

John R. Gilbert
Professor of Computer Science
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Research interests:

Combinatorial scientific computing, numerical linear algebra, graph algorithms, sparse matrix methods, mathematical software, high-performance computing.

Experience:

- University of California, Santa Barbara. Professor of Computer Science, since 2002.
- Lawrence Berkeley National Laboratory. Faculty Scientist, since 2004.
- Massachusetts Institute of Technology. Visiting Scientist, Laboratory for Computer Science and Mathematics Department, 2002-2003 and 2008.
- Xerox Palo Alto Research Center. Principal Scientist, Area Manager, and Member of Research Staff, 1988-2002.
- University of Bergen (Norway). Adjunct Professor of Computer Science, 1987-1989.
- University of Iceland. Visiting Professor of Mathematics, 1985.
- Cornell University. Associate Professor of Computer Science, 1986-1988. Assistant Professor of Computer Science, 1981-1986.

Education:

- Stanford University. Ph.D., Computer Science, 1981.
- University of New Mexico. B.U.S., summa cum laude in Mathematics, 1973.

Honors and Awards:

- John and Fannie Hertz Foundation Fellow, 1978.
- George Forsythe Memorial Award for Teaching, Stanford University, 1978.
- National Science Foundation Presidential Young Investigator, 1985.
- Distinguished Centennial Alumnus, University of New Mexico, 1989.
- Hanes-Willis Visiting Professorship of Computer Science, U. of North Carolina, 1997.
- Several Xerox Corporation awards for research and for management, 1990-2001.
- MIT 50K Entrepreneur Competition: Software Category Award, 2003.
- Fellow of the Society for Industrial and Applied Mathematics, 2010.

Selected Consulting and Advisory Boards:

- External Advisory Boards (2), Sandia National Laboratories, 2008-2013.
- No-fee consultant, MIT Lincoln Laboratory, since 2008.
- Consultant, Silicon Graphics Inc., 2004-2006.
- Advisory Board, Interactive Supercomputing Inc. 2004-2008.
- Defense Science Board Task Force on Critical Technologies, 2005.
- Consultant, Institute for Defense Analyses, since 2001.
- NRC Assessment Board on the NIST Information Technology Laboratory, 1998-2003.
Mathematics Panel Chair, 2002-2003.

Selected Professional Activities:

- Program Chair, 6th Conf. on PGAS Programming Models, 2012.
- Conference Co-chair, SIAM Symposium on Parallel Processing, 2008.
- Chair, SIAM Activity Group on Supercomputing, 2006-2007.
- Editorial Board, SIAM Review, 2004-2006.
- Editorial Board, SIAM Fundamentals of Algorithms book series, 2004-2006.
- Co-organizer, SIAM Workshop on Combinatorial Scientific Computing, 2004 & 2005.
- Member, SIAM Council, 1997-2003.
- Editorial Board, ACM Transactions on Mathematical Software, 1994-1998.
- Program Director, SIAM Activity Group on Linear Algebra, 1992-1997.
- Chair, ACM Special Interest Group for Numerical Mathematics, 1993-1997. Board Member, 1989-1993.
- Editorial Board, SIAM Journal on Matrix Analysis and Applications, 1988-1992.
- Editorial Board, SIAM Journal on Algebraic and Discrete Methods, 1984-1987.

Ph.D. Theses Supervised:

- Anders Edenbrandt. *Combinatorial Problems in Matrix Computation*. Ph.D. 1985, Cornell.
- Raimund Seidel. *Output-Size Sensitive Algorithms for Constructive Problems in Computational Geometry*. Ph.D. 1987, Cornell. Now at Universität des Saarlandes, Saarbrücken, Germany.
- Earl Zmijewski. *Sparse Cholesky Factorization on a Multiprocessor*. Ph.D. 1987, Cornell. Now at Renesys Corp., Boston.
- Hjalmltyr Hafsteinsson. *Highly Parallel Algorithms for Sparse Matrix Computation*. Ph.D. 1988, Cornell. Now at University of Iceland, Reykjavik.
- Viral Shah. *An Interactive System for Combinatorial Scientific Computing with an Emphasis on Programmer Productivity*. Ph.D. 2007, UCSB. Now at Unique Identification Authority of India.
- Imran Patel. *Empirical Evaluation of Software Development Productivity in High-Performance Computing*. Ph.D. 2008, UCSB. Now at amazon.com.
- Vikram Aggarwal. *A Parallel Preconditioner for Octree Meshes*. Ph.D. 2008, UCSB. Now at Google.
- Aydın Buluç. *Linear Algebraic Primitives for Parallel Computing on Large Graphs*. Ph.D. 2010, UCSB. Now at Lawrence Berkeley National Lab.

Postdoctoral Scholars Supervised:

- David Eppstein, Xerox PARC, 1989-1990. Now at University of California, Irvine.
- Shang-Hua Teng, Xerox PARC, 1991-1992. Now at University of Southern California.
- Nabil Kahale, Xerox PARC, 1992-1993. Now at ESCP Europe, Paris.
- Annamaria Amenta, Xerox PARC, 1993-1995. Now at University of California, Davis.
- Sivan Toledo, Xerox PARC, 1996-1998. Now at Tel-Aviv University, Israel.

Publications: See list at cs.ucsb.edu/~gilbert