for high school students, April 1, Pilsen
- 25th International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision (WSCG 2017), May 29 – June 2, Pilsen
- 20th International Conference Text, Speech and Dialogue (TSD 2017), Sept. 27–31, Prague
- Data and Knowledge Conference, October 5 – 6, 2017, Pilsen
- Software PETER for medical emergency services – report by Czech television, July 7, 2017 (K. Ekštejn)

Heads of Sections

doc. Ing. Přemysl Brada, MSc., Ph.D.
(Software Engineering and Information Systems)
doc. Ing. Josef Kohout, Ph.D.
(Medical Informatics)
prof. Dr. Ing. Ivana Kolingerová
(Computer Graphics and Multimedia Systems)
doc. Ing. Vlastimil Vavříčka, CSc.
(Computer Systems and Networking)

Full Professors

prof. Ing. Karel Ježek, CSc.
prof. Dr. Ing. Jana Kolingerová
prof. Ing. Václav Matoušek, CSc.
prof. Ing. Václav Skala, CSc.
prof. Ing. Jiri Šafařík, CSc.

Associate Professors

doc. Ing. Josef Bokr, CSc.
doc. Ing. Přemysl Brada, MSc., Ph.D.

doc. Ing. Dalibor Fiala, Ph.D.
doc. Ing. Pavel Herout, Ph.D.
doc. Dr. Ing. Jana Klečková
doc. Ing. Josef Kohout, Ph.D.
doc. Ing. Tomáš Koutný, Ph.D.
doc. Ing. Pavel Král, Ph.D.
doc. Ing. Stanislav Racek, CSc.
doc. Ing. Josef Steinberger, Ph.D.
doc. Ing. Libor Váša, Ph.D.
doc. Ing. Vlastimil Vavříčka, CSc.