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the **2004 RESCUE SEMINAR SERIES**

"Taming the Dynamics of Distributed Data"

DATE: Friday, July 30, 2004
LOCATION: 136 CS2 (Bldg. 304 on campus map)
TIME: 1:00 p.m. – 2:15 p.m. (light refreshments served)
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SPEAKER
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ABSTRACT:
Data gathered from (wireless) sensor networks and those delivered today via the web reflect rapid and unpredictable changes in the world around us. Clearly, the Quality of Service needs for such delivery are much more stringent than for static data. This talk will examine the nature of dynamics of distributed data, study the suitability of the current infrastructure for disseminating time varying information, and discuss fresh approaches to maintain the temporal coherency of dynamic data. We argue that executing user queries over dynamic data at the edge of the network, e.g., at Data Aggregators, improves scalability and reduce overheads but poses challenges in terms of delivering consistent query results in spite of data dynamics as well as failures in the infrastructure. How these challenges can be met by the judicious design of algorithms for data dissemination, caching, and cooperation forms the crux of the talk.

BIO:
Prof. Ramamritham received the Ph.D. in Computer Science from the University of Utah and then joined the University of Massachusetts. He is currently at the Indian Institute of Technology Bombay as the Vijay and Sita Vashee Chair Professor in the Department of Computer Science and Engineering. He was a Science and Engineering Research Council (U.K.) visiting fellow at the University of Newcastle upon Tyne, U.K and has held visiting positions at the Technical University of Vienna, Austria and at the Indian Institute of Technology Madras.

Ramamritham's interests span the areas of real-time systems, transaction processing in database systems, and real-time databases systems. He is applying concepts from these areas to solve problems in embedded systems, mobile computing, e-commerce , intelligent internet, and the Web.

Prof. Ramamritham is a Fellow of the IEEE and a Fellow of the ACM. His conference chairing duties include the Real-Time Systems Symposium -- as Program Chair in 1994 and as General Chair in 1995, the Conference on Data Engineering -- as a Vice-Chair in 1995 and 2001 and as a Program Chair in 2003, and the Conference on Management of Data -- as Program Chair in 2000. He has also served on numerous program committees of conferences and workshops. His editorial board contributions include IEEE Transactions on Knowledge and Data Engineering, IEEE Transactions on Parallel and Distributed Systems, IEEE Internet Computing, the Real-Time Systems Journal, the WWW Journal, the VLDB Journal, and ACM SIGMOD's Digital Review. He has co-authored two IEEE tutorial texts on real-time systems, a text on advances in database transaction processing, and a text on scheduling in real-time systems.