

Benjamin Linder

Education

- 1994 – 99 Ph.D. in Mechanical Engineering, Design, Massachusetts Institute of Technology, January 1994 – August 1999. Thesis: Understanding Estimation and its Relation to Engineering Education. Advisor: Woodie Flowers
- 1991 – 93 M.S. in Mechanical Engineering, Design, Massachusetts Institute of Technology, September 1991 – May 1993. Thesis: A Computer-based Design Tool for the Construction of Three-Dimensional Folded Sheet Models. Advisor: Woodie Flowers
- 1986 – 91 B.S.E. in Electrical Engineering, University of Michigan, September 1986 – August 1991
B.S.E. in Mechanical Engineering, University of Michigan, September 1986 – August 1991
Advisor: Panos Y. Papalambros

Grants

- 2011 – P Linder, B., Mihir, R., Noyes, E., “The Affordable Design and Entrepreneurship Initiative,” NCIIA Course and Program Grant, \$50,000, April, 2011 to June, 2012, Pending
- 2011 – P Linder, B., “Affordable Design and Entrepreneurship,” Continuum LLC, \$10,000, March 1, 2011 to February 29, 2012
- 2010 – 11 Linder, B., “Social and Environmental Sustainability Curriculum Initiatives,” Green Mountain Coffee Roasters, Inc., \$25,000, July 1, 2010 to June 30, 2011
- 2009 – 10 Eris, O., Linder, B., “Redesigning the Design Reviews in UOCD as an Assessment and Feedback Tool,” Innovation Funding Program, Franklin W. Olin College of Engineering, \$8,000, June, 2009 to August, 2010
- 2009 – P Smith, A., Linder, B., and Boning, D., “Incorporating Environmental Sustainability throughout the Engineering Curriculum,” Massachusetts Institute of Technology, \$25,000, January 2009 – Present
- 2008 – 09 Linder, B., “Environmental Curriculum Development Initiative,” Innovation Funding Program, Franklin W. Olin College of Engineering, \$3,550, June, 2008 to August, 2009
- 2007 Linder, B., Marquis, R. (PM), Ross-McBride, G., Somerville, M., “Engineering Epiphany,” Commonwealth Information Technology Initiative, \$30,000, April – November 2007
- 2006 – 08 Linder, B. (PI), Somerville, M. (PI), “Forum for Excellence in Higher Education,” Spencer Foundation, \$25,000, May 2006 – August 2008
- 2006 – 07 Stolk, J. (PI), Chachra, D., Linder, B., “Acquisition of an Infrared Spectrometer System for Interdisciplinary Materials Research and Undergraduate Engineering Education,” NSF 05-515 Major Research Instrumentation Program, DMR-0619468, \$208,167, July 2006 – November 2007
- 2005 – 07 Slocum, A. (PI), Linder, B., Heafitz, A., “MIT Humanitarian Demining Class,” NCIIA Course and Program Grant, \$36,200, January 2005 – November 2007

Publications

- 2010 Linder, B., “Achieving a Sustainable Environmental Perspective,” *International Journal of Engineering Education*, 26-2, 293-296, 2010
- 2007 Somerville, M., Linder, B., Eris, O., “Task Orientation: Are we doing students a disservice?” Proceedings of the 7th International ALE Workshop, INSA Toulouse, France, June 4–6, 2007

- 2006 Eris O., Geddes J., Linder B., Somerville M., and Stolk J., "Incorporating Values: A User-Oriented Approach to Curriculum Design," Special session, 36th ASEE/IEEE Frontiers in Education Conference, San Diego, CA, October 28 – 31, 2006
- 2006 Heafitz, A., Linder, B., Luczynska, M., and Scott, M., "Visor Scratch Repair and Prevention," *Journal of Mine Action*, 10.2, Winter 2006
- 2001 Linder, B., and Flowers W., "Integrating Engineering Science and Design: A Definition and Discussion," *International Journal of Engineering Education*, 17, 436-439, 2001
- 1996 Linder, B., and Flowers, W., "Student Responses to Impromptu Estimation Questions," *Proceedings of the 1996 ASME Design Engineering Technical Conferences and Computers in Engineering Conference*, Irvine, CA, August 18–22, 1996
- 1993 Chiredast, M., Linder, B., Yang, J., and Papalambros, P.Y., "Concurrent Engineering in Optimal Structural Design," *Concurrent Engineering: Automation, Tools, and Techniques*, John Wiley & Sons, Inc., 1993
- 1993 Battles, A., Linder, B., Chang, K., and Slocum, A., "The Design of a Precision Bilaminar Resonating Transducer Assembly Tool," *Precision Engineering*, 1993, 15, 248–257

Patents

- 2000 Linder, B., Lee, D., Battles, A., and Otten, D., "Locking Centrifuge Rotor Cover Assembly," *U.S. Patent No. 6,056,684*, issued May 2, 2000
- 1995 Linder, B., Lee, D., Battles, A., and Thomas, B., "Sample Tube Identification Flag," *U.S. Patent No. 5,468,022*, issued November 21, 1995
- 1995 Linder, B., "Method and Apparatus for Making Desired Three Dimensional Surfaces from Sheet Material," *U.S. Patent abandoned* January, 1995

Meetings and workshops organized

- 2010 DeSombre, B., Hunter, J., Lester, T., Linder, B., Mandel, R., and Somerville, M., "Creating Holistic Sustainability Curricula," Curriculum Development Workshop, Franklin W. Olin College of Engineering, Needham, MA, June 23-25, 2010
- 2009 Linder, B., "Sustainable Product Design," Faculty Development Workshop, Franklin W. Olin College of Engineering, Needham, MA, January 12-16, 2009
- 2008 Linder, B., MacPherson M. Redding, S., Summer Institute in Sustainable Design, California College of the Arts, Point Reyes and San Francisco, Ca, June 15 – June 27, 2008
- 2007 – P Smith, A., Linder, B., Quintus-Bosz, H., Hudnut, P., and Pickar, K., International Development Design Summit, Massachusetts Institute of Technology, Cambridge, MA, July 16 – August 10, 2007 and July 14 – August 8, 2008; Kwame Nkrumah University of Science and Technology, Kumasi, Ghana, July 6 – August 12, 2009; Colorado State University, Fort Collins, CO, July 7 – 30, 2010
- 2007 – P Linder, B., "Introduction to Sustainable Design" Workshop, Selected sites: Continuum, West Newton, MA; Altitude, Cambridge, MA; Cooper-Perkins, Burlington, MA; Legrand, West Hartford, CT; Philips Color Kinetics, Burlington, MA; Keurig, Reading, MA
- 2007 Linder, B. and Somerville, M., Engineering Epiphany, Olin College of Engineering, July 30 – August 10, 2007
- 2005 – 07 Linder, B., Schiffman, S., "Recognizing Opportunities for Entrepreneurial Action: User Oriented

Collaborative Design,” Babson–Olin Symposium for Engineering Entrepreneurship Educators, Babson College and Franklin W. Olin College of Engineering, June 2005, June 2006 & June 2007

Meeting presentations

- 2010 Linder, B., “A New Educational Approach Involving Sustainable Development,” Boston Grand Challenge Summit: Educational Imperatives of the Grand Challenges. NAE Grand Challenge Summit Series, April 21, 2010
- 2009 Linder, B., “Design for the Developing World” InterAction, Franklin W. Olin College of Engineering, May 9, 2009
- 2009 Linder, B., “Theme: The engineer’s role in developing countries,” Panel Discussion: Curricular implications of emerging trends in engineering, The Engineering Curriculum Workshop: Understanding the Design Space and Exploiting the Opportunities, National Academy of Engineering, March 23, 2009
- 2009 Linder, B., “You are Pre-adapted, Now Evolve!” 2009 Annual Meeting & Exchange, Association of Professional Design Firms, March 16, 2009
- 2007 Chachra, D., Linder, B. and Somerville, M., “What Works: Creativity as a Goal for Organizational Change,” Opening plenary session, 2007 PKAL Summer Institute: Focusing on leadership, student learning & institutional transformation, June 13 – 16, 2007
- 2007 Somerville, M., Linder, B., “Applying User-oriented Techniques to Curriculum Design,” 7th International ALE Workshop, INSA Toulouse, France, June 4–6, 2007
- 2006 Linder, B., Somerville, M., “Learning Orientation in Teams: Hypothesis and Initial Findings”, Presented at the Forum for Excellence and Innovation in Higher Education, Harvard University, November 3 & 4, 2006
- 2006 Linder, B., “Roundtable on Community–Engaged Learning,” Greater Boston Anthropology Consortium, Brandeis University, October 31, 2006
- 2006 – 07 Linder, B., “Introduction to Humanitarian Demining,” Humanitarian Studies Initiative for Residents Course, Harvard Humanitarian Initiative, September 7, 2006 & September 12, 2007
- 2005 Linder, B., Somerville, M., “Introducing Studio Spaces and Design Thinking into an Undergraduate Engineering Curriculum: Efforts and Opportunities”, Presented at the Forum for Excellence and Innovation in Higher Education, Harvard University, November 4 & 5, 2005
- 2005 Somerville, M., Geddes, J., Linder, B., “Imaginary Students: Applying User–Oriented Design Techniques to Active Curriculum Design,” Workshop, Presented at Active Learning in Engineering Education International Workshop, Amsterdam, Netherlands, June 2005
- 2004 Bryant, R., MacPherson, M., Waage, S., Session facilitation, Sustainable Design Summit, The Natural Step, California College of Art, August 5 & 6, 2004
- 2003 Linder, B., Heafitz, A., “Demining Technologies, “ Clear a path to a Safe Word: Addressing the Tragedy of Landmines, Northampton Massachusetts, November 14–16, 2003
- 1998 Linder, B., Estimation Workshop, System Design and Management Program, Massachusetts Institute of Technology, January 12 & 16, 1998

Invited talks

- 2010 Linder, B., “Reframing Our Approach to Production (and Consumption),” Tellus Institute for a

Great Transition, Boston, Ma, December 15, 2010

- 2009 Linder, B., "Understanding Sustainability," Global Issues, Needham Public Schools Early Release Day Professional Development Program, Needham High School, Needham, Ma, April 28, 2009
- 2009 Linder, B., "The State of Sustainable Product Design: A report from the front," Environmental Studies Spring Speaker Series, Wellesley College, Wellesley, Ma, March 13, 2009
- 2008 Linder, B., "Applying Design Thinking in Engineering Education," Inquiries in Engineering Education Seminars, University of Illinois at Urbana-Champaign, Champaign, IL, October 27, 2008
- 2008 Linder, B., "Understanding Sustainability," Needham Exchange Club, Needham, Ma, December 2, 2008
- 2007 Linder, B., "The Olin Design Experience," Needham Exchange Club, Needham, Ma, September 20, 2007
- 2007 Linder, B., "Design for Humanitarian Demining: Countering the effects of conflict through engineering," Wellesley College, March 26, 2007
- 2006 Linder, B., "Engineering Design at Olin," Know How #2, IDEO, Boston, August 13, 2006
- 2006 Chow, C., Gustashaw, D., Lin, J., Linder, B., "Impact Kickoff Event and Panel Presentation: Careers that make a difference," Massachusetts Institute of Technology, February 13, 2006
- 2005 Linder, B., "Designing Products for Humanitarian Demining: Countering the effects of conflict to save lives," Design for Developing Communities Seminar Series, Department of Mechanical Engineering, California Institute of Technology, December 1, 2005
- 2005 Linder, B., "Experiences in Design," Olin Lecture Series, Needham Adult Education Program, Franklin W. Olin College of Engineering, November 15, 2005
- 2005 Linder, B., "The Olin Design Experience," University of Southern Denmark, June 1, 2005
- 1998 Linder, B., "Why, when I can just look it up?" Estimation and Learning Engineering Science," Department of Physics, Virginia Polytechnic Institute, April 16, 1998
- 1997 Linder, B., "9-Volt Battery or Bomb: Does engineering teach students the difference?" Department of Mechanical Engineering, Michigan Technological University, January 7, 1997

Teaching

- 2005 – P Instructor, ENGR 4190 Senior COnsulting Program for Engineering (SCOPE), Franklin W. Olin College of Engineering, Fall 2005 – present
- 2005 – P Instructor, ENGR 4198 Olin Self Study, Franklin W. Olin College of Engineering, Fall 2005 – present
- 2004 – P Instructor, ENGR 3210 Sustainable Design, Franklin W. Olin College of Engineering, Spring 2004 – present
- 2004 – P Coordinator and Instructor, ENGR 2250 User Oriented Collaborative Design, Franklin W. Olin College of Engineering, Spring 2004 – present
- 2003 – P Coordinator and Instructor, ENGR 1200 Design Nature (Mechanical Nature in 2003), Franklin W. Olin College of Engineering, Fall 2003 – present
- 2007 Co-instructor, CC76 Metal Casting, Franklin W. Olin College of Engineering, Spring 2007

- 2003 – 07 Co-instructor, SP 776 Design for Demining, Edgerton Center, Massachusetts Institute of Technology, Spring 2003 – Spring 2007
- 1999 Teaching Assistant, 2.994/2.997 Humanitarian Demining, Department of Mechanical Engineering, Massachusetts Institute of Technology, Spring 1999
- 1999 Co-instructor, Gravity Casting Short Course, Massachusetts Institute of Technology, January 1999
- 1998 Co-instructor, Investment Casting Short Course, Massachusetts Institute of Technology, January 1998
- 1996 Lab Instructor, 2.73 Product Design Process, Department of Mechanical Engineering, Massachusetts Institute of Technology, Fall 1996
- 1995 Teaching Assistant, 2.744 Product Development, Department of Mechanical Engineering, Massachusetts Institute of Technology, Spring 1995
- 1994 – 96 Committee Member, Undergraduate Curriculum Development Committee, Department of Mechanical Engineering, Massachusetts Institute of Technology, Fall 1994 – Spring 1996
- 1993 Teaching Assistant, 2.73 Design Projects, Department of Mechanical Engineering, Massachusetts Institute of Technology, Fall 1993
- 1991 Teaching Assistant, ME 450 Mechanical Design II, Department of Mechanical Engineering, University of Michigan, Spring 1991

Invited course lectures

- 2010 “Sustainability: What is good,” MOB 3578 Product Design and Development, Babson College, Franklin W. Olin College of Engineering, Rhode Island School of Design, October 5 and October 27, 2010
- 2010 “Workshop: Environmental Sustainability,” Design for Social Entrepreneurship, RISD Industrial Design Advanced Studio, Rhode Island School of Design, April 8, 2010
- 2009 “Sustainable Design and Entrepreneurship,” Entrepreneurship and Business, University of Sao Paulo, November 22, 2009
- 2009 – 10 “Green Engineering,” 2.722J/SP.722 D-Lab Design, Massachusetts Institute of Technology, April 8, 2009, April 14, 2010
- 2008 – 09 “Sustainability,” SP.721/11.025/11.472 D-Lab Development, Massachusetts Institute of Technology, December 1, 2008, December 4, 2009
- 2005 – 10 “Environmental Impact of Materials,” SCI 1410 Principles of Materials Science with Lab, Franklin W. Olin College of Engineering, April 27, 2005, April 25 & 26, 2006, November 28 & 29, 2006 & May 1, 2007, April 25, 2008, November 30, 2009, April 17, 2010
- 2006 “Humanitarian Demining and Robotics,” ENGR 3390 Robotics, Franklin W. Olin College of Engineering, February 1, 2006
- 1999 “Feasibility,” 2.009 Product Engineering Process, Department of Mechanical Engineering, Massachusetts Institute of Technology, September 20, 1999
- 1998 “Estimating,” SP.753 Designs: Developing Countries, Edgerton Center, Massachusetts Institute of Technology, March 2, 1998
- 1997 “Introduction to Engineering Estimation,” 2.670 Mechanical Engineering Tools, Department of

- Mechanical Engineering, Massachusetts Institute of Technology, January 10, 16, 24, & 30, 1997
- 1996 – 98 “Estimation,” 2.009 Product Engineering Process (2.73 Product Development Process in 1996), Department of Mechanical Engineering, Massachusetts Institute of Technology, September 27, 1996, September 17 & Oct 10, 1997 & September 21, 1998
- 1996 “Estimating,” Freshman Seminar: Product development, Department of Mechanical Engineering, Massachusetts Institute of Technology, Fall 1996
- 1994 “Sketching in Mechanical Engineering,” 11.012 Drawing and Thinking Freshman Seminar, Department of Urban Studies and Planning, Massachusetts Institute of Technology, November 15, 1994

Advising and mentoring

- 2007 – P Sustainable Design Advisor, Sustainable Minds, Brookline, Ma, July 2007 – Present
- 2006 – P Product Design and Entrepreneurship Advisor, RecipeTango, August 2006 – present
- 2005 – P Product Design Advisor, Salubrion, LLC, September 2005 – present
- 2005 Team Mentor, 2.009 Product Engineering Processes, Massachusetts Institute of Technology, Fall 2005
- 2003 – P Hatchery Advisory Board Member, Arthur M. Blank Center for Entrepreneurship, Babson College, September 2003 – present
- 1998 Research Advisor, Rafael Nogueras, Jorge, “Client–Server Technology Comparison,” MIT Summer Research Program, Massachusetts Institute of Technology, Summer 1998
- 1998 Research Advisor, Estrada, Roberto, “Benchmarking,” MIT Summer Research Program, Massachusetts Institute of Technology, Summer 1998
- 1994 Research Advisor, Newell, Sarinda, "Hand–held Heater for Bending Sheet Plastics," Undergraduate Thesis, Department of Mechanical Engineering, Massachusetts Institute of Technology, May 1994

Research affiliations and collaborations

- 2010 - P Research Fellow, Tellus Institute for a Great Transition, February 2010 – Present
- 2007 – 08 Olin Coordinator, U–Labs, Cambridge, Ma, April 2007 – Present
- 1998 – 99 Research Group Member, Computer Aided Design Lab, Massachusetts Institute of Technology, June 1998 – May 1999
- 1997 – 99 Research Affiliate, Center for Innovation in Product Development, Massachusetts Institute of Technology, Spring 1997 – Summer 1999
- 1990 – 91 Research Group Member, Design Group, Department of Mechanical Engineering, University of Michigan, January 1990 – August 1991

Consulting, selected disclosable engagements

- 2009 – P Sustainable product design, Keurig, Burlington, MA, May 2009 – Present
- 2008 – P Sustainable product design, Recycline, Inc., Waltham, MA, January 2008 – Present
- 2007 – P Sustainable product design, Continuum, West Newton, MA, August 2007 – Present
- 2006 Product design, The Benetech Initiative, Cambridge, MA, August 2006 – September 2006

- 2003 – 05 Interaction design, TacShot Inc., Cambridge, MA, March 2003 – November 2005
- 2003 – 05 Interaction design, College of Veterinary Medicine, North Carolina State University, Raleigh, NC, January 2003 – 2005
- 1995 – 97 Mechanical design, International Totalizing Systems, Bradford, MA, July 1995 – June 1997

Employment

- 2003 – P Associate Professor of Design and Mechanical Engineering, Franklin W. Olin College of Engineering, Needham, MA, Summer 2003 – present
- 1999 – 02 Co-founder, Director, Vice President of Product Development, Oculus Technologies Corporation, Boston, MA, Fall 1999 – Spring 2002
- 1999 Deployment Coordinator, Center for Innovation in Product Development, Massachusetts Institute of Technology, Fall 1999
- 1999 Lecturer, Department of Aeronautics and Astronautics, Massachusetts Institute of Technology, Summer 1999
- 1991 – 93 Design Team Leader, New Products Program, Massachusetts Institute of Technology, November 1991 – December 1993
- 1989 Engineering Intern, Research & Development Center, Kelsey–Hayes Company, Ann Arbor, MI, Summer 1989

Honors

- 1998 – 99 Karl Chang Fellowship, Massachusetts Institute of Technology, 1998 – 1999
- 1998 Mechanical Engineering Department Service Award, Massachusetts Institute of Technology, 1998
- 1994 Lemelson Fellowship, Massachusetts Institute of Technology, 1994
- 1993 Carl G. Sontheimer Prize for Innovative Design in Mechanical Engineering, Massachusetts Institute of Technology, 1993
- 1991 Star Foundation Fellowship, Massachusetts Institute of Technology, 1991
- 1990 Gold Award, Lincoln Arc Welding Foundation National Design Competition, University of Michigan, 1990

Society participation

American Society of Engineering Education
 Industrial Design Society of America
 American Society of Mechanical Engineers
 Tau Beta Pi, National Engineering Honor Society