Dennis E. Shasha
Courant Institute of Mathematical Sciences, New York University
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Education
1984   Harvard University, Cambridge, Massachusettes. Ph.D., Mathematics
1980   Syracuse University, Syracuse, New York, M.S., Computer Science
1977   Yale University, New Haven, Conneticut, B.S., Engineering and Applied Science

Positions and Honors:
1984-1990   Assistant Professor, Courant Institute of Mathematical Sciences, New York University.
1990-1995   Associate Professor, Courant Institute of Mathematical Sciences, New York University.
1995-Present   Full Professor, Courant Institute of Mathematical Sciences, New York University.
1992-1993   Invited Professor, INRIA, Roquencourt, France.
1998-1999   Invited Professor, INRIA, Roquencourt, France.
2006-2007   Invited Professor, INRIA, Roquencourt, France.
1993-Present   Co-Editor-in-Chief (with Gottfried Vossen) of Information Systems. Publisher: Elsevier North Holland

Synergistic Activities:
Database tuning and design consulting for Wall Street companies, Bell Labs, ecommerce, and biotech companies (drug discovery). 1991-Present
Monthly puzzle column for editor Scientific American (www.sciam.com). 2001-Present
Distinguished Science Advisor, New York Hall of Science, one of 20. 2003-Present

List of Collaborators or Potential Collaborators:
I have collaborated with the following people during the last 48 months (or may collaborate with them due to a series editorship at Oxford for Genomics and Bioinformatics) in addition to those listed in the publications list: Michael Ashburner, David Botstein, Charles Cantor, Lee Hood, Minoru Kanehisa, Raju Kucherlapati, Gary Bader, Isidore Rigoutsos, Gregory Stephanopoulos, Martyn Amos, and Michael Rabin.

Names of Graduate and Post-Graduate Advisors and Advisees:
Dissertation advisor: Nathan Goodman

Advisees in the last 5 years (current affiliation is in parentheses):
Rosalba Giugno (Assistant Prof, Univ of Catania, Bioinformatics)
Alberto Lerner (Google Research)
Yunyue Zhu (Finance)
Aristotle Tsirigos (Bioinformatics, IBM)
Xiaojian Zhao (Finance)
Zhihua Wang (Ask.com)
Tyler Neylon (Google research)
Xin Zhang (Finance)

Selected Publications:
Dennis Shasha and Philippe Bonnet. "Database Tuning: Principles Experiments and Troubleshooting Techniques" (2002) *Morgan Kaufmann Publishers*, June 2002, ISBN 1-55860-753-6, Paper, 464 Pages.

Mitchell Levesque, Dennis Shasha, Wook Kim, Michael G Surette, and Philip N Benfey (2003) "Trait-To-Gene: A Computational Method for Predicting the Function of Uncharacterized Genes." **Current Biology**, vol. 13, 129-133.

Kenneth Birnbaum, Dennis E. Shasha, Jean Y. Wang, Jee W. Jung, Georgina M. Lambert, David W. Galbraith, and Philip N. Benfey (2003) "A gene expression map of the Arabidopsis root". **Science**, Dec 12 2003:1956-1960.

Rodrigo Gutierrez, Dennis Shasha, and Gloria Coruzzi (2005) "Systems Biology for the Virtual Plant" **Plant Physiology**, vol. 38, pp. 550-554.

Christopher S. Poultney, Rodrigo A. Gutirrez, Manpreet S. Katari, Miriam L. Gifford, W. Bradford Paley, Gloria M. Coruzzi and Dennis E. Shasha (2006) "Sungear: Interactive visualization and functional analysis of genomic datasets" **Bioinformatics**, doi:10.1093/bioinformatics/btl496.

A. Ferro, R. Giugno, G. Pigola, A. Pulvirenti, D. Skripin, G. D. Bader, D. Shasha (2007) "NetMatch: a Cytoscape Plugin for Searching Biological Networks" **Bioinformatics**, 23(7):910-912; doi:10.1093/bioinformatics/btm032

C. Research Support:

Title: Primitives for Online Time Series Analysis (NSF)
Role on project: PI   Project dates: 09/15/05 – 08/31/2008
This grant focuses on fast algorithms for correlation in very large time series.

Title: Arabidopsis 2010: High-Throughput Functional Analysis of Differentiation Network Genes (NSF)
Role on project: Co-PI   Project dates: 09/01/2005 – 08/31/2008
This grant focuses on finding redundant genes through machine learning. My role is in the development and specification of machine learning techniques.

Title: N2010: Nitrogen Networks in Plants (NSF)
Role on project: Co-PI   Project dates: 09/01/05 - 08/31/09
This grant concerns the analysis of genome wide responses to nitrogen treatments, and the use of machine learning and network analysis to make connections between all developmental and physiological processes that are regulated by nitrogen treatments.

Title: Genomics of Comparative Seed Evolution (NSF)
Role on project: Co-PI   Project dates: 10/01/04 - 09/30/09
This grant concerns using a phylogenomic approach to identify genes involved in the evolution of seeds.

Title: Conceptual Data Integration for the VirtualPlant (NSF)
Role on project: Co-PI   Project dates: 01/01/05 - 12/31/09
This grant concerns the construction of a web tool called the VirtualPlant that combines a host of features that will enable researchers to mine genomic data using visualization tools which enable analysis and integration of genomic data in a biological context, including networks.