ROGER E. BOHN

Curriculum Vitae

School of International Relations and Pacific Studies
University of California, San Diego
La Jolla, CA 92093-0519
Mobile (preferred): (619) 995-5630   Rbohn@UCSD.edu

Academic Employment

2007-2008 **Massachusetts Institute of Technology** Visiting professor of Technology, Innovation, and Entrepreneurship, at the Sloan School of Management, MIT. Researching the evolution of technology from craft to science.

2006-2007 **Boston University School of Management** Visiting Scholar. Conducting research.

1991 –2006, 2008 - present
University of California at San Diego, *School of International Relations and Pacific Studies*, San Diego, California. Professor of Management. Director, *Global Information Industry Center*. Total grant funding over $5 million, from Alfred P. Sloan Foundation, NSF, others.

1990-1991 **Massachusetts Institute of Technology,** *Center for Technology, Policy, and Industrial Development*, and *Sloan School of Management*, Cambridge, Massachusetts. Visiting Scholar.

1982-1990 **Harvard Business School,** Boston, Massachusetts. Assistant Professor of Technology and Operations Management.

Various Teaching in graduate and executive programs at Oxford University, Melbourne Business School, Rady School of Management (UCSD), and others.

Education

Ph.D. **Massachusetts Institute of Technology,** *Sloan School of Management*, 1982. Ph.D. in Management. Major field in applied economics; minor in finance. Dissertation on spot pricing of electricity, combining electrical engineering, economics and public policy.

B.A.   Harvard College, 1976.
B.A. in Applied Mathematics, summa cum laude. Phi Beta Kappa.
Senior thesis on peasant agriculture in Bangladesh. Varsity lightweight crew.

Publications (partial list)

"From Art to Science in Manufacturing: The Evolution of Technological Knowledge," *Foundations and Trends in Technology, Information and Operations Management*, Vol. 1 Issue 2, pp. 1-82. Also at: http://repositories.cdlib.org/postprints/808/

 "Setup Time Reduction for Electronics Assembly: Combining Simple (SMED) and Sophisticated Methods," (with S. Trovinger), *Production and Operations Management*, Vol 14 Issue 2, 2005, pp 205-207.

 "International Product Transfer And Production Ramp-Up: A Case Study From The Data Storage Industry." (with Christian Terwiesch and K. Chea) *R & D Management*, Volume 31, Issue 4, (Oct 2001), pp. 435-452.

"Learning and Process Improvement during Production Ramp-up." (with Christian Terwiesch) *International Journal of Production Economics*, Vol. 70, Issue 1; (March 3, 2001), pp. 1- 19.

"Globalization of Production: Insights from the Hard Disk Drive Industry." (with Peter Gourevitch and David McKendrick) *World Development*, Volume 28, Issue 2, (2000), pp. 301-317.

"Stop Fighting Fires." *Harvard Business Review* , Volume 78, Issue 4, (2000), pp. 82-91.

"The Low-Profit Trap in Hard Disk Drives, and How to Get out of It." *Insight*, (March/April 2000), pp. 6-10.

"The Lucrative Marketing of Meaningless Improvements." *Data Storage*, (January 2000), Volume 7, Number 4.

"The Economics of Yield-Driven Processes." (with Christian Terwiesch) *Journal of Operations Management*, Volume 18, Issue 1, (December 1999) pp. 41-59. Working paper at HYPERLINK "http://isic.ucsd.edu/papers/yield.shtml"

"Report on Market Issues in the California Power Exchange Energy Markets,"(August 1998) Report to FERC,

"Globalization of Disk Drive Manufacturing: What and Where,"(1997) Bohn, R.E., P. Gourevitch and D. McKendrick. *Insight*, Vol. 10, No. 4, July/August 1997.

"From San Jose to Singapore: Global Portrait of an Industry", Bohn, R.E. and P. Gourevitch, *Data Storage*; Vol. 33 No. 2; July/August 1997.

"The Impact of Process Noise on VLSI Process Improvement," Bohn, R.E.*IEEE Transactions on Semiconductor Manufacturing*, Vol. 8 No. 3, August 1995, pp 228-238. Working paper partial version at: HYPERLINK "http://isic.ucsd.edu/papers/ processnoise.shtml"

"Noise and Learning in Semiconductor Manufacturing," Bohn, R.E. *Management Science*, Vol. 41 No. 1, January 1995, pp. 31-42. Working paper partial version at: HYPERLINK "http://isic.ucsd.edu/noiselearning.html"

"Measuring and Managing Technological Knowledge," Bohn, R.E. *Sloan Management Review*, Vol. 36 No. 1, Fall 1994, pp. 61-73. Various reprints.

"Mitigating the Coming Internet Crunch: Multiple Service Levels via Precedence," Bohn, R. E., H. W. Braun, K. Claffy, and S. Wolff, *Journal of High Speed Networks*, Vol. 3 No. 4, 1994, pp. 335-49**.** Working paper at HYPERLINK "http://www.nlanr.net/Papers/ precedence/"

"Sizing of Electric Thermal Storage Under Real Time Pricing" Bohn, R.E. and B. Daryanian, *IEEE Transactions on Power Systems*, Vol. 8 No. 1, February 1993, pp. 35-43.

"A Dynamic Approach to Operations Management: An Alternative to Static Optimization" Bohn, R.E. and R. Jaikumar, *International Journal of Production Economics*, Vol. 27 No. 3, October 1992, pp. 265-282. Working paper at HYPERLINK "http://isic.ucsd.edu/ dynamicapproach.shtml"

"Optimal Spot Pricing: Practice and Theory" Bohn, R.E. and M. Caramanis and F. Schweppe, *IEEE Transactions on Power Apparatus and Systems*, Vol. PAS-101 No. 9, Sept. 1992,
pp. 3234-3245.

"An Experiment in Real Time Pricing for Control of Electric Thermal Storage Systems" Bohn, R.E. B. Daryanian and R. Tabors, *IEEE Transactions on Power Systems*; Vol. 6 No. 4, November 1991; pp. 1356-1365.

"Beating Murphy's Law" (with W. B. Chew and D. Leonard-Barton), *Sloan Management Review*, Vol. 32 No. 3, Spring 1991.

"Optimal Demand-Side Response to Electricity Spot Prices for Storage-Type Customers" Bohn, R.E. B. Daryanian and R. Tabors, *IEEE Transactions on Power Systems*; Vol. 4 No. 3; August 1989; pp. 897-903.

"System Security Control and Optimal Pricing of Electricity" Bohn, R.E. and M. Caramanis and F. Schweppe, *Electrical Power & Energy Systems*; Vol. 9 No. 4, October 1987; pp. 217-224.

"The Costs of Wheeling and Optimal Wheeling Rates" Bohn, R.E. and M. Caramanis and F. Schweppe, *IEEE Transactions on Power Systems*; Vol. PWRS-1 No. 1, February 1986; pp. 63-73.

"Implications of Cost-Service Trade-offs in Industry Logistics Structures" Bohn, R.E., D. Rosenfield and R. Shapiro, *Interfaces*; Vol. 15 No. 6, Nov.-Dec. 1985; pp. 47-59.

"Wheeling Rates: An Economic-Engineering Foundation". Bohn, R.E., F. Schweppe and M. Caramanis . *MIT Technical Report* TR 85-005; September 1985

"Optimal Pricing in Electrical Networks Over Space and Time", Bohn, R.E., M. Caramanis and F. Schweppe. *The Rand Journal of Economics*, Vol. 15 No. 3, Autumn 1984; pp. 360-376.

"Deregulating the Generation of Electricity Through the Creation of Spot Markets for Bulk Power" Bohn, R.E., B. Golub, F. Schweppe, and R. Tabors, *The Energy Journal*, Vol. 5 No. 2, 1984, pp. 71-91.

Books

Bohn, Roger and Ramchandran Jaikumar, *From Filing and Fitting to Flexible Manufacturing*. Hanover, Mass.: now Publishers, 2005.

Spot Pricing of Electricity F. Schweppe, M. Caramanis, R. Tabors, R. Bohn, Kluwer Academic Press, 1988.

Book Chapters

"Real Time Pricing: Bringing Added Value to Utility Programs", Bahman Daryanian, Richard D. Tabors, and Roger E. Bohn, in *Service Opportunities for Electric Utilities: Creating Differentiated Products*, ed. Shmuel S. Oren and Stephen A. Smith. Norwell, MA: Kluwer Academic Publishers, 1993

"Socially Responsive Buildings: Real-Time Control of Storage HVAC Systems," chapter in *Energy and the Environment in the 21st Century*, Jefferson Tester editor, The MIT Press, 1991.

"The Development of Intelligent Systems for Industrial Use: An Empirical Investigation" (with R. Jaikumar) in *Research on Technological Innovation, Management, and Policy*, Vol. 3, pp. 213-262, edited by Richard Rosenbloom (Greenwich, CT: JAI Press Inc., 1986).

"The Development of Intelligent Systems for Industrial Use: A Conceptual Framework" (with R. Jaikumar) in *Research on Technological Innovation, Management, and Policy*, Vol. 3, pp. 169-211, edited by Richard Rosenbloom (Greenwich, CT: JAI Press Inc., 1986).

"An Approach for Deregulating the Generation of Electricity" (with B. Golub, R. Tabors, and F. Schweppe), Chapter 5 in *Electric Power Strategic Issues*, J. Plummer et al., editors, Public Utility Reports, Inc., 1983.

"Using Spot Pricing to Coordinate Deregulated Utilities, Customers, and Generators" (with F. Schweppe and R. Tabors), Chapter 13 in *Electric Power Strategic Issues*, J. Plummer et al., editors, Public Utility Reports, Inc., 1983.

Professional Activities

Referee   for various journals, including *Management Science*; *Harvard Business Review*; *IEEE Transactions on Systems, Man, and Cybernetics*; *IEEE Transactions on Engineering Management*; *National Science Foundation*; *Operations Research; Oxford University Press, Robotics and Computer Integrated Manufacturing; The Energy Journal*.

Editorial   *IEEE Transactions on Engineering Management*
Board   *Foundations and Trends in Technology, Information and Operations Management*

Board of   NP Strategies Inc., San Diego (Nonprofit consulting)
Directors

Member   Institute of Electrical and Electronics Engineers (IEEE)
                 Institute for Operations Research and Management Science (INFORMS)

Consulting Summary

Client type	Main areas of consulting
Intel-AMD litigation	Expert testimony on semiconductor manufacturing
Semiconductor DRAM litigation	DRAM technology; personal computer technology and industry characteristics (expert witness)
International Electronics Manufac. Initiative (iNEMI)	Participate in roadmap development for data storage. (Unpaid contributor to this international activity.)
Large semiconductor/ electronics	Organization of product development activities

Small electronics company	Manufacturing improvement
High-tech startup	Business plan
Energy consulting	Principal, Tabors Caramanis and Associates (1990s)
Electronic components	Manufacturing trouble-shooting
Large manufacturing	Manufacturing improvement
Medium-sized Semiconductor	Various, including manufacturing trouble-shooting, product development, process control, in-house teaching
Steel products	Manufacturing, process development. (Several companies in Europe and Mexico)
Wood products	Strategy and manufacturing
Large semiconductor	Manufacturing improvement, process control (unpaid)

Roger Bohn   October 2009