

**3<sup>rd</sup> Indian International Conference on Artificial Intelligence (IICAI-07)**  
**December 17-19 2007, Pune, India**  
**[www.iiconference.org](http://www.iiconference.org)**

**Title of the tutorial:** Rough Sets in Data Mining and Data Warehousing

**Presenter:** Prof. Dominik Slezak, Ph.D.

**Abstract of the tutorial:** Theory of rough sets focuses on derivation of knowledge from data. Its advantage lays in simple and powerful knowledge representation, as well as its relationship to the KDD-related task of feature reduction. Rough set principles are supported by efficient algorithms, easily combinable with other methodologies, leading to valuable results in many fields, including multimedia, medicine, bioinformatics, web analytics, etc.

In this talk, we focus on both foundations and applications of rough sets. The first part of the talk refers to some examples of rough set-based data mining projects, while the second part shows how rough sets enabled BrightHouse - the database engine developed by Infobright Inc. - to efficiently query the terabytes of compressed data with a limited need of their decompression. As a summary, we hope to convince all the attendees about usefulness of rough sets in the areas of data mining and data warehousing, basing on our academic and industry experiences.

**Expected background for the audience:** Graduate students, researchers and developers working in this area or having some knowledge in this area.

**Brief bio-data of the presenter:** Dominik Slezak received his PhD in Computer Science in 2002 from Warsaw University, Poland. In an instructional capacity he has supervised more than 15 graduate students in Canada, Poland, and the United Kingdom. He has pursued academic collaborations with Warsaw University, University of Regina, and the Polish-Japanese Institute of Information Technology. Currently, he is working as the chief scientist for Infobright Inc.

Dominik Slezak serves as a guest editor and reviewer for a number of international scientific journals, and chair of several international scientific conferences. He has published over 50 peer-reviewed papers for books, journals, and conference proceedings. He has delivered a number of invited talks in Canada, China, Egypt, India, Japan, South Korea, Poland, and the United Kingdom. His research interests are related mainly to rough sets, data mining, KDD, data warehousing, bioinformatics, as well as medical and multimedia data analysis.