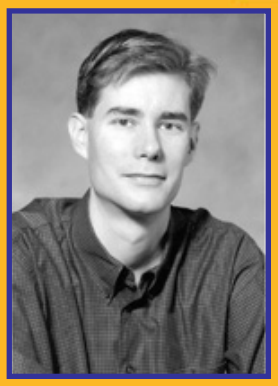
Calit2 UC Irvine Division and
Donald Bren School of Information & Computer Sciences
Present the

2007 RESCUE Distinguished Lecture Series

Scaling Computer Games to Epic Proportions



Dr. Johannes Gehrke

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Johannes Gehrke is an Associate Professor in the Department of Computer Science at Cornell University and an Associate Director of the Cornell Theory Center. Johannes' research interests are in the areas of data mining, search, data privacy, complex event processing, and applications of database and data mining technology to marketing and the sciences. Johannes has received a National Science Foundation Career Award, an Arthur P. Sloan Fellowship, an IBM Faculty Award, the Cornell College of Engineering James and Mary Tien Excellence in Teaching Award, and the Cornell University Provost's Award for Distinguished Scholarship. He is the author of numerous publications on data mining and database systems, and he co-authored the undergraduate textbook *Database Management Systems* (McGrawHill (2002), currently in its third edition), used at universities all over the world.

Johannes was co-Chair of the 2003 ACM SIGKDD Cup, Program co-Chair of the 2004 ACM International Conference on Knowledge Discovery and Data Mining (KDD 2004), and he is Program Chair of the 33rd International Conference on Very Large Data Bases (VLDB 2007).

Monday, March 26, 2007

Refreshments served at 10:45 a.m. with talk to follow at 11:00 a.m.

Calit2 Room 3008

Sponsored by Professor Sharad Mehrotra

This talk will introduce scalability for computer games as the next frontier for techniques from data management. A very important aspect of computer games is the artificial intelligence (AI) of non-player characters. To create interesting AI in games today, developers or players can create complex, dynamic behavior for a very small number of characters, but neither the game engines nor the style of AI programming enables intelligent behavior that scales to a very large number of non-player characters.

It will introduce a first step towards truly scalable AI in computer games by modeling game AI as a data management problem, and will present a highly expressive scripting language SGL (for Scalable Gaming Language) that provides game designers and players with a data-driven AI scheme for customizing behavior for individual non-player characters. The use sophisticated query processing and indexing techniques allows us to efficiently execute large numbers of SGL scripts, thus providing a framework for games with a truly epic number of non-player characters. The talk will conclude with an outlook how our techniques can be used to also achieve significant scalability in large-scale simulations.

This talk describes joint work with Alan Demers (Cornell), Christoph Koch (Saarland University), Rajmohan Rajagopalan (Cornell), and Walker White (Cornell).

For additional information on this series, contact Jean Chin, (949) 824-1147 or jean.chin@uci.edu