

**SARA L. BECKMAN**

Haas School of Business  
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University of California, Berkeley  
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**Education**           Stanford University, Doctor of Philosophy, Department of Industrial Engineering and Engineering Management, December 1986.  
Doctoral Dissertation: "Manufacturing Flexibility and Organizational Structure"  
Committee: James V. Jucker, Robert I. Sutton, Warren H. Hausman  
A model of the achievement of flexibility by a manufacturing organization with empirical data from Hewlett-Packard's manufacturing sites.

Stanford University, Master of Science, Statistics, June 1985.

Stanford University, Master of Science, Industrial Engineering and Engineering Management, June 1978.

Stanford University, Bachelor of Science with Distinction, Industrial Engineering, June 1978.

**Academic Honors**       Phi Beta Kappa, 1977.  
Tau Beta Pi, 1977.

**Research and Teaching Experience**   **Haas School of Business, University of California Berkeley**  
**September 1988 to present**  
*Senior Lecturer with Security of Employment, July 2002 to present*  
*Lecturer with Security of Employment, July 1994 to July 2002*  
*Director, Management of Technology Program, July 1991 to July 1997*  
*Assistant Professor, Management Science, July 1988 to July 1994*  
Teaching operations management and new product design and development to MBA students in day and evening programs as well as to executive program participants. Researching issues in innovation management, environmental supply chain management and operations strategy. Teaching highlights:

- Taught annually in Berkeley Executive Program (1990 – present)
- Launched course on "design thinking" (2006)
- Earl F. Cheit Award for Excellence in Teaching, MBA Program (2003)
- UC Berkeley Campus-Wide Distinguished Teaching Award (2001)
- Launched cross-disciplinary course on managing the new product development process (1996)
- Founded Berkeley Software Forum for software development organizations to discuss product definition and development issues (1995-96)
- Launched course on entrepreneurship in biotechnology (1995-96)
- Earl F. Cheit Award for Excellence in Teaching, MBA Program (1992)
- Launched course on design as a strategic business issue (1990)
- Earl F. Cheit Award for Excellence in Teaching, MBA Program (1990)
- Earl F. Cheit Award for Excellence in Teaching, Evening MBA Program (1990)

**Sloan School of Management, Massachusetts Institute of Technology  
1994, 1999, and ongoing thesis supervision**

*Leaders for Manufacturing Masters Thesis Advisor, 1999 to present*

*Visiting Senior Lecturer, Spring 1999*

*Visiting Assistant Professor, Operations Management, Spring 1994*

Teaching introductory operations management and operations strategy courses to MBA and Leaders for Manufacturing students. Thesis supervisor for field research on operations and product development issues.

**Department of Industrial Engineering and Engineering Management,  
Stanford University**

**September 1978 to September 1985**

*Research Assistant, January 1985 to September 1985*

*Teaching Assistant, September 1984 to April 1985, January 1984 to June 1984,  
September 1977 to June 1978*

*Teaching Fellow, September 1978 to June 1980*

Collecting and analyzing data for research on the characteristics of the learning curve in aerospace companies. Undergraduate advising; teaching and grading in courses on computer utilization, problem solving, organizational behavior, financial decision-making, industrial marketing and manufacturing strategy. Instructed a required course on "Utilization of Computers."

**Professional  
Experience**

**Hewlett-Packard Company**, November 1991 to January 1993.

Organizational Learning Champion, Software Reuse Department, HP Labs. Assisted HPLabs in organizational transformation project. Conducted research on product definition and new product development activities in software development organizations.

Hewlett-Packard Company, November 1989 to November 1991.

Director, Product Generation Change Management Team.

Managed consulting services in organizational design, manufacturing education and training and strategic planning and modeling along with company-wide environmental, health and safety function.

Hewlett-Packard Company, February 1989 to November 1989.

Manager, Surface Mount Technology Program.

Managed rollout of centrally developed standard surface mount assembly processes to HP sites worldwide. Controlled capacity and site location, parts standardization programs.

Hewlett-Packard Company, February 1986 to February 1989.

Program Manager, Corporate Manufacturing

Developed long-term manufacturing strategy on a corporate-wide basis. Focus on plant location issues, including international. Prepared a process costing model to evolve into a process cost accounting system.

Hewlett-Packard Company, June 1985 to February 1986.

Strategic Planner, Data Systems Division.

Strategy development and competitive analysis for computer business.

Management Consultant, Self-employed, January 1984 to August 1984, January 1985 to June 1985.

Long-range manufacturing planning, business divestment planning, manufacturing systems acquisition and implementation.

**Booz, Allen & Hamilton, Inc.**, August 1980 to December 1983.  
Management consulting in the Operations Management Services practice.

**Publications  
(since 1990)**

Beckman, Sara L., Lora Oehlberg and Caneel Joyce, "Reflections on Teaching Design Thinking in a Cross-Disciplinary Setting," *Advances in Appreciative Inquiry*, Vol. 4, "Positive Design and Appreciative Construction: From Sustainable Development to Sustainable Value" (forthcoming)

Roschuni, Celeste, Lora Oehlberg, Alice Agogino and Sara Beckman, "Relationship Conflict and Feeling Communications in Design Teams", Proceedings of the ASME 2009 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference, IDETC/CIE 2009, August 30 – September 2, 2009, San Diego, CA U.S.A., DETC2009-87626

Oehlberg, Lora, Alice Agogino and Sara Beckman, "Framing Sustainability in Human-centered Product Design," Proceedings of the ASME 2009 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference, IDETC/CIE 2009, August 30 – September 2, 2009, San Diego, CA U.S.A.

Gil, Nuno and Sara Beckman, "Infrastructure Meets Business: Building New Bridges, Mending Old Ones," *California Management Review*, Vol. 51, No. 2, Winter 2009

Beckman, Sara L. and Michael Barry, "Defining Brand and User Experience through Storytelling," *The Handbook of Technology Management*, 3 Volume Set, Hossein Bidgoli, Editor-in-Chief, Copyright © John Wiley & Sons, Inc., 2009, Hoboken, N.J, 07030 (forthcoming)

Beckman Sara L. and Peter Lawrence, "Designing Workplaces to Support Creativity and Innovation," *The Handbook of Technology Management*, 3 Volume Set, Hossein Bidgoli, Editor-in-Chief, Copyright © John Wiley & Sons, Inc., 2009, Hoboken, N.J, 07030 (forthcoming)

Beckman, Sara L. and Nathan Shedroff, "Designing Sustainable Solutions: Frameworks and Tools for Considering Sustainability Issues in New Product Development," *The Handbook of Technology Management*, 3 Volume Set, Hossein Bidgoli, Editor-in-Chief, Copyright © John Wiley & Sons, Inc., 2009, Hoboken, N.J, 07030 (forthcoming)

Hey, J. H. G., Joyce, C. K., Beckman, S. L., "Framing innovation: negotiating shared frames during early design phases," *Journal of Design Research*, JDR, Undersciences, Vol. 6. Nos. 1-2, pp. 79-99, 2007. ISSN 1748-3050. Special Issue on Fostering Creativity and Innovation during Early Informal Design Phases: Sociotechnical and psychology studies

Gil, N., Beckman, S., and Tommelein, I. (2006). "UPSTREAM PROBLEM-solving under UNCERTAINTY AND AMBIGUITY: EVIDENCE FROM AIRPORT EXPANSION PROJECTS" In review

Gil, N., Beckman, S., and Tether, B. (2006). " User Involvement in Infrastructure Development Projects: How to make it work?" In progress.

C.L. Cobb, A.M. Agogino, S. L. Beckman, L. Speer, "Enabling and Characterizing Twenty-First Century Skills in New Product Development Teams," Under Review for International Journal of Engineering Education (IJEE), Special Issue from the 2007 Mudd Design Workshop VI.

Agogino, A.M., S.L. Beckman, V. Borja, M. Lopez, N. Shedroff and A.C. Ramirez, "Teaching Multinational, Multidisciplinary Sustainable Product Development," Proceedings of the ASME 2008 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference, IDETC/CIE 2008, August 3-6, 2008, Brooklyn, New York, U.S.A

Beckman, S.L. and M. Barry, "Innovation as a Learning Process: Embedding Design Thinking," *California Management Review*, Fall 2007, Volume 50, Number 1. Winner of the Accenture Paper of the Year Award.

Cobb, Corie L., Agogino, Alice M., Beckman, Sara L., Speer, Leslie, "Enabling and Characterizing Twenty-First Century Skills in New Product Development Teams," *International Journal of Engineering Education*, 24(2): 420-433, March 2008.

Nuno Gil, Sara Beckman and Iris Tommelein, Problem-Solving Base Building Under Uncertainty and Ambiguity: Multiple-Case Study on an Airport Expansion Programme, ASCE Manuscript Number: CO/2006/023664  
Beckman, Sara L. and Donald B. Rosenfield, Operations Strategy: Competing in the 21<sup>st</sup> Century, McGraw-Hill Irwin, New York: New York, 2008.

Gil, N. and Beckman, S. (2007). "Design Reuse and Buffers in High-tech Infrastructure Development: A Stakeholder Perspective," *IEEE Transactions on Engineering Management*, 54 (3) 484-497.

Gil, N., Beckman, S., and Tommelein, I. (2007). "Operationalizing the Open Building Approach in the Management of Large-scale Engineering Projects." Chapter in *Open Building Manufacturing: Core Concepts and Industrial Requirements*, ManuBuild. Kazi, A.S., Hannus, M., Boudjabeur, S., and Malone, A. (Eds.) ISBN: 978-951-38-6352-4 (Print); ISBN: 978-951-38-6353-1 (Electronic).

C.L. Cobb, A.M. Agogino, S.L. Beckman, L. Speer, "Enabling and Characterizing Twenty-First Century Skills in New Product Development Teams," In Proc. of the Mudd Design Workshop VI, 2007, CD-ROM ISBN# 978-0-9677049-5-1.

C.L. Cobb, A.M. Agogino, and S.L. Beckman, "A Longitudinal Study of Learning Outcomes in New Product Development," In Proc. of 2007 ASME International Design Engineering Technical Conferences & the Computers and Information in Engineering Conference, #DETC2007-34456, CD-ROM ISBN: 0-7918-3806-4.

Hey, J, Van Pelt, A, Agogino, A, Beckman, S., "Self-Reflection: Lessons Learned in a New Product Development Class," *Journal of Mechanical Design*, Vol. 129, No. 7, pp. 668-676, July 2007.

Chan, Jeffrey K., Sara L. Beckman and Peter G. Lawrence, "Workplace Design: A New Management Imperative," *California Management Review*, Vol. 49, No. 2, Winter 2007.

Beckman, S. and Leslie Speer, "Learning About Design: Lessons from Ten Years of New Product Development Class Projects," In 2006 Eastman IDSA National Education Symposium Proceedings, September 17-20, 2006 - Austin, TX

Beckman, S. and K. K. Sinha, "Conducting Academic Research with an Industry Focus: Production and Operations Management in the High Tech Industry", *Production and Operations Management Journal*, Vol. 14, No. 2, Summer 2005

Gil, N., Tommelein, I.D., and Beckman, S. "Postponing Design Processes in Unpredictable Environments." *Research in Engineering Design*, Volume 15, Number 3, 139-154, December 2004.

Hirsch, Scott, Janice Fraser and Sara Beckman, "Leveraging Business Value: How ROI Changes User Experience," Adaptive Path ([http://adaptivepath.com/publications/reports/businessvalue/ap\\_businessvalue\\_summary.pdf](http://adaptivepath.com/publications/reports/businessvalue/ap_businessvalue_summary.pdf)), 2004.

White, Charles D., Eric Masanet, Christine Meisner Rosen, Sara L. Beckman, "Product Recovery with Some Byte: An Overview of Management Challenges and Environmental Consequences in Reverse Manufacturing for the Computer Industry," *Journal of Cleaner Production*, Volume 11, 2003.

Rosen, Christine Meisner, Sara L. Beckman and Janet Bercovitz, "The Role of Voluntary Industry Standards in Environmental Supply Chain Management: An Institutional Economics Perspective," *Journal of Industrial Ecology*, Volume 6, Number 3-4, Summer - Fall 2002.

Rosen, Christine, Janet Bercovitz and Sara Beckman, "Environmental Supply Chain Management in the Computer Industry: A Transaction Costs Economics Perspective," *Journal of Industrial Ecology*, Vol. 4, No. 4, 2001.

Beckman, Sara L., "The Knowledge of Design," foreword to *Design Does Matter*, Teknion, June 2001.

Beckman, Sara L., Christine Rosen and Janet Bercovitz, "Environmentally Sound Supply Chain Management: Implementation in the Computer Industry," a chapter in Christian Madu (ed.), *Handbook of Environmentally Conscious Manufacturing*, (Kluwer Academic Publishers, Boston), 2000.

Beckman, Sara L., "Evolution of Management Roles in a Networked Organization: An Insider's View of the Hewlett-Packard Company," *Broken Ladders: Managerial Careers in the New Economy*, ed. Paul Osterman, Oxford University Press, 1996.

Beckman, Sara L., "The Process of Managing Product Definitions in Software Product Development," *Handbook of Technology Management*, 1996.

Beckman, Sara, Paul Worhach and Paul S. Sheng, "Environmentally-Conscious Supply Chain Management," IEEE Transactions, 1995.

Beckman, Sara and Doug Braithwaite, "Creating the Perpetual Enterprise Machine: Learning from One Another About New Product Development," Target: Innovation at Work, The Periodical of the Association for Manufacturing Excellence, Vol. 10, No. 6, November/December 1994.

Beckman, Sara L., "Hewlett-Packard Company," in The Perpetual Enterprise Machine: High Performance Product Development in the 1990's, eds. H. Kent Bowen, Kim B. Clark, Charles A. Holloway, Steven C. Wheelwright, Oxford University Press, 1994.

Holloway, C., J. Solberg, H. Edmondson, S. Beckman., "Pushing the Performance Envelope," in The Perpetual Enterprise Machine: High Performance Product Development in the 1990s, eds. H. Kent Bowen, Kim B. Clark, Charles A. Holloway, Steven C. Wheelwright, Oxford University Press, 1994.

Bacon, Glenn, Sara Beckman, David Mowery and Edith Wilson, "Managing Product Definition in High-Technology Industries: A Pilot Study," California Management Review, Volume 36, Number 3, Spring 1994.

Beckman, Sara L., "Developing Strategy in a Manufacturing Business," American Management Association Handbook, Third Edition, ed. John J. Hampton, AMACOM, 1994.

Beckman, Sara L. and David Mowery, "Getting the Right Products to Market: A Study of Product Definition in the Electronics Industry," Design Management Journal, Spring 1993.

Beckman, Sara L., "How Much Flex Is There In Flexforce?," Target: Innovation at Work, The Periodical of the Association for Manufacturing Excellence, Vol. 7, No. 3, Special Issue, 1991.

Beckman, Sara L., William A. Boller, Stephen A. Hamilton and John W. Monroe, "Using Manufacturing as a Competitive Weapon: The Development of A Manufacturing Strategy," Strategic Manufacturing: Dynamic New Directions for the 1990's, ed. Patricia E. Moody, Dow Jones-Irwin, APICS Series in Production Management.

Beckman, Sara L., "Manufacturing Flexibility: The Next Source of Competitive Advantage," Strategic Manufacturing: Dynamic New Directions for the 1990's, ed. Patricia E. Moody, Dow Jones-Irwin, APICS Series in Production Management.

Beckman, Sara L. and Harold E. Edmondson, "Strategic Process Deployment: SMT at Hewlett-Packard," Managing the SMT Challenge: Implementing Quality in Assembly, ed. Charles-Henri Mangin, Springer-Verlag, 1990.

Argote, Linda, Sara L. Beckman and Dennis Epple, "The Persistence and Transfer of Learning in Industrial Settings," Management Science, Vol. 36, No. 2, February 1990.

**Invited  
Seminars and  
Colloquiums  
(since 1994)**

Gil, N., Tether, B., and Beckman, S. (2007) "Customer Involvement in the Infrastructure Development Process: How to make it Work?" *Presented at Euram, Paris*

Gil, N., Beckman, S., and Tommelein, I. (2007). "Upstream Problem-Solving under Uncertainty and Ambiguity: Evidence from Airport Expansion Projects," *Presented at Euram, Paris, Academy of Management, Philadelphia*

Gil, N. and Beckman, S. (2006). "Stakeholders Interests and Project Management: Ties to Design Reuse and Redundancy," *EURAM, Oslo, Norway.*

Gil, N. and Beckman, S. (2005). "Project Stakeholders Interests and Precautionism: The Ties to Paradoxical Management Practices," *Academy of Management Conference, 5/8-10/8, Honolulu.*

Gil, Nuno and Sara L. Beckman, "Project Stakeholders Interests and Precautionism: Ties to Paradoxical Management Practices", 2005 Academy of Management Meeting, August 5-10, in Honolulu, Hawaii

"Collaboration and Cross-Functional Learning," INFORMS, Denver, Fall 2004

Panelist, Product Development Management Association, Spring 2004  
Session Chair, "The New Challenges in Managing New Product Development: A High-Tech Industry Panel," INFORMS, San Jose, Fall 2002

Session Chair, "Exploring the Role of Design in New Product Development – What We Know and What We Don't," INFORMS, San Jose, Fall 2002

White, Charles D., Sara L. Beckman and Christine Rosen, "A Description of Computer Demanufacturing: New Challenges in Operations Management," Production and Operations Management Society, Orlando Meeting, April 2001.

Invited speaker, "What We Can Learn from Designers," Marketing Science Institute, June 2000.

"Integrating Green Objectives in New Product Design," INFORMS, October 1995.

"Integration of the Customer in the Software Product Definition Process," INFORMS, October 1995

"Management of Technology Programs -- Comparison and Future Trends," Panel member representing Berkeley MOT Program, INFORMS, October 1995

"Empirical Results from the Study of Product Definition in the Software Industry," INFORMS, April 1995.

"Corporate Change and Competitiveness: The Hewlett-Packard Company," London School of Economics, September 1995

"The Keys to Successful Product Definition," Concurrent Engineering and Product Development: Best Practices -- Concept to Delivery, Eighth International Conference of The Management Roundtable, November 2-4, 1994, Orlando, Florida. (Invited speaker)

"Learning by Design or Design by Learning?," Raychem Key Expert Panel on Innovation, September 1994.

"Learning in the Packaged Software Product Development Process," Organizational Learning in the U.S. and Japan: Tapping the Power of Adaptive Change, The MIT Japan Program, April 1994.

"Organizational Issues in the Management of Technology," International Conference on Technology Management, Denver, Colorado, April 1994.

"Management of Product Definition in the Software Industry," ORSA/TIMS, April 1994.

**Memberships,  
Editorships  
and Board  
Participation**

Distinguished Fellow, The Idea Factory, 2003 - present  
Director, Bulding Materials Holding Corporation, 2001 – present.  
Corporate Design Foundation, Board of Directors, 1999 - present  
POMS – General Chair, Annual Meeting, 2002  
Guest Editor, *California Management Review*, 2008-2009  
Co-Editor, "Infrastructure Meets Business", special issue of *California Management Review*, Vol. 51, No. 2, Winter 2009  
Co-Editor, "Workplace Design," special issue of *California Management Review*, Vol. 49, No. 2, Winter 2007  
Co-Editor, "Operations in High Technology Industry," special issue of *Production and Operations Management*, 2005  
Co-Editor, *California Management Review*, 2000-2001  
Co-Editor, "Breakthrough Product Development," special issue of *Journal of Operations Management*, Vol. 17, Number 6, November 1999.  
POMS - VP, Finance, 1997 to 2001  
@Issue Journal Advisory Board, 1995 to present  
Manufacturing Studies Board, National Research Council, 1992 - 1994  
Leaders for Manufacturing, MIT, Operating Committee Member, 1988 - 1992