

2008 SIGMOD Award Winners

SIGMOD Edgar F. Codd Innovations Award

For innovative and highly significant contributions of enduring value to the development, understanding, or use of database systems and databases. Until 2003, this award was known as the "SIGMOD Innovations Award." In 2004, SIGMOD, with the unanimous approval of ACM Council, decided to rename the award to honor Dr. E.F. (Ted) Codd (1923 - 2003) who invented the relational data model and was responsible for the significant development of the database field as a scientific discipline.



**2008 SIGMOD Edgar F. Codd Innovations Award Winner:
Moshe Y. Vardi**

Moshe Y. Vardi is the recipient of the 2008 SIGMOD Edgar F. Codd Innovations Award for fundamental contributions to the foundations of relational databases. He has made significant contributions to the foundations of relational databases by establishing deep connections between database theory, mathematical logic, complexity theory, and AI. His important contributions span many areas of database theory, including the complexity of query evaluation, the semantics of database updates, conjunctive queries, data integration, data dependencies, and deductive databases.

The most prominent examples of Vardi's deep contributions are the following fundamental results.

- **Query processing complexity:** Vardi has established the distinction between data complexity, which is complexity with respect to the size of the data, and expression complexity, which is complexity with respect to the expression denoting the query. This fundamental distinction is now used in most discussions of query-evaluation complexity, and outside of database theory as well.
- **Logics and query languages:** Vardi is one of the pioneers of finite model theory, which is a cornerstone of relational database theory. His pioneering contributions include classical results on capturing complexity classes with fixpoint logics, on 0-1 laws, and on infinitary logics that have been instrumental in the study of relational query languages.
- **Connections between databases and other areas of computer science:** Vardi has established connections between databases and AI (for example, between database updates and belief-revision problems in AI, and also between query containment and constraint satisfaction problems). He was the first to point out connections between database theory and automata, more than a decade before automata have become a common tool in the study of XML.

SIGMOD Contributions Award

For significant contributions to the field of database systems through research funding, education, and professional services.



2008 SIGMOD Contributions Award Winner:

Klaus R. Dittrich

Klaus R. Dittrich is the recipient of the 2008 SIGMOD Contributions Award for his lifetime dedication and service to the database community, most notably, sustained and excellent work in the VLDB Endowment, leadership for the VLDB Journal, and promotion of interaction between the database and software engineering communities.

Klaus R. Dittrich, who passed away on November 20, 2007, was a tireless and unselfish organizer and promoter of database research, both within the community and across its boundaries. He served on numerous committees and boards within ACM and other professional organizations, including the positions of the program committee co-chair of VLDB 1997, CAiSE 2001, and ICDE 2002. Dittrich served many years on the VLDB Endowment's Board of Trustees, the steering committee of the VLDB conference series; from 1998 to 2003 he was the board's secretary, probably the most work-intensive position on the VLDB executive. From 2005, he was an editor-in-chief of the VLDB Journal, one of the flagship journals of the database community, and a major contributor to the journal's great success in terms of citation rate and impact factor.

Dittrich was one of the early minds behind object-oriented databases and an ardent promoter of this influential technology. He co-authored the manifesto on object-oriented databases, a highly influential paper with more than 700 citations. He worked on important applications of object-oriented data management in computer-aided design and software engineering. Dittrich was very active in the research communities on both database systems and software engineering, and he was a strong and very successful advocate of interaction and cross-fertilization between these two communities.

2008 SIGMOD Best Paper Award

- *Serializable Isolation for Snapshot Databases.*
Michael Cahill, Uwe Roehm, and Alan Fekete
- *Scalable Network Distance Browsing in Spatial Databases.*
Hanan Samet, Jagan Sankaranarayanan, and Houman Alborzi

SIGMOD Test of Time Award

The ACM SIGMOD Test of Time Award recognizes the best paper from the SIGMOD proceedings 10 years prior (i.e., for 1998 the 1988 proceedings were consulted), based on the criterion of identifying the paper that has had the most impact (research, products, methodology) over the intervening decade. This paper is chosen by the SIGMOD Awards Committee.

2008 SIGMOD Test of Time Award

Integration of Heterogeneous Databases without Common Domains Using Queries Based on Textual Similarity

William W. Cohen (AT&T Labs-Research)

This landmark paper on data integration established the importance of data-driven (as opposed to schema-driven) methods, and opened up the important field of text-similarity joins. Prior to this paper, the literature on heterogeneous databases had focused on schema-centric approaches assuming a unified representation of individual entities. This work was the first database-research publication that addressed the entity-matching problem as a core issue of data integration. Its query-time approach to partial integration anticipated the modern notion of pay-as-you-go data-spaces.

SIGMOD Jim Gray Doctoral Dissertation Award

SIGMOD has established the annual SIGMOD Jim Gray Doctoral Dissertation Award to recognize excellent research by doctoral candidates in the database field. This award, which was previously known as the SIGMOD Doctoral Dissertation Award, was renamed in 2008 with the unanimous approval of ACM Council in honor of Dr. Jim Gray.

2008 SIGMOD Jim Gray Doctoral Dissertation Award

- *Winner:* Ariel Fuxman (advisor: Renee J. Miller), University of Toronto
- *Honorable Mentions:* Cong Yu (advisor: H. V. Jagadish), University of Michigan; Nilesh Dalvi (advisor: Dan Suciu), University of Washington.

2008 SIGMOD Undergraduate Awards

- Sanghoon Cha (Brown University, USA)
- Alexander G. Connor (University of Pittsburgh, USA) – **Best Poster Award**
- Alban Galland (University Telecom Paris Tech, France)
- Hongyu Gao (Peking University, China) – Poster Finalist
- Yoshishige Tsuji (Keio University, Japan) – Poster Finalist
- Sriram Vanama (Indian Institute of Technology, Madras, India)
- Eli Cortez C. Vilarinho (Universidade Federal Do Amazonas, Brazil) – Poster Finalist
- Yang Ye (Tsinghua University, China) – Poster Finalist

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