

LENORE BLUM

PROFESSIONAL PREPARATION

- Carnegie Institute of Technology (1959-1961); Simmons College, Mathematics, BS, 1963.
- MIT, Mathematics, PhD, 1968.
- UC Berkeley, Mathematics, Postdoctoral Fellow, 1968-1969.
- Mills College, Doctor of Laws, honoris causa, 1999.

APPOINTMENTS

- Distinguished Career Professor of Computer Science, Carnegie-Mellon University, Pittsburgh PA, 1999- present.
- Founding Director, Project Olympus, Carnegie Mellon, 2007-present
- Co-Director/Co-PI, the NSF-ALADDIN Center for ALgorithm ADaptation Dissemination and Integration, Carnegie Mellon, 2000-present.
- Founder, Faculty Advisor, Women@SCS, 1999-present, Women@IT, 2003-present.
- PI/Co-Director, CS4HS, 2006-present
- Visiting Professor, Department of Mathematics, City University of Hong Kong, 1996-1998.
- Deputy Director, Mathematical Sciences Research Institute (MSRI), Berkeley CA, 1992-1997.
- Visiting Scientist, IBM T.J. Watson Research Center, Yorktown Heights NY, Fall 1987.
- NSF (VPW) Visiting Prof, Department of Mathematics, Graduate Center, CUNY, 1984-85.
- Research Scientist, International Computer Science Institute, Berkeley CA, 1988-2000.
- Mills College, Oakland, CA, 1973-96: Head/Co-Head and Founder, Dept. of Mathematics and Computer Science, 1974-87; Letts-Villard Chair and Research Professor, 1979-96.
- University of California, Berkeley, 1968-2000: AFOSR Postdoctoral Fellow, Lecturer, Research Associate, Department of Mathematics.

PUBLICATIONS

Publication: Mathematics/Computer Science (selected)

- L. Blum, M. Blum and M. Shub, "A Simple Secure Pseudo-Random Number Generator," *SIAM Journal of Computing*, Vol. 15, No. 2, 364-383, May 1986.
- L. Blum, "A New Simple Homotopy Algorithm for Linear Programming I," *Journal of Complexity*, Vol.4, No.2, 124-136, June 1988.
- L. Blum, M. Shub, S. Smale, "On a Theory of Computation Over the Real Numbers; NP Completeness, Recursive Functions and Universal Machines," FOCS; 88; *Bulletin of the AMS*, Vol. 21, No.1, 1-46, July 1989.
- L. Blum, F. Cucker, M. Shub, S. Smale, *Complexity and Real Computation*, Springer-Verlag, 1998.
- L. Blum, "Computing over the Reals, Where Turing Meets Newton," *Notices of the AMS*, Oct.r, 2004.

Publications: Increasing the Participation of Women in STEM (selected)

- L. Blum, S. Givant, "Increasing the Participation of Women in Math-Based Fields: A Collegiate Program," *American Mathematical Monthly*, Vol.87, No.10, Dec. 1980.
- L. Blum, C Frieze, "Building an Effective Computer Science Student Organization: the Carnegie Mellon Women@SCS Action Plan," *Inroads*, SIGCSE Bulletin, Special Issue, *Women and Computing*, vol. 34, No. 2, June 2002, pp 74-78.
- L. Blum, "Women in Computer Science: The Carnegie Mellon Experience," *The Innovative University*, eds. Daniel P. Resnick, Dana Scott, Carnegie Mellon University Press, 2003.
- L. Blum, C. Frieze, "The Evolving Culture of Computing: Similarity is the Difference," *Frontiers*, Volume 26, Number 1, 2005, pp 110-125.
- L.Blum, C. Frieze, O. Hazzan, M.B. Dias, "A Cultural Perspective on Gender Diversity in Computing," *Reconfiguring the Firewall: Recruiting Women to Information Technology across Cultures and Continents* eds. C.J. Burger, E. G. Creamer, and P. S. Meszaros, AK Peters, 2007.

SYNERGISTIC ACTIVITIES

Professional Service/Awards

- Catalyst Award, Carnegie Science Center, 2009
- Presidential Award for Excellence in Science, Math, Engineering Mentoring (PAESMEM 04)
- President, Association for Women in Mathematics (AWM), 1975-1978.
- Founding Co-Director, Math/Science Network & *Expanding Your Horizons* Conferences, 1975 (Expanding Your Horizons Network won the 2009 National Science Board Public Service Award)
- Member, NSF Committee on Equal Opportunity in Science and Technology (CEOST), 1985-86.
- Vice-President, American Mathematical Society (AMS), 1990-93.
- AMS representative to the Third Pan African Congress of Mathematicians, Nairobi, 1991.
- US Delegate, International Mathematics Union, Kobe, 1990.
- Chair, Math Section, American Association for the Advancement of Science (AAAS), 1998-99.
- Chair, AMS National Meetings Program Committee, 2004 (for 2005 meeting).
- Review Committee, CS graduate program, University of Illinois at Chicago, May 2004.
- Visiting Committee, Mathematics Department, M.I.T, 2006-2012.
- Charter member and Board member, TiE Pittsburgh, 2009-2012.

Invited Addresses (Computing over the Reals)

- American Mathematical Society Annual Meeting, Phoenix, January 1989.
- International Congress of Mathematicians, Kyoto, August 1990.
- Fifth Asian Logic Conference, Singapore, June 1993.
- European Logic Colloquium, Clermont-Ferand, France, July 1994.
- Mathematical Association of America Annual Meeting, San Francisco, January 1995.
- European Logic Colloquium 2000 (tutorial), Sorbonne, Paris, France, July 2000.
- Noether Lecture, Joint Mathematics Meetings, San Diego, January 2001.
- Institute for Advanced Study, June 2000.
- *Computing in the 21st Century*, Beijing and Guang Zhou, China, October 2002.
- Kurt Godel Society, Vienna, Austria, May 2006.
- European Women in Mathematics, Cambridge University, Cambridge, England, September 2007
- Mathematical Association of America, Annual Meeting, San Francisco, January 2010
- Many Computer Science Departments.

Invited Addresses (Women in CS: *Transforming the Culture of Computing*)

- *Future Opportunities Generated by Diversity in Higher Education and Training*, Munich, Feb., 2002.
- Computer Science and Telecommunications Board (CSTB), Washington DC, September, 2002.
- Anita Borg Lecture Series, Microsoft Research, June 2003.
- Dean's Lecture Series, Rochester Institute of Technology, December 2003.
- *National Symposium on the Advancement of Women in Science*, Harvard University, April 2003.
- Leadership Conference, Association for Women in Mathematics, U. of Maryland, March 2004.
- Educational Testing Service, Addressing Achievement Gaps Symposium, May 2005.
- Many Computer Science Departments.

COLLABORATORS AND OTHER AFFILIATIONS

Thesis Advisor: Gerald Sacks. **Interdisciplinary CS Masters Student at Mills:** Margo Nanny, "The Mathmagic Lab: An Interactive Video Software, Design for Education," May 1987. **PhD Students helped advise at UC Berkeley:** Daniel Andler, 1972 (with R. Vaught); Feng Gao, 1998, Michael Hirsch, 1990, Edward Bishop, 1991 (with S. Smale); Rose St. John, 1995 (with L. Harrington); Thomas Emerson, 1995 (with M. Davis). **PhD Thesis Committees at Carnegie Mellon:** Andrej Bauer, September 2000 (Computer Science); Monica VanDieren, April 2002 (Mathematics); PhD student: Carol Frieze, May 2007 (Computer Science). **Collaborators:** S. Smale; M. Shub; F. Cucker; C. Frieze, O. Hazzan, M. B. Dias, T. Cortina, J. Gal-Ezer.