

## **2007 SIGMOD Award Winners**



### **2007 SIGMOD Edgar F. Codd Innovations Award**

#### **Jennifer Widom**

Professor Jennifer Widom is the recipient of the 2007 SIGMOD Edgar F. Codd Innovations Award for a series of fundamental contributions in several database sub-areas. Her contributions have either brought new structure to existing database research areas, or opened up whole new lines of database research.

Professor Widom has made fundamental contributions in areas including database rule systems, data warehousing and view maintenance, semi-structured data management, stream database systems, and database support for uncertainty and lineage. In the area of database rule systems, her 1990 ACM SIGMOD paper offered the first complete framework for incorporating production rules into a DBMS with well-defined semantics; that paper was later recognized for its contribution via the SIGMOD Test of Time Award in 2000. In her 1991 VLDB paper, Professor Widom applied those results to the problem of view maintenance, providing practical guidelines for determining when materialized views can be efficiently incrementally maintained. This paper won both the Best Paper Award for the 1991 VLDB Conference as well as the Ten Year Paper Award at VLDB 2001. In the area of semi-structured data, Professor Widom's Lore system pioneered techniques for storing, querying, and managing semi-structured data, before the emergence and popularity of XML. This work heavily influenced subsequent work on XML databases and their query languages. Professor Widom's CQL language is widely regarded as having brought structure and well-thought-out semantics to the problem of querying streams; it is proving foundational for the StreamSQL standardization effort by IBM, Oracle, StreamBase, and others. Recently, Professor Widom has turned her attention to uncertainty and data lineage in her TRIO project, and this work appears to be again spearheading a new research thrust for the database community.



### **2007 SIGMOD Contributions Award**

#### **Hans-Jörg Schek**

Professor Hans-Jörg Schek is the recipient of the 2007 SIGMOD Contributions Award for his significant service to the database research community, as well as the broader scientific community, as a scholar, an educator, a supervisor, a referee of and advisor for large collaborative research projects in Europe, and as an organizer of conferences, journals, and other community activities. He has also served the community through his pioneering research efforts in nested relational data management and database support for advanced applications such as office automation, engineering information management, and digital libraries.

Professor Schek's contributions are numerous. As one notable example, Professor Schek served as the founding Editor-in-Chief of the VLDB Journal, which according to Thomson's Science Citation Index, currently stands as the computer science journal with the highest impact factor. Professor Schek served as a Trustee of the VLDB Endowment, the organization that sponsors and oversees the annual VLDB Conference and its associated activities, from 1998-2006. As a teacher, Professor Schek graduated several generations of students, many of whom are today highly recognized database professors themselves. He thus played a major role in growing the European database research community. Over the years Professor Schek rang the warning bell of potential irrelevance, urging the database community to "get out of its box", engage with other communities, and move from traditional databases to more general, diverse,

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and universal data management. He modeled this philosophy through his research and worked to broaden the scope of the VLDB Conference and the VLDB Journal. He served and continues to serve as a role model for numerous young scientists, both his own students and others in our field, with his dedication to community service, to database research, and to the continued vitality of the field.

### **2007 SIGMOD Test of Time Award**

#### [Online Aggregation](#)

**Joseph M. Hellerstein (UC Berkeley), Peter J. Haas (IBM Almaden Research Center), and Helen J. Wang (UC Berkeley)**

The paper *Online Aggregation* from the 1997 ACM SIGMOD Conference in Tucson, AZ, was chosen from a number of potential candidates for the lasting impact that it had by opening up new database research directions. In the years since 1997, this frequently cited paper has had a significant influence on subsequent research on approximate query processing, sampling-based data reduction, and more recently, approaches to handling aggregation in stream data management and continuous query processing systems.

### **2007 SIGMOD Doctoral Dissertation Award**

- *Winner*: *Boon Thau Loo* (advisors: Joseph M. Hellerstein and Ion Stoica), University of California at Berkeley
- *Honorable Mentions*: *Xifeng Yan*, University of Illinois at Urbana-Champaign; *Martin Theobald*, Saarland University

### **2007 SIGMOD Best Paper Award**

- [Compiling Mappings to Bridge Applications and Databases](#)  
Sergey Melnik, Atul Adya, and Philip Bernstein
- [Scalable Approximate Query Processing with the DBO Engine](#)  
Christopher Jermaine, Subramanian Arumugam, Abhijit Pol, and Alin Dobra

### **2007 SIGMOD Undergraduate Awards**

- *Rui Fang*, Hong Kong University of Science & Technology, China
- *Marcin Kwietniewski*, Warsaw University of Technology, Poland, and York University, Canada
- *Yin Yee (Samantha) Leung*, University of British Columbia, Canada
- *Rui Li*, Shanghai Jiao Tong University, China
- *Yinan Li*, Peking University, China
- *Zhongyuan Wang*, Renmin University, China
- *Zhijun Yin*, Fudan University, China

A complete listing of all SIGMOD Awards is available at: <http://www.sigmod.org/awards/>