



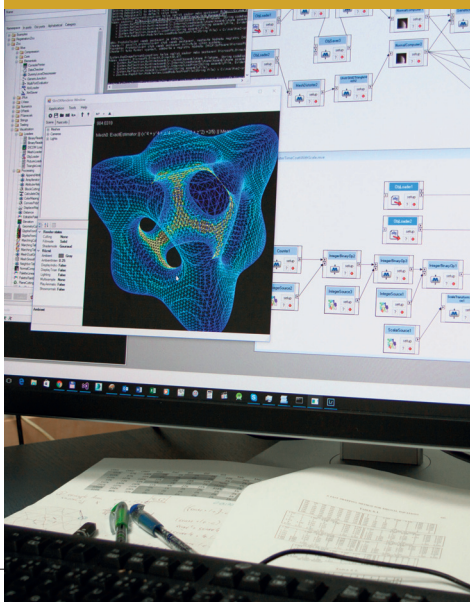
FACULTY
OF APPLIED SCIENCES
UNIVERSITY
OF WEST BOHEMIA

SCHOOL OF COMPUTING

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

2015

Faculty of Applied Sciences
Univerzitní 8
306 14 Plzeň, Czech Republic
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PROFILE

Basic Facts

- Founded in 1988, origins from 1960s
- 5 full professors, 72 staff members (incl. 30 NTIS researchers), 27 full-time PhD students, 580 bachelor and master students, 27 international
- Total budget: EUR 1.2 million (government: EUR 1 million, grants: EUR 0.2 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 Speech Communication Association (ISCA), International Neuroinformatics Coordinating Facility (INCF), ARTEMIS
- Industrial partners: AŽD Praha, s. r. o., CCA Group, a. s., Czech News Agency (ČTK) Praha, Medicalc, s. r. o., University hospital Plzeň, Openmatics, s. r. o., Owen software USA, Seznam.cz, ŠKODA AUTO, a. s.

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, INSA France, QUB United Kingdom, OTH Germany, HAMK Finland, ULPGC Spain, etc.

Research Areas

- Medical Informatics (J. Kohout): Medical Information Systems (J. Klečková); Neuroinformatics (R. Mouček)
- Computer Engineering and Networks (V. Vavříčka): Distributed Systems (J. Šafařík); Embedded Systems, Specialized Hardware and Computer Networks (V. Vavříčka)
- Computer Graphics, Data Visualisation (I. Kolingerová): Geometric Algorithms and Models (I. Kolingerová); Algorithms and Human-Computer Visual Interaction (V. Skala)
- Natural Language Processing, Data Mining (P. Král): Text-Mining (K. Ježek); Natural Language Processing (P. Král)
- Software Engineering and Reliability (P. Brada): Reliable Software Architectures (P. Brada)

Head of Department

prof. Ing. Jiří Šafařík, CSc. (until 08/2015)
doc. Ing. Přemysl Brada, MSc., Ph.D. (since 09/2015)

Deputy heads

doc. Ing. Pavel Herout, Ph.D. (Education)
prof. Dr. Ing. Ivana Kolingerová (Research)

Administration Manager

Ing. Jana Krutišová

SELECTED RESULTS

Journal publications

- BOKR, J. Supervisory logic control of discrete event systems. In *Elektrorevue*.
- BRADA, P.; JEŽEK, K. Repository and meta-data design for efficient component consistency verification. In *Science of Computer Programming*.
- BRYCHCÍN, T.; KONOPIK, M. Latent semantics in language models. In *Computer Speech and Language*.
- JEŽEK, K.; DIETRICH, J.; BRADA, P. How Java APIs break – An empirical study. In *Information and Software Technology*.
- JEŽEK, P.; MOUČEK, R. Semantic framework for mapping object-oriented model to semantic web languages. In *Frontiers in Neuroinformatics*.
- LENC, L.; KRÁL, P. Automatic face recognition system based on the SIFT features. In *Computers & Electrical Engineering*.
- LOBAZ, P.; VANĚČEK, P. Safe range of free space light propagation calculation in single precision. In *Optics Express*.

Conference publications

- DUDÁČEK, K.; DUDÁČEK, K.; VAVŘIČKA, V. Comparison of Short Delay Measurement Methods. In *2015 International Conference on Applied Electronics*.
- KONKOL, M.; KONOPIK, M. Segment Representations in Named Entity Recognition. In *Text, Speech, and Dialogue*.
- KRÁL, P.; LENC, L.; CERISARA, C. Semantic Features for Dialogue Act Recognition. In *Third International Conference on Statistical Language and Speech Processing (SLSP 2015)*.
- KRÄMER, S.; MOTTOK, J.; RACEK, S. Proportionate Fair based Multicore Scheduling for FT Multicore RT Systems. In *Proceedings of the 1st International Conference on Electrical and Information Technologies*.
- PAPEŽ, V.; MOUČEK, R. Archetypes Development in Electrophysiology Domain – Electroencephalography as a Personal EHR System Module. In *HEALTHINF 2015 – 8th International Conference on Health Informatics*.
- POTUŽÁK, T. Distributed/Parallel Genetic Algorithm for Road Traffic Network Division using Step Parallelization. In *2015 4th Eastern European Regional Conference on the Engineering of Computer Based Systems*.
- VARNUŠKOVÁ, J.; KOHOUT, J. Science on a Sphere, Ways of Adding Interactivity into the Unique Projection System. In *GRAPP 2015*.

Applied Research Results

- Stimulation device for neuroinformatic and reactometric experiments (P. Mautner, R. Mouček, J. Novotný, K. Dudáček), Czech patent No. CZ 304979

Research Projects

- NECPA-Development of Algorithms for Computer Graphics and CAD/CAM systems, MŠMT, LH12181, 2012–2015, EUR 36.500, V. Skala
- MediaGist – Summarisation and Sentiment Analysis for Evolving Multilingual Media Content, 7.RP – EUROPEAN COMMISSION, FP7-CIG-630786, 2014–2018, EUR 100.000, J. Steinberger

Industrial Projects

- Software development process analysis and improvement design in CCA Group, a. s., Client: CCA Group, a. s., 2015, P. Brada
- Research and development work in field of text processing, full-text searching and analysis of text data, Client: CCI Technologies LLC, 2015, M. Konopik
- Home and small enterprises energy monitoring system, Client: EnEng, s. r. o., 2015, K. Dudáček
- Software solution for automatic processing of scanned images, Client: EXON, s. r. o., 2015, P. Král
- Verification, analysis and design of application system platform processes, Client: Openmatics, s. r. o., 2013–2015, P. Brada
- Research and development of prototype for intelligent document comparison, Client: Owen Software Development Company Ltd., 2015, M. Konopik

HIGHLIGHTS

Events

- Programming contest PilsProg for high school students, April 11, 2015, Pilsen
- 23th International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision (WSCG 2015), June 8–11, 2015, Pilsen
- 18th International Conference Text, Speech and Dialogue (TSD 2015), Sept. 14–17, 2015, Pilsen

Awards

- Joseph Fourier prize – 2nd place for research in the field of Distributional semantics in language modelling (T. Brychcín)

Full Professors

prof. Ing. Karel Ježek, CSc.
prof. Dr. Ing. Ivana Kolingerová
prof. Ing. Václav Matoušek, CSc.
prof. Ing. Václav Skala, CSc.
prof. Ing. Jiří 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. Ing. Jana Klečková
doc. Ing. Josef Kohout, Ph.D.
doc. Ing. Pavel Král, Ph.D.
doc. Ing. Stanislav Racek, CSc.
doc. Ing. Josef Steinberger, Ph.D.
doc. Ing. Libor Vaša, Ph.D.
doc. Ing. Vlastimil Vavříčka, CSc.