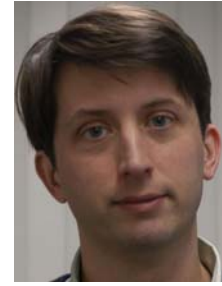


Curriculum Vitae

Eric David Williams

Citizenship: USA
Date of Birth: October 29, 1965
Family info: Married, with two children



Contact Information

Department of Civil, Environmental and Sustainable Engineering &
The School of Sustainability
Arizona State University
Tempe, Arizona 85287-5306
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Education

- 1993 Ph.D. in Physics, C.N. Yang Institute for Theoretical Physics, Department of Physics, State University of New York at Stony Brook, Stony Brook, New York
- 1988 B.A. in Physics,
Macalester College, St. Paul, Minnesota

Professional Experience

- 8.2008 - present Research Director, Center for Earth Systems Engineering and Management, Arizona State University
- 8.2006 - present Assistant Professor, Department of Civil, Environmental and Sustainable Engineering & School of Sustainability, Arizona State University, Tempe
- 9.2005 - 7.2006 Visiting Assistant Professor, Department of Civil and Environmental Engineering, Carnegie Mellon, Pittsburgh
- 9.2001 - 7.2006 Project Coordinator, United Nations University/Centre, Tokyo
- 9.2000 - 8.2001 Associate Fellow, United Nations University/Institute of Advanced Studies, Tokyo, Japan
- 9.1997 - 8.2000 Research Associate, United Nations University/Institute of Advanced Studies, Tokyo, Japan
- 9.1995 - 8.1997 JSPS Postdoctoral Fellow, Institute for Solid State Physics, University of Tokyo, Japan
- 9.1994 - 8.1995 Temporary Assistant Professor, Department of Mathematics, University of Minnesota, Minneapolis
- 9.1993 - 8.1994 Visiting Researcher, Department of Mathematics, University of Minnesota, Minneapolis

Publications

Articles under review at refereed journals

1. P. Zhai and E. Williams, “Hybrid life cycle assessment of trends in embodied energy and carbon of polysilicon photovoltaic (PV) systems”, under review (2009)
2. C. Harto, R. Meyers, and E. Williams, “Life Cycle Water Use of Low-Carbon Transport Fuels”, under review (2009)
3. N. Forrest and E. Williams, “Life Cycle Environmental Implications of Residential Swimming Pools in Phoenix, Arizona”, under review (2009)
4. R. Meyers, E. Williams, and H. Matthews, “Scoping the potential of monitoring and control technologies to reduce energy use in homes” under review (2009)
5. R. Kahhat and E. Williams, “Used Computers in the Residential Sector of Developing Countries: Case Study of Lima”, under review (2009)
6. B. Warr, R. Ayres and E. Williams, “Economic growth in a resource poor country: The case of Japan”, under review (2009)
7. M. Xu, E. Williams, and B. Allenby, “Environmental impacts embodied in the China-U.S. Trade: A Comprehensive Perspective from Manufacturing and Labor Input using Adjusted Trade Data“, under review (2009)
8. J. Yu, E. Williams, M. Ju, and C. Shao, “Waste electrical and electronic equipment recycling in China: Practices and Strategies” , under review (2009)
9. L. Deng and E. Williams, “Functionality versus “Typical Product” Measures of Energy Efficiency: Case study of Semiconductor Manufacturing”, under review (2009)
10. E. Williams, R. Kahhat, and S. Kaneko, “Bounding and extrapolation analyses of future energy demand of China’s steel sector”, under review (2008)

Articles in refereed journals

1. E. Williams, C. Weber and T. Hawkins, “Survey and Hybrid Approach to Managing Uncertainty in Life Cycle Inventories”, in press, *Journal of Industrial Ecology* (2009)
2. Y. Yang and E. Williams, “Logistic Model-based Forecast of Sales and Generation of Obsolete Computers in the U.S.”, in press, *Technological Forecasting and Social Change*, available online - DOI:10.1016/j.techfore.2009.03.004 (2009)
3. R. Kahhat and E. Williams, “Product or Waste?: Importation and end-of-life processing of computers in Peru”, *Environmental Science & Technology* 43(15), 6010–6016 (2009)
4. C. Babbitt, R. Kahhat, E. Williams, and G. Babbitt, “Evolution of product lifespan and its role in the environmental assessment and management of products: a case study of personal computers in higher education”, *Environmental Science & Technology* 43 (13), 5106–5112 (2009)
5. J. Kim, M. Xu, R. Kahhat, B. Allenby, and E. Williams, “Designing and Assessing a Sustainable Networked Delivery (SND) System: Hybrid Business-to-Consumer Book Delivery Case Study”, *Environmental Science & Technology* 43 (1), 181-187 (2009)

6. E. Williams, R. Kahhat, B. Allenby, E. Kavazanjian, J. Kim and M. Xu, "Environmental, social and economic implications of global reuse and recycling of personal computers", *Environmental Science & Technology* 42(17), 6446-6454 (2008)
7. E. Williams, B. Warr, and R. Ayres, "Efficiency dilution: Long-term exergy conversion trends in Japan", *Environmental Science & Technology* 42 (13), 4964–4970 (2008)
8. R. Kahhat, J. Kim, M. Xu, B. Allenby, E. Williams, and P. Zhang, "Exploring e-waste management systems in the United States", *Resources, Conservation and Recycling* 52, 955–964 (2008)
9. C. I. Davidson, C. T. Hendrickson, H. Scott Matthews, M.W. Bridges, B. Allenby, J. Crittenden, Y. Chen, E. Williams, D. Allen, C. Murphy, and S. Austin, "Adding Sustainability to the Engineer's Toolbox: A Challenge for Engineering Educators", *Environmental Science & Technology* 41(14), 4847-4850 (2007)
10. P. Marcotullio and E. Williams, "Exploring effects of an "infrastructure bottleneck" on road transportation CO₂ emissions in Asia Pacific countries", *International Journal of Environment and Pollution* 30(7), 27-43 (2007)
11. Terazono, S. Murakami, N. Abe, B. Inanc, Y. Moriguchi, S. Sakai, M. Kojima, A. Yoshida, J. Li, J. Yang, M. H. Wong, A. Jain, I. Kim, G. L. Peralta, C.C. Lin, T. Mungcharoen, and E. Williams, "Current status and research on E-waste issues in Asia", *J. Material Cycles and Waste Management* 8(1), 1-12 (2006)
12. K. Tokimatsu, T. Kosugi, T. Asami, E. Williams, and Y. Kaya, "Evaluation of lifecycle CO₂ emissions from the Japanese electric power sector in the 21st century under various nuclear scenarios", *Energy Policy* 34(7), 833-852 (2006)
13. P. Marcotullio, E. Williams and J. Marshall, "Faster, sooner, and more simultaneously: how recent transportation CO₂ emission trends in developing countries differ from historic trends in the United States of America", *Journal of Environment & Development* 13 (3), 125-148 (2005)
14. H.S. Matthews and E. Williams, "Telework adoption and energy use in building and transport sectors in the US and Japan", *Journal of Infrastructure Systems* 11(1), 21-30 (2005)
15. E. Williams, "Energy intensity of computer manufacturing: hybrid analysis combining process and economic input-output methods", *Environmental Science & Technology* 38(22), 6166 - 6174 (2004)
16. E. Williams, "The environmental impacts of semiconductor fabrication", *Thin Solid Films* 461(1), 2-6 (2004)
17. R. Ayres and E. Williams, "The digital economy: where do we stand?", *Technological Forecasting and Social Change* 71(4), 315-339 (2004)
18. E. Williams, "Forecasting material and economic flows of the global production chain for silicon", *Technological Forecasting and Social Change* 70(4), 341-357 (2003)
19. E. Williams and T. Tagami, "Energy use in sales and distribution via B2C E-commerce and conventional retail: a case study of the Japanese book sector", *Journal of Industrial Ecology* 6(2), 99-114 (2003)
20. E. Williams, R. Ayres, and M. Heller, "The 1.7 kg microchip: energy and chemical use in the production of semiconductors", *Environmental Science & Technology* 36 (24), 5504-5510, Dec. 15 (2002) (cover story)

21. H. Scott Matthews, E. Williams, C. Hendrickson, and T. Tagami, “Energy implications of online book retailing in the United States and Japan”, *Environmental Impact Assessment Review* 22(5), 493-507 (2002)
22. R. Beals, D. Sattinger, and E. Williams, “A Dirac Sea and thermodynamic equilibrium for the quantized three-wave interaction”, *Journal of Mathematical Physics* 39 (1), 1-29, (1998)
23. M. Takahashi and E. Williams, “Disconnection transition in an extended delta-function Bose gas”, *Journal of the Physical Society of Japan* 66, 3322-3325 (1997).
24. E. Williams, “Exact wavefunctions for a delta function Bose gas with higher derivatives”, *Physics Letters A* 223, 19-22 (1996)
25. E. Williams, “Thermodynamics and excitations of the supersymmetric t-J model”, *International Journal of Modern Physics*, B9 (27), 3607-3624 (1995)
26. E. Williams, “Strings complete the spectrum of 1-D δ -function fermions”, *Modern Physics Letters B* 7, 689-701 (1993)

Books, monographs, conference proceedings

1. R. Kuehr and E. Williams (eds.), *Computers and the Environment: Understanding and Managing their Impacts*, Kluwer Academic Publications: Dordrecht (2003)
2. E. Williams, *Global Production Chains and Sustainability: the case of high-purity silicon and its applications in Information Technology and renewable energy*, United Nations University/Institute of Advanced Studies: Tokyo, 140 pages (2000)
3. C. Suzuki and E. Williams (eds.), *Proceedings of the First Workshop on the Quartz Industrial Trade System*, United Nations University/Institute of Advanced Studies: Tokyo, ISBN# 4-906686-C, 248 pages (1998)

Book chapters

1. E. Williams, N. Krishnan, and S. Boyd, Ultra-purity, thermodynamics and energy use: case study of semiconductor manufacturing, in press, in *Thermodynamics and the Destruction of Resources*, edited by B. Bakshi, T. Gutowski, and D. Sekulic, Cambridge University Press (2010)
2. R. Kuehr, J. Velasquez and E. Williams, “Computers and the environment—an introduction to understanding and managing their impacts”, in R. Kuehr and E. Williams (eds.), *Computers and the Environment: Understanding and Managing their Impacts*, Kluwer Academic Publications: Dordrecht, 1-16 (2003)
3. E. Williams, “Environmental impacts associated with the production of personal computers”, in R. Kuehr and E. Williams (eds.), *Computers and the Environment: Understanding and Managing their Impacts*, Kluwer: Dordrecht, 41-72 (2003)
4. E. Williams and Y. Sasaki, “Strategizing the end-of-life handling of personal computers”, in R. Kuehr and E. Williams (eds.), *Computers and the Environment: Understanding and Managing their Impacts*, Kluwer: Dordrecht, 183-196 (2003)
5. E. Williams and R. Kuehr, “Today’s Markets for Used PCs—And Ways to Enhance Them”, in R. Kuehr and E. Williams (eds.), *Computers and the Environment: Understanding and Managing their Impacts*, Kluwer: Dordrecht, 197-210 (2003)

6. E. Williams, "Environmental Life Cycle Assessment and Municipal Solid Waste Management", in *Encyclopedia of Life Support Systems*, E1-18: Institutional and Infrastructural Resources, Human Settlement Development, edited by Saskia Sassen, United Nations Educational, Scientific and Cultural Organization: Paris (2003)

Articles in conference proceedings and reports

1. E. Williams, "Framework for Thermodynamic Constraints on Sustainability", in Proceedings of the 2009 IEEE International Symposium on Sustainable Systems and Technology, Phoenix (2009)
2. C. Mattick, E. Williams, and B. Allenby, "Energy and Civilization", in Proceedings of the 2009 IEEE International Symposium on Sustainable Systems and Technology, Phoenix (2009)
3. M. Xu, E. Williams and B. Allenby, "Environmental Overhead of Labor (EOL) Embodied in Trade: The Case of 2002 China-U.S. Trade", in Proceedings of the 2009 IEEE International Symposium on Sustainable Systems and Technology, Phoenix (2009)
4. J. Yu, E. Williams, and M. Ju, "Review and Prospects of Recycling Methods for Waste Printed Circuit Boards" in Proceedings of the 2009 IEEE International Symposium on Sustainable Systems and Technology, Phoenix (2009)
5. C. Harto, R.J. Meyers, and E. Williams, "Life Cycle Water Consumption of Alternative, Low-Carbon Transportation Energy Sources", report to the Arizona Water Institute, December (2008)
6. L. Deng and E. Williams, "Measures and Trends in Energy Use of Semiconductor Manufacturing", in Proceedings of the 2008 IEEE International Symposium on Electronics and the Environment, San Francisco, CA (2008)
7. Y. Yang and E. Williams, "Forecasting sales and generation of end-of-life computers in the U.S.", in Proceedings of the 2008 IEEE International Symposium on Electronics and the Environment, San Francisco, CA (2008)
8. N. Krishnan, E. Williams and S. Boyd, "Case Studies in Energy Use to Realize Ultra-High Purities in Semiconductor Manufacturing", in Proceedings of the 2008 IEEE International Symposium on Electronics and the Environment, San Francisco, CA (2008)
9. R. Kahhat, J. Kim, M. Xu, B. Allenby, and E. Williams, "Exploring e-waste management systems in the U.S.", in Proceedings of the 2008 IEEE International Symposium on Electronics and the Environment, San Francisco, CA (2008)
10. J. Kim, M. Xu, R. Kahhat, B. Allenby, and E. Williams, "Design and Assessment of a Sustainable Networked System in the U.S.: Case study of Book Delivery System", in Proceedings of the 2008 IEEE International Symposium on Electronics and the Environment, San Francisco, CA (2008)
11. E. Williams, R. Kahhat, B. Allenby, E. Kavazanjian, J. Kim and M. Xu, "Sustainability review of the international reverse chain for reuse and recycling of computers", in Proceedings of the 2008 IEEE International Symposium on Electronics and the Environment, San Francisco, CA (2008)

12. E. Williams, B. Warr, and R. Ayres, "Long Term Exergy-efficiency Trends in Japan", in *Proceedings of Eco-Design 2007 - 5th International Symposium on Environmentally Conscious Design and Inverse Manufacturing*, Tokyo: Japan (2007)
13. E. Williams and H. Scott Matthews, "Scoping the potential of monitoring and control technologies to reduce energy use in homes", in *2007 IEEE International Symposium on Electronics and the Environment*, IEEE: Piscataway, New Jersey, 239-244 (2007)
14. C. Weber, H. Scott Matthews, J. Corbett and E. Williams, "Carbon Emissions Embodied in Importation, Transport and Retail of Electronics in the U.S.: A Growing Global Issue", in *2007 IEEE International Symposium on Electronics and the Environment*, IEEE: Piscataway, New Jersey, 174-179 (2007)
15. E. Williams, "The case for improved uncertainty analysis of LCI", in *Proceedings of the Seventh International Conference on Ecobalance*, published by the Society for Non-traditional Technology: Tokyo, 249-252 (2006)
16. Hendrickson, C., H.S. Matthews and E. Williams, "Experience with the Economic Input-Output Life-Cycle Assessment Website", in *Proceedings of the Seventh International Conference on Ecobalance*, published by the Society for Non-traditional Technology: Tokyo, 243-244 (2006)
17. E. Williams, H. Scott Matthews, M. Breton and T. Brady, "Use of a computer-based system to measure and manage energy use in the home", *2006 IEEE International Symposium on Electronics and the Environment*, IEEE: Piscataway, New Jersey, 161-166 (2006)
18. E. Williams, Mandated prices as an instrument to mitigate environmental impacts in informal reuse/recycling, *Proceedings of The Second National Institute for Environment Studies (NIES) Workshop on E-waste: November 23rd, Tokyo, Japan*, pp 43-56 (2005).
19. E. Williams and T. Hamanaka, "The relevance of computer usage patterns and secondary markets for energy management", in *Proceedings of the 2005 ACEEE Summer Study on Energy Efficiency in Industry*, American Council for an Energy-Efficient Economy: Washington D.C. (2005)
20. E. Williams, "International activities on E-waste and guidelines for future work", in *Proceedings of The Third Workshop on Material Cycles and Waste Management in Asia*, National Institute of Environmental Sciences: Tsukuba, Japan, 49-60 (2005)
21. E. Williams and T. Hatanaka, "Residential computer usage patterns in Japan and associated life cycle energy use", in *2005 IEEE International Symposium on Electronics and the Environment*, IEEE: Piscataway, New Jersey, 177-182 (2005)
22. E. Williams, "Revisiting Energy used to Manufacture a Desktop Computer", in *2004 IEEE International Symposium on Electronics and the Environment*, IEEE: Piscataway, New Jersey, 80-85 (2004)
23. E. Williams, "Hybrid analysis of energy used to manufacture a desktop computer", in *Proceedings of the Sixth International Conference on Ecobalance*, published by the Society for Non-traditional Technology: Tokyo, 71-74 (2003)
24. E. Williams and H.S. Matthews, "Potential impact of telework programs on energy use in the US and Japan", *Proceedings of Proceedings of 11th LCA Case Studies Symposium - Environmental Assessment in the Information Society*, SETAC: Belgium, 77-80 (2003)

25. E. Williams, "Life cycle energy of computer manufacturing", Proceedings of Proceedings of 11th LCA Case Studies Symposium - Environmental Assessment in the Information Society, SETAC: Belgium, 122-125 (2003)
26. E. Williams, "Assessing the potential of telecommuting as an energy savings technology in Japan", in *2003 IEEE International Symposium on Electronics and the Environment*, IEEE: Piscataway, New Jersey, 147-152 (2003)
27. E. Williams, "Energy analysis of end-of-life for personal computers: resell, upgrade, recycle", in *2003 IEEE International Symposium on Electronics and the Environment*, IEEE: Piscataway, New Jersey, 187-192 (2003)
28. E. Williams, "Extending PC lifespan through secondary markets", in *2003 IEEE International Symposium on Electronics and the Environment*, IEEE: Piscataway, New Jersey, 255-259 (2003)
29. E. Williams and T. Hatanaka, "Sustainable consumption and the Information Technology revolution", in *Proceedings of the First International Workshop on Sustainable Consumption*, Society for Non-Traditional Technology: Tokyo, 69-75 (2003)
30. E. Williams, "Energy efficiency of b2c E-commerce in Japan", in *2002 IEEE International Symposium on Electronics and the Environment*, IEEE: Piscataway, New Jersey, 38-43 (2002)
31. E. Williams, R. Ayres, and M. Heller, "Energy and chemical use in the production chain for microchips", in *2002 IEEE International Symposium on Electronics and the Environment*, IEEE: Piscataway, New Jersey, 184-189 (2002)
32. E. Williams and T. Tagami, "Energy analysis of e-commerce and conventional retail distribution of books in Japan", in *Sustainability in the Information Society*, Metropolis Verlag: Marburg, Germany, 73-80 (2001)
33. E. Williams, "Systems Analysis of the Global Production Chain for High-purity Silicon", in *Proceedings of the Fourth International Conference on Ecobalance*, published by the Society for Non-traditional Technology: Tokyo, 577-580 (2000)
34. E. Williams and M. Troyer, "A Framework for Computer Aided Modeling, Design, and Optimization of Integrated Industrial Systems", UNU/IAS Working Paper #54, United Nations University/Institute of Advanced Studies: Tokyo, 20 pages (1998)
35. E. Williams, "Towards Quantitative Design of Zero Emissions Industrial Clusters: Choice of Variables and Fractal Invariance", in *Proceedings of the Targeting Zero Emissions for the Utilization of Renewable Resources*, University of Tokyo: Tokyo, 98-102 (1998).
36. E. Williams, "Computer Models as Description and Design Tools for QITS", in *Proceedings of the First Workshop on QITS*, United Nations University: Tokyo, ISBN# 4-906686-C, 138-144 (1998)
37. J. Gravitis, T. Della Senta, and E. Williams, "The Conversion of Biomass into Fuels, Fibers, and Value-added Chemical Products from the Perspective of the Zero Emissions Concept", in *Proceedings of the Symposium on Biomass Conversion*, Sapporo, Japan, 1-18 (1997)

Fundraising experience

(P.I.) Research project, “Assessing long-term technological progress for alternative transport energy sources”, *National Science Foundation*, Environmental Sustainability program, August 2009 - July 2012 (\$299,000)

(PI) Book project, “The End of Waste”, *Hewlett-Packard*, July 2009-December 2009 (\$24,000)

(co-PI) Workshop project: “The First Symposium on Industrial Ecology for Young Professionals”, *National Science Foundation*, Environmental Sustainability program, Jan 2009 - May 2009 (\$37,000)

(P.I.) Research Experience for Undergraduates (REU) supplement to “Assessing and managing the sustainability of global reverse supply chains: the case of personal computers”, *National Science Foundation*, Environmental Sustainability program, Jan. 2009 - Dec. 2009 (\$7,000)

(senior personnel) Research project, “EFRI-RESIN: Sustainable Infrastructures for Energy and Water Supply”, *National Science Foundation*, Sep. 2008 – Aug. 2011 (\$1,991,498)

(P.I.) Research Project, “Life Cycle Water Use of Alternative Transportation Fuels”, *Arizona Water Institute*, Jan. 2008- Dec. 2008 (\$20,000)

(P.I.) Research Project, “Assessing and managing the sustainability of global reverse supply chains: the case of personal computers”, *National Science Foundation*, Environmental Sustainability program, Sep. 2007- Aug. 2010 (\$350,000)

(co-PI) Research project, “Environmental and Economic Impacts of Material Used in Future Urban Development”, *Science Foundation Arizona*, Jan. 2007-Mar. 2008 (\$399,000)

(senior personnel) MUSES: Sustainable Consumption, Globalization and Information: Impacts and Opportunities, National Science Foundation, Materials Use: Science, Engineering and Society program planning grant, Sep. 2006-Aug. 2007 (\$100,000)

(co P.I.) Scoping research: “Environmental applications of Information Technology”, *Intel*, Jun. 2005-Dec. 2005 (\$6,000)

(co P.I.) Project development: “Solving the E-waste problem: a synthetic approach”, *Hewlett Packard*, Apr. 2005-Mar. 2006 (\$50,000)

(P.I.) Research project: “Roadmapping the adoption of energy efficient technologies in the Chinese iron/steel industry”, *New Energy and Industrial Technology Development Organization (NEDO)* – Japan, Apr. 2005-Mar. 2006 (\$25,000)

(P.I.) Research project: “Energy consumption of IT infrastructure in Asia - Computer Use Patterns”, *New Energy and Industrial Technology Development Organization (NEDO)* – Japan, Apr. 2004-Mar. 2005 (\$25,000)

(co P.I.) Research project: “Testing the theory of telescoping environmental transitions”, *U.S. Environmental Protection Agency*, Mar. 2004-Aug. 2004 (\$23,000)

(co P.I.) Research project: “The Digital Economy and Energy”, *Japan Foundation - Center for Global Partnership*, Jun. 2001- May 2003, (\$160,000)

Event co-funding: “International Symposium on Information Technology and the Environment”, held Oct. 2002 in Tokyo: support from the *Japan Zero Emissions Forum* (\$10,000) and *Ministry of Science and Education Committee on Zero Emissions* (\$5,000).

Awards

Central Arizona Project Award for Water Research, for research paper “Life Cycle Water Consumption of Alternative, Low-Carbon Transportation Energy Sources”, joint award with C. Harto and R. Meyers (\$1,000)

Industrial Ecology Fellow, “Substitution and Complementarity of ICT products and services”, *AT&T Foundation*, joint award with Brad Allenby, Jan. 2008-Dec. 2008 (\$25,000)

Industrial Ecology Fellow, “Information Technology-based monitoring and control systems to mitigate energy use in households”, *AT&T Foundation*, Jan. 2006-Dec. 2006, joint award with H. Matthews (\$25,000)

Industrial Ecology Fellow: “Effects of computer usage patterns on the life cycle energy consumption of IT infrastructure”, *AT&T Foundation*, Jan. 2004-Dec. 2004, joint award with H. Matthews (\$25,000)

Takeda Fellowship Award for Outstanding Researchers, *Takeda Foundation*, Sep. 2001-Aug. 2002 (\$40,000).

Education - Advising graduate students

Degrees completed (As chair of thesis committee):

- Ramzy Kahhat, Civil and Environmental Engineering, ASU, PhD earned 2009
- Carolyn Mattick, School of Sustainability, ASU, M.S. earned 2009
- Yan Yang, Civil and Environmental Engineering, ASU, M.S. earned 2009

Degrees completed (As thesis committee member):

- Christopher Weber, Civil and Environmental Engineering & Engineering and Public Policy, Carnegie Mellon, PhD earned 2008
- Junbeum Kim, Civil and Environmental Engineering, ASU, PhD earned 2008
- Ming Xu, Civil and Environmental Engineering, ASU, PhD earned 2009

Advising in progress (as chair of committee):

- Liqui Deng, School of Sustainability, ASU, PhD expected 2010
- Pei Zhai, School of Sustainability, ASU, PhD expected 2010
- Michelle Mutchek, Civil and Environmental Engineering, ASU, M.S. expected 2011
- Nigel Forrest, School of Sustainability, ASU, M.S. expected 2011
- Chris Harto, School of Sustainability, ASU, PhD expected 2011
- Robert J. Meyers, School of Sustainability, ASU, PhD expected 2011

Education - Courses taught

| # | Dates | Course | Department/Institution |
|----|-----------------------------|--|--|
| 1 | Spring 2009 | Sustainable Consumption | School of Sustainability, Arizona State University |
| 2 | Fall 2009, Spring 2007-2009 | Industrial Ecology and Design for Sustainability | Civil and Environmental Engineering & School of Sustainability, Arizona State University |
| 3 | Fall 2006-2009 | Engineering Business Practice | Civil and Environmental Engineering, Arizona State University |
| 4 | Spring 2005 | Advanced Life Cycle Assessment | Civil and Environmental Engineering, Carnegie Mellon University |
| 5 | Spring 2004, Spring 2005 | Environmental Governance | School of International Politics, Economics and Business, Aoyama University, Tokyo |
| 6 | 5. 2002, 2004 | International Course | United Nations University, Tokyo |
| 7 | Spring 1995 | Fourier Analysis | Dept. of Mathematics, Univ. of Minnesota |
| 8 | Spring 1995 | Calculus II | Dept. of Mathematics, Univ. of Minnesota |
| 9 | Fall 1994 | Calculus I | Dept. of Mathematics, Univ. of Minnesota |
| 10 | Fall 1994 | Pre-Calculus | Dept. of Mathematics, Univ. of Minnesota |
| 11 | Spring 1992 | Classical Mechanics | Dept. of Physics, SUNY at Stony Brook |
| 12 | Spring 1991 | Optics | Dept. of Physics, SUNY at Stony Brook |
| 13 | Fall 1990 | Modern Physics | Dept. of Physics, SUNY at Stony Brook |
| 14 | Fall 1989, Spring 1990 | Introductory Physics | Dept. of Physics, SUNY at Stony Brook |

(details of teaching evaluations available on request)

Notes:

1. Upper division undergraduate course, Roles: developing course and primary instructor
2. Graduate course, Roles: developing course and primary instructor
3. Upper division undergraduate course, Role: primary instructor
4. Graduate course, Roles: developing course and primary instructor
5. Master's degree course, Role: co-developer and co-instructor
6. Intensive, one month non-accredited course, Role: guest lecturer
7. Upper division undergraduate course, Role: primary instructor
8. Lower division undergraduate course Role: head instructor of multi-section course with coordination of teaching assistants for recitation sections
9. Lower division undergraduate course, Role: head instructor of multi-section course with coordination of teaching assistants for recitation sections
10. Lower division undergraduate course, Role: head instructor of multi-section course with coordination of teaching assistants for recitation sections
11. Graduate course, Role: graduate teaching assistant
12. Lower division undergraduate course, Role: graduate teaching assistant
13. Lower division undergraduate course Role: graduate teaching assistant
14. Lower division undergraduate course Role: graduate teaching assistant

Service

Arizona State University committee membership

Department of Civil and Environmental Engineering: Member, Academic Affairs Committee, Oct. 2008 - present

School of Sustainability: Member, Executive Committee, Sept. 2008 - present

School of Sustainability: Member, Undergraduate Committee, Oct 2007- Aug. 2008

External service

National Academy of Sciences, Member, Committee to review the FreedomCAR and Fuel Partnership, July 2009-present

Green Electronics Council, Member, Board of Councillors, March 2009-present

IEEE: Treasurer, IEEE Technical Committee on Electronics and the Environment, August 2008- present

EcoDesign 2009 Conference (Japan): Conference co-Chair, Aug. 2008- present

International Society for Industry Ecology: Member, Program Committee, 2009 Conference of the International Society for Industry Ecology, Jul. 2008 - present

IEEE: Conference Chair, IEEE International Symposium on Electronics and the Environment, May 2008, San Francisco, California

U.S. House of Representatives Committee on Science and Technology: Witness, Hearing on e-waste and Technology, Apr. 29, 2008

National Academy of Sciences: Member, Committee on Point of Use and Full Fuel Cycle Measurement Approaches to Energy Efficiency Standards, Jan. – Dec. 2008

National Science Foundation: Review Panel member, Environmental Sustainability program, December 2007

International Society for Industry Ecology: Program Committee, International Conference of the International Society for Industry Ecology, June 2007, Toronto, Canada

IEEE: Program Chair, IEEE International Symposium on Electronics and the Environment, May 2007, Orlando, Florida

Professional review activities for journals

Canadian Journal of Civil Engineering; Chemosphere; Energy: the International Journal; Environmental Impact Assessment Review; Environmental Management; Environmental Research Letters; Environmental Science & Technology; IEEE Symposium on Electronics & the Environment; International Journal of Environment and Sustainable Development; International Journal of Life Cycle Assessment; Global Environmental Politics; Journal of Cleaner Production; Journal of Industrial Ecology; Journal of Material Cycles and Waste Management; Journal of the Air & Waste Management Association; ASCE Journal of Infrastructure Systems; Proceedings of the National Academy of Sciences; Resources, Conversation and Recycling; Sustainability Science

Invited presentations (selected)

International conference, “Escrap 2009”, Orlando, Florida, September 2009 (work presented by Callie Babbitt)

International conference, “Escrap 2008”, Phoenix, Arizona, September 2008

Tutorial instructor, IEEE Components, Packaging, and Manufacturing Technology Society, Phoenix, September 2008

Seminar, School of Forestry and Environmental Sciences, Yale University, September 2008

Seminar, National Institute of Advanced Science and Technology, Tsukuba, Japan, July 2008

International conference, “2008 International Computer Refurbishers Summit”, , Toronto, Canada, May 2008 (work presented by Ramzy Kahhat)

Seminar, School of Environmental Design, University of Calgary, Canada, May 2008

Congressional Hearing, “Electronic waste – Can the nation manage modern refuse in the digital age?”, U.S. House of Representatives Committee on Science and Technology, Washington D.C., April 2008

Conference, “28th Annual Microcomputers in Education Conference”, Phoenix, Arizona April 2008

Seminar, Department of Civil and Environmental Engineering, Carnegie Mellon University, March 2008

Seminar, Department of Energy, Environmental and Chemical Engineering, Washington University, St. Louis, February 2008

International workshop, “The Second NIES Workshop on E-waste”, National Institute of Environmental Studies (NIES), Tsukuba, Japan, November 2005

International conference, “Visions of the Information Society Conference”, EMPA, St. Gallen, Switzerland, November 2005

Seminar, Research Center for Eco-Environmental Sciences, Beijing Academy of Sciences, China, January 2005

Outreach: Media coverage of research (selected sampling)

Popular media Print/Web

1. Discovery Channel DiscoveryTech, "Don't recycle that computer, reuse it", July 10, 2008 (URL: <http://dsc.discovery.com/technology/my-take/computer-recycle-bad.html>)
2. Arizona Republic, "Safe Recycling of E-Waste Is a Priority", January 25, 2008
3. Financial Times, "IT going green: Are the problems just being passed on?", July 11, 2007
4. AZ Republic, "Out with the old, but where to...", July 2, 2007
5. Financial Times, "Computer makers miss the big green picture", June 7, 2007
6. PC Magazine, "What's Inside a Laptop", April 10, 2007, p. 87-91
7. Foreign Policy, "Pollution Solution", September/October 2004, p. 92
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