informatik-Kolloquium

Der Fachbereich Informatik der Johannes Kepler Universität Linz[1] lädt in Zusammenarbeit mit der Österreichischen Gesellschaft für Informatik (ÖGI) zu folgendem Vortrag ein:

Topic:	**Approximate Lifted Inference with Probabilistic Databases**
Presenter:	**Wolfgang Gatterbauer,** Tepper School of Business, Carnegie Mellon University, Pittsburgh, USA
Date:	**Dienstag 8. März 2016, 17:00 – 18:00**
Location**:**	**Universität Linz, Science Park 3, S3 055**

Abstract: The lecture introduces new approach for approximate evaluation of #P-hard queries with probabilistic databases. In this approach, every query is evaluated entirely in the database engine by evaluating a fixed number of query plans, each providing an upper bound on the true probability, then taking their minimum. An algorithm takes into account important schema information to enumerate only the minimal necessary plans among all possible plans. Importantly, this algorithm is a strict generalization of all known results of PTIME self-join-free conjunctive queries: A query is safe if and only if the algorithm returns one single plan. Three relational query optimization techniques are applied to evaluate all minimal safe plans very fast. Detailed experimental evaluation of this approach are given and, in the process, a new way of thinking about the value of probabilistic methods over non-probabilistic methods for ranking query answers is provided.

Short Bio: Wolfgang Gatterbauer, grown up in Linz, is an Assistant Professor in the Tepper School of Business, and by courtesy in the Computer Science Department of Carnegie Mellon University. He received a Dipl.-Ing. degree from Graz University of Technology (Mechanical Engineering), two M.Sc. degrees from Massachusetts Institute of Technology (Electrical Engineering & Computer Science; and Technology & Policy), and his PhD in Computer Science from Vienna University of Technology (Database and Artificial Intelligence Group). Prior to joining CMU in 2011, he was a Post-Doc at University of Washington (Database Research Group). He also won a Bronze medal at the International Physics Olympiad, worked in the steam turbine development department of ABB Alstom Power, and in the German office of McKinsey & Company.

Einladende: *Univ.-Prof. Dr. Roland Wagner*
a Univ.-Prof. Dr. Josef Küng
Institut für anwendungsorientierte Wissensverarbeitung