Department of Software Engineering

 # Semantic web
 # Similarity search, Big data analytics
 # Database systems, multimedia retrieval

„Our primary objective is an investigation of techniques for data retrieval, visualization, modeling and processing in domains related to multimedia, open data, big data, bioinformatics.“

Offer

- Development of database technology for accessing and integrating complex unstructured and incomplete data
- Efficient processing of graph data (XML, RDF, linked data, network traffic)
- Semantic web services
- Similarity search in multimedia databases
- Structural bioinformatic similarity retrieval
- Similarity modeling
- Recommender systems
- Video retrieval
- Database indexing
- Application of Linked-data principle
- XML and Web technologies and their exploitation
- Schema evolution
- Change management and adaptability of applications

Expertise

- Database methods for large-scale similarity search
- Development of image descriptors
- Content-based multimedia retrieval
- Development of algorithms and computational tools for biological data analysis
- Methods for data integration and extraction
- Recommender systems
- Database technology for content-based management and retrieval of unstructured data (text, multimedia, biological) and structured data (XML, RDF, relational) and their integration

Partnerships and Collaborations

Academic Partners

- University of Konstanz
- Universidad de Chile, Chile
- RWTH Aachen University, Germany
- University of Leipzig
- University of Milano Biccocca

Industry Partner

- Cisco Systems
- Profinit EU

NGO-sector

- Collaboration with non-profit initiative OpenData.cz, which promotes the principles of Linked Data among governmental organizations

Main Recent Projects

- TAČR TH03010276, The system for advanced analytics of large connected data based on simmilarity modeling, 2018–2020
- GAČR 17-22224S, User Preference Analytics in Multimedia Exploration Models, 2017–2019
- GAČR 15-08916S, Efficient subgraph discovery for petabyte-scale web analysis, 2015–2017
- GAČR 15-00885S, Novel methods for computational prediction and visualization of secondary structures of ribosomal ribonucleic acids – an integrated solution, 2015–2017
- NoSQL-Net – Managing Linked Data in NoSQL Stores under Schema Evolution
- Highly Scalable Parallel and Distributed Methods of Data Processing in e-Scienc
- Inteligent library – INTLIB
- ETRAIN – Platform for train control and information systems based on Ethernet Communication Non-Metric Similarity Searching in Very Large Complex Databases
- Handling XML Data in Heterogeneous and Dynamic Environments

Are you interested in this expertisa?

Please contact CPPT UK
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Experts and their Department

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Klíčová slova

 # Sémantický web
 # Analýza velkých dat, podobnostní vyhledávání
 # Databázové systémy, multimediální vyhledávání