Foreword about Michal Kratky, Vice-dean of FEECS for Science and Research and Chair of WOFEX Ph.D. workshop

Michal Kratky

Michal Kratky was born in Olomouc, 1978. He graduated in Computer science from the Faculty of Electrical Engineering and Computer Science (FEECS) in 2001. He also received his Ph.D. degree in Computer Science there in 2004. Hence then he has been a member of the Department of Computer Science, since 2007 he has been working as an associate professor at the same faculty. His research interests include: physical implementation of database systems, multidimensional data structures, indexing and querying XML data. He is a leader of the Database Research Group at the Department of Computer Science, a guarantor of courses related to database management systems and also the supervisor of 8 Ph.D. students.

The FEECS is a research and science leader at the VSB - Technical University of Ostrava and it is one of the most successful faculties related to electrical engineering and computer science in the Czech Republic. Because of the reason that the doctoral study is the most important backbone of research at our faculty, the FEECS supports many activities related to the doctoral study. One of these activities is the Ph.D. workshop WOFEX.

The 9th annual workshop WOFEX 2011 (Ph.D. workshop of Faculty of Electrical Engineering and Computer Science) was held on September 8th-9th 2011 at the VSB - Technical University of Ostrava. The workshop offers an opportunity for students to meet and share their research experiences, to discover commonalities in research and studentship and to foster a collaborative environment for joint problem solving. The book of proceedings includes 110 papers from Ph.D. students of our faculty and 4 papers of external authors. The proceedings of WOFEX 2011 are also available at WOFEX Web site http://wofex.vsb.cz/2011/. The FEECS boards of doctoral study selected 9 papers for submitting of their extended versions in the AEEE Journal. This issue includes 7 extended articles, the last 2 articles will be published in the next issue of this journal. This high selection guarantees a high quality of chosen papers.

Database Management Systems (DBMS) have been developed in former forty years. Since data volume grows every day, we need DBMS to be able to manage this large amount of information. Therefore, the development of DBMS will continue in future. Due to large volume of information, some new needed requirements emerged: high scalability using distributed DBMS, high parallelization using SIMD, GPU and other new hardware platforms. From data model point of view, there are some new concepts like NoSQL databases, where a user utilizes a less strict view on transactions (ACID properties are not completely required). As a result, these DBMS can provide a higher performance than common ACID-based relational DBMS. As the data volume growth continues every day, we expect other challenges in the world of database management systems.