**DENNIS E. SHASHA**

Courant Institute of Mathematical Sciences, New York University

**EDUCATION:**

Yale University B.S. Engineering and Applied Science 1977

Syracuse University M.S. Computer Science 1980

Harvard University Ph.D. Applied Mathematics 1984

**APPOINTMENTS:**

**1995 - Present Full Professor, Courant Institute of Mathematical Sciences, New York University**

**1990 - 1995 Associate Professor, Courant Institute of Mathematical Sciences, New York University**

**1984 - 1990 Assistant Professor, Courant Institute of Mathematical Sciences, New York University**

**1993 - Present Co-Editor-in-Chief (with Gottfried Vossen) of Information Systems, Publisher: Elsevier North Holland**

**2006 - 2007 Invited Professor, INRIA, Roquencourt, France**

**1998 - 1999 Invited Professor, INRIA, Roquencourt, France**

**1992 - 1993 Invited Professor, INRIA, Roquencourt, France**

**5 PUBLICATIONS RELATED TO THIS PROPOSAL:**

``Nitrogen economics of root foraging: Transitive closure of

the nitrate-cytokinin relay and distinct systemic signaling for

N supply vs. demand.''

Sandrine Ruffel, Gabriel Krouk, Daniel Ristova, Dennis Shasha,

Kenneth Birnbaum, and Gloria Coruzzi,

Proc U.S. National Academy of Science November 8, 2011Krouk G, Mirowski P, LeCun Y, Shasha D and Coruzzi G (2010) “Predictive network modeling of the high-resolution dynamic plant transcriptome in response to nitrate.” *Genome Biology,* 11(12):

R123.

Katari MS, Nowicki SD, Aceituno FF, Nero D, Kelfer J, Thompson LP, Cabello JM, Davidson RS, Goldberg AP, Shasha DE, Coruzzi GM, and Gutierrez RA (2009) "VirtualPlant: a software platform to support system biology research" *Plant Physiology* 152 (2):500-515.

Krouk G, Tranchina D, Lejay L, Cruikshank A, Shasha D, Coruzzi G, Gutierrez R (2009) ‘’ A systems approach uncovers restrictions for signal interactions regulating genome-wide responses to nutritional cues in Arabidopsis. ‘' *PloS Comp Biol,.* 5(3):e1000326. (Highly Accessed).

Poultney CS, Gutirrez RA, Katari MS, Gifford ML, Paley WB, Coruzzi GM and Shasha DE (2006) “Sungear: Interactive visualization and functional analysis of genomic datasets" *Bioinformatics*, 23(2):259-61, doi:10.1093/bioinformatics/btl496.

**5 OTHER SIGNIFICANT PUBLICATIONS:**

``Rational design of temperature-sensitive alleles

using computational structure prediction.''

Christopher S. Poultney, Glenn L. Butterfoss, Michelle R. Gutwein, Kevin

Drew, David Gresham, Kristin C. Gunsalus, Dennis E. Shasha, Richard

Bonneau.

PLoS ONE 6(9): e23947. doi:10.1371/journal.pone.0023947

Chang J and Shasha D (2011) *Stored Clocked Programs Inside DNA: a simplifying framework for Nanocomputing,* Morgan and Claypool, 66 pages.

Chen HW, Bandyopadhyay S, Shasha DE, and Birnbaum KD (2010)``Estimation of genome-wide redundancy in Arabidopsis thaliana.” *BMC Evolutionary Biology*, 10:357; doi:10.1186/1471-2148-10-357.

Regorgiato D, Gutierrez R, and Shasha D (2008) “GraphClust: A Method for Clustering Databases of Graphs” *Journal of Information and Knowledge Management (JIKM)*, 7(4):231 – 241.

Birnbaum K, Shasha DE, Wang JY, Jung JW, Lambert GM, Galbraith DW and Benfey PN (2003) "A gene expression map of the Arabidopsis root" *Science*, 302(5652):1956-1960   
doi: 10.1126/science.1090022.

**SYNERGISTIC ACTIVITIES:**

Database tuning and design consulting for internet companies, Bell Labs, ecommerce, and biotech companies (drug discovery). 1991-Present

Distinguished Science Advisor, New York Hall of Science, one of 20. 2003-Present

**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.

**GRADUATE ADVISOR AND POSTDOCTORAL SPONSOR:**

Dissertation Advisor: Nathan Goodman, Institute for Systems Biology, Seattle Washington

**THESIS ADVISOR AND POSTGRADUATE SCHOLAR SPONSOR:**

Advisees in the last 5 years (current affiliation is in parentheses):

Aristotle Tsirigos (Bioinformatics, IBM)

Xiaojian Zhao (Finance)

Zhihua Wang (Ask.com)

Tyler Neylon (Founder of data analysis startup)

Xin Zhang (Finance)   
Chris Poultney (Bioinformatics, researcher Sloan Kettering)  
Huang-Wen Chen (Bioinformatics, post-doc)