Title of the lecture: Conceptual graph based modeling and querying methods for RDBMS and semi-structured data

Conceptual Graphs (CGs) are a knowledge representation language based on the existential graphs of Ch. S. Peirce and the semantic networks of Artificial Intelligence, which were first introduced by J.F. Sowa in 1976 [3]. CGs are also a modeling and design language, which is human readable and computer tractable. This makes CGs suitable for a large variety of applications.

During this lecture, I would like to present a CG based modeling for various databases and exemplify this method on RDBMS and semi-structured data (especially XML data) pointing out inherent differences. I would like also to discuss about a CG based query designer for the relational data model and for XQuery. [4, 5, 6]

I intend to highlight that the expressive power of CGs consist of the fact that the representation method, based on these graphs, gives a natural and intuitive tool for database structure design and database querying, especially in the case of semi-structured data: they help to present the structure of semi-structured data in a form which is also accessible for non-experts.

Bibliography: