

David Courard-Hauri

Environmental Science and Sustainability • Drake University • 2507 University Avenue
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EDUCATION

1996-1998 Princeton University, Princeton, NJ

MPA, Economics and Public Policy

Certificate in Science, Technology, and Public Policy

1991-1996 Stanford University, Stanford, CA

PhD, Physical Chemistry

Dissertation: Computational Functions in Biological Reaction Mechanisms

1986-1991 Georgetown University, Washington, DC

BS, Chemistry, Government

POSITIONS HELD

2000 – Present: Professor of Environmental Science and Sustainability, Drake University (Full Professor, 2017)

Courses:

FYS 21 Sustainable Communities (First Year Seminar)

FYS 21 Intention in the Universe (First Year Seminar)

ENSP 22 Meteorology

ENSP 23 Meteorology Lab

ENSP 35 One Earth: Introduction to Environmental Science

ENSP 36 Intro to Env. Sci. Lab

ENSP 50 Poverty, Development, and the Environment

ENSP 107 Civic Environmentalism

ENSP 111 International Study Seminar (Guatemala/Nicaragua/Ecuador/Belize)

ENSP 135 Global Change: The Science and Policy of Climate Change

ENSP 151 Sustainability and Resilience

ENSP 153/ECON 198 Ecological Economics: From Climate Change to the Value of Life

ENSP 154 Environmental Decision-Making

ENSP 168 Dynamic Environmental Modeling

ENSP 191 Senior Capstone

SMCE 002 The Iowa Environment

2012 – 2017: Director, Environmental Science and Policy Program, Drake University

1998 – 2000: Dreyfus Postdoctoral Fellow, University of North Carolina, Chapel Hill

1997: Resources For the Future, Washington, DC.

REFEREED PUBLICATIONS

- Courard-Hauri, D.**, Haase, R., *Consumer obligation and counterproductive consumption: can the things we don't use affect us more than those that we do?* in preparation.
- Courard-Hauri, D.**, Parrish, C., and Klimas, C. *An analysis of the long-term social discount rate and non-marginal environmental losses using tradeoffs of similar type*, in review.
- Courard-Hauri, D.**, Chancellor, R, Rundus, A, and Boland, A. 2016, *A method for estimating the current and future carbon content of standing biomass applied to Gishwati Forest Reserve, Rwanda*. Journal of Tropical Forest Science, **28** (4): 416-425.
- Summerville, K.S., Lane, J., and **Courard-Hauri, D.**, 2012, *Stability in forest lepidopteran communities: how sensitive are pest species to experimental forest management?* Insect Conservation and Diversity, **6**, 265-276. DOI: 10.1111/j.1752-4598-2012.00213x
- Courard-Hauri, D.**, Lauer, S., 2012, *Taking "All men are created equal" seriously: toward a metric for the interpersonal comparison of utility functions through life values*, Journal of Benefit-Cost Analysis, **3**, article 3. DOI: 10.1515/2152.1099.
- Summerville, K.S., **Courard-Hauri, D.**, Dupont, M., 2009, *The legacy of timber harvest: Do patterns of species dominance suggest recovery of lepidopteran communities in managed hardwood stands?* Journal of Forest Ecology and Management, **259**, 8-13.
- Courard-Hauri, D.**, 2007, *Using Monte Carlo analysis to investigate the relationship between overconsumption and uncertain access to one's personal utility function*. Ecological Economics, **64**, 152-162.
- Courard-Hauri, D.**, Wick, A., Kneubuhler, L., Summerville, K.S. 2006, *Patch-scale movement dynamics and intra-seasonal redistribution in two species of Iowa grassland butterflies*, Journal of the Great Lakes Entomologist, **39**, 184-199.
- Courard-Hauri, D.**, 2004, *Renegotiating Kyoto: A Computer-Aided Role Play*, Academic Exchange Quarterly, **8**, 2841-4z.
- Courard-Hauri, D.**, 2004, *The effect of income choice on bias in policy decisions made using cost-benefit analysis*, Ecological Economics, **51**, 191-199.
- Shulman, S.W., Schlosberg, D., Zavestoski, S., and **Courard-Hauri, D.**, 2003, *Electronic Rulemaking: New Frontiers in Public Participation*, Social Science Computer Review, **21**, 162-178.

Hauri, D.C., Shen, P., Arkin, A.P., Ross, J., 1996, *Steady-State Measurements on the Fructose 6-Phosphate/Fructose 1,6-Bisphosphate Interconversion Cycle*, Journal of Physical Chemistry B, **19**, 3872-3876.

Shen, P., **Hauri, D.C.**, Ross, J., Oefner, P., 1996, *Analysis of glycolysis metabolites by capillary zone electrophoresis with indirect UV detection*, Journal of Capillary Electrophoresis, **3**, 155-163.

Hauri, D.C., Ross, J., 1995, *A Model of Excitation and Adaptation in Bacterial Chemotaxis*, Biophysical Journal, **68**, 708-722.

Mahootian, F., **Hauri, D.**, Earley, J.E., 1992, *New Region of Oscillations in the Chlorite-Bromate-Iodide System of Internally Coupled Chemical Oscillators*, Journal of Physical Chemistry, **96**, 1014-1015.

BOOKS

Friedland, A.J., Relya, R.A, **Courard-Hauri, D.**, 2012, *Essentials of Environmental Science*, Freeman, New York.

Friedland, A.J., Relya, R.A, **Courard-Hauri, D.**, 2011, *Environmental Science: Foundations and Applications*, Freeman, New York.

Friedland, A.J., Relya, R.A, **Courard-Hauri, D.**, 2011, *Environmental Science for the AP*, Freeman, New York.

BOOK CHAPTERS

Courard-Hauri, D., 2015, Chapter 13: Environmental Science: A Field for the Future, in *Environmental Science and Studies for the Curious*, The Curious Academic Publishing, Canberra, Australia.

CONTRIBUTED PAPERS (published abstracts for oral and poster* papers at scientific meetings)

Courard-Hauri, D., 2016, *Beyond Limits: Ecological Economics in an age of partial abundance*. International Society for Ecological Economics Biennial Conference, June 26-29, Washington, DC.

Courard-Hauri, D., 2015, *Roleplaying and scale: Moving beyond “plant trees to save climate.”* Iowa Climate Educators’ Forum, October 9, Des Moines University, Des Moines, Iowa.

Courard-Hauri, D., 2013, *Toward a new understanding of the discount rate*. United States Society for Ecological Economics Biennial Meeting, June 9-13, Burlington, Vermont.

- *Boland, A., **Courard-Hauri, D.**, Chancellor, R., and Rundus, A., 2012, *Current and future carbon content of standing biomass in Gishwati Forest Reserve, Rwanda*, Iowa Academy of Sciences, April 20-21, Mason City, Iowa.
- Courard-Hauri, D.**, 2011, *Taking “all men are created equal” seriously: Toward a metric for the intergroup comparison of utility functions through life values*. United States Society for Ecological Economics Biennial Meeting, June 26-29, East Lansing, Michigan.
- Courard-Hauri, D.**, 2009. *Consumer obligation and counterproductive consumption: can the things we don’t use affect us more than those that we do?* United States Society for Ecological Economics Biennial Meeting, May 31-June 3, Washington, DC.
- Courard-Hauri, D.**, 2007. *Feedbacks and lock-in leading to counterproductive long-term overconsumption choices among actors with partial information*, United States Society for Ecological Economics Biennial Meeting, June 23-27, New York, NY.
- Courard-Hauri, D.**, 2005. *The Use of Monte Carlo Methods to Explore the Relationship Between Overconsumption and Uncertainty in Utility Information*, United States Society for Ecological Economics Biennial Meeting, July 20-23, Seattle, WA.
- Courard-Hauri, D.**, 2005. *A Model of Grassland Butterfly Movement in Kuehn Conservation Area, Dallas County, IA*, Iowa Academy of Science Annual Conference, April 29-30, Cornell College, Mt. Vernon, IA.
- *Wick, A.A., Kneubuhler, L.K., **Courard-Hauri, D.**, and Summerville, K.S., 2005. *Movement Behavior of Grassland Butterflies in Mixed Habitats of Central Iowa*, Iowa Academy of Science Annual Conference, April 29-30, Cornell College, Mt. Vernon, IA.
- *Wick, A.A., Kneubuhler, L.K., Summerville, K.S., and **Courard-Hauri, D.**, 2005. *Movement Behavior of Grassland Butterflies in Mixed Habitats of Central Iowa*, Drake University Conference on Undergraduate Research in the Sciences, April 15, Drake University, Des Moines, IA.
- Courard-Hauri, D.**, 2005, *Teaching the Iowa Environment*, SENCER regional meeting, Loyola University, Chicago, IL.
- Courard-Hauri, D.**, 2005, *Emerging Model Presentation: Nutrition and Wellness and the Iowa Environment*, SENCER Annual Meeting, Santa Clara University, Santa Clara, CA.

Courard-Hauri, D., 2004, *The Use of Monte Carlo Methods for the Incorporation of Behavioral Information into Realistic Economic Models*, International Society for Ecological Economics Biennial Conference, July 11-14, Montreal, Canada. Behavioral Economics and Game Theory Session Chair.

Courard-Hauri, D., 2002, *A Novel Technique for the Automatic Generation of Dynamic Atmospheric Models*, 12th Annual Iowa Space Grant Conference, December 6, Iowa Valley Community College, Marshalltown, Iowa.

*Heule, R., and **Courard-Hauri, D.**, 2002, *The use of Simulated Annealing in Automatic Model Generation*, 12th Annual Iowa Space Grant Conference, December 6, Iowa Valley Community College, Marshalltown, Iowa.

REPORTS

Courard-Hauri, D., 2005, Butterfly Movement Dynamics in Kuehn Conservation Area, Dallas County, IA. Report to the Iowa Academy of Science.

Courard-Hauri, D., 2004, Expert Opinion in *Northeast Iowa Citizens for Clean Water vs. State of Iowa*, Polk County District Court (Affidavit, February 2005)

Courard-Hauri, D., 2002, The Automatic Generation of Dynamic Atmospheric Models, Report to the Iowa Space Grant Consortium.

INVITED PRESENTATIONS

“A Universe that sparkles with awareness: An outsider’s view on panspsychism, patterns, and the hard problem of consciousness.” Humanities Center Colloquium, Drake University, October 16, 2016.

“Carbon Solutions: Saving the planet with or without the government.” March 7 2013, ciWeek, Des Moines Community College.

“Health and Ecosystems in a Changing Climate.” Heartland Global Health Conference, August 14, 2012, Des Moines University.

“Happiness, Income, and Overconsumption: Combining Hedonic Psychology with Monte Carlo Modeling” Dartmouth College, January 24, 2008.

“Happiness, Income, and Overconsumption: Combining Hedonic Psychology with Monte Carlo Modeling” Drake University Science Colloquium Series, November 11, 2005.

“The Movement Behavior of Grassland Butterflies” Drake University Biology Department Seminar, 2004.

“Chemotaxis in *E. coli*: What Can We Learn From a Computer Model?” Drake University Biology Department Seminar, 2001.

“Climate Instabilities in the Late Pleistocene to Early Holocene, and Implications for Predictions of Linear Climate Change” Resources for the Future, August 5, 1997.

“A Model of Excitation and Adaptation in Bacterial Chemotaxis” Georgetown University Department of Chemistry, November 10, 1997.

GRANTS AWARDED

2016-2017 *Assessing, Collaborating, and Empowering Water Quality in Rural Uganda*. Nelson Institute. (With Megan Lindmark, Hayley LeBlanc, Cassity Guitierrez, Amahia Mallea, Jimmy Senteza, and Peter Levi). \$30,000

2015: *The Effect of Income on Willingness to Accept Compensation for Increased Statistical Risk*. DUSCI Research Grant. \$3000.

2014-2015: *Environmental Learning Center Ecological Restoration*. State Farm Youth Activities Grant (Faculty director, with students Emily Wilkins, Jenna Pries, Ryan Berry, and Hillary Johnson). \$67,595.

2013: *STEM Curriculum Development: Sophomore-Level Case Study Analysis*. Iowa Space Grant Consortium. \$4961.

2013: *Internationalizing Academic Programs*. Drake International Office (with Keith Summerville and Kathryn Szramek). \$6574.

2011-2012: *Sowing Sustainability: The Urban Youth Garden Classroom*. State Farm Youth Activities Grant (Faculty director, with students Matthew Prather, Cara Pratt, Rachel Stern, and April Hansen). \$44,544.

2011: *Carbon Sequestration in Rwanda's Gishwati Forest Reserve*. Arts and Sciences Faculty Development Grant for Undergraduate Research. \$1962

2010-2011: *Choice and Group Polarization in the Face of Imperfect External Data*. Drake University Provost's Grant. \$3000.

2005-2006: *Seasonal movement behavior of non-migratory grassland butterflies*. Drake University Internal Grant. \$2400.

2004-2005: *Movement behavior of grassland butterflies in mixed habitat of central Iowa*. Iowa Academy of Sciences. \$4610.

2004-2005: *Movement behavior of grassland butterflies in Iowa*. Drake University Internal Grant. \$2000.

2001-2002: *Development of a Novel Technique for the Automatic Generation of Dynamic Atmospheric Models*. Iowa Space Grant Consortium. \$10,000.

OTHER

- **Winner, Olson Outstanding Global Service-Learning Faculty/Staff Award, 2014.** This is a university-wide award.
- **Professional Associations:** American Association for the Advancement of Science; International Society for Ecological Economics; Iowa Academy of Science.
- **University Service:** Current: Faculty Senate President (2017-2018), Chair, Environmental Science and Policy Program; Arts and Sciences Council; Co-Chair, University Sustainability Committee; Past: Faculty Senate Vice President; Arts and Sciences Promotion and Tenure Committee; Chair, Arts and Sciences Cabinet; Chair, Arts and Sciences Council; Chair of the Institutional Animal Care and Use Committee; Chair, Environmental Oversight Committee; Chair, Arts and Sciences Cabinet and Council; Faculty Senate Executive Committee; Honors Board; Drake Neighborhood Improvement Task Force; Buildings and Grounds Committee.
- **External Service:** Drake Neighborhood Association (secretary); Des Moines Plan and Zoning commission.
- **Environmental Consulting:** Expert witness, Northeast Iowa Citizens for Clean Water vs. State of Iowa (Polk County District Court, 2004-2005).