

MICHAEL SPRINGBORN

Assistant Professor
Department of Environmental Science and Policy
University of California, Davis
Phone: 530.752.5244
Email: mspringborn@ucdavis.edu

EDUCATION

- Ph.D. Environmental Science and Management** (2008)
Economics and Environmental Science Training Program
Donald Bren School of Environmental Science and Management
University of California, Santa Barbara
- M.A. Economics**, University of California, Santa Barbara (2004)
- B.A. Psychology**, University of Colorado, Boulder (1999)

AWARDS

- Biodiversity and Ecosystem Services Training Network (BESTNet) fellow (2007)
- Selected participant and best student paper honor at the European Summer School in Resource and Environmental Economics, Venice International University (2007)
- Selected National Science Foundation IGERT fellow, U.C. Santa Barbara (2003-2008)

PUBLICATIONS

Michael Springborn, Christopher J. Costello, and Peyton Ferrier. "Optimal random exploration for trade-related non-indigenous species risk." *Bioinvasions and Globalization: Ecology, Economics, Management, and Policy*, ed. C. Perrings, H. Mooney and M. Williamson, Oxford University Press, Oxford, *in press*.

Michael Springborn, Christopher J. Costello and Carol McAusland. "Policy and risk processes of trade-related biological invasions." U.S. Department of Agriculture, Economics Research Report, June 2008.

Christopher J. Costello, Michael Springborn, Carol McAusland, and Andy Solow. "Unintended biological invasions: Does risk vary by trading partner?" *Journal of Environmental Economics and Management*, 54(3), 2007, 262-276.

MANUSCRIPTS IN PROGRESS

Michael Springborn. "Bayesian adaptive management with learning."

Michael Springborn. "Capacity, intelligence or awareness? Optimal investment, R&D and threat assessment for stochastic environmental risks."

Carolyn Fischer and Michael Springborn. "Emissions Targets and the Real Business Cycle"

Michael Springborn, Michael Bliss Singer and Thomas Dunne. "A Mass Balance Analysis of Total Mercury Flux Through a Large, Managed Floodplain."

RESEARCH EXPERIENCE

Optimal Bayesian adaptive management with learning (1/07 – 6/08)

Research with Associate Professor of Economics, Christopher J. Costello

Donald Bren School of Environmental Science and Management, U.C. Santa Barbara

Wrote and received a \$19,000 grant from the U.S. Department of Agriculture to study "Optimal

Profiling with Learning in Border Inspections for Sanitary/Phytosanitary Risks in Agricultural Imports.”
Extended a Bayesian multi-armed bandit framework to achieve an optimal balance between learning about and mitigating uncertain import contamination risk.

Invasive species risk from trade (2/04 - 5/07)

Research with Associate Professor of Economics, Christopher J. Costello

Donald Bren School of Environmental Science and Management, U.C. Santa Barbara

Conducted a maximum likelihood estimation of region-specific parameters of an import-invasion discovery process using historical data on imports and invasive species discoveries.

Floodplain dynamics of mercury transport (6/04 - 5/07)

Independent project advised by Professor of Hydrology, Thomas Dunne

Donald Bren School of Environmental Science and Management, U.C. Santa Barbara

Conducted a mass balance analysis of total mercury flux through a large, managed floodplain based on estimated statistical relationships between total mercury concentration and water flow.

Research intern (6/05 - 9/05)

Research with Resources for the Future Fellow, Carolyn Fischer

Resources for the Future, Washington, D.C.

Research assistant (5/98 - 12/98)

Research with Professor of Pharmacogenetics, Jeanne M. Wehner

Institute for Behavioral Genetics, University of Colorado, Boulder

Research assistant (1/97 - 5/97)

Research with Assistant Professor of Psychology, Megan Lewis

Institute of Behavioral Science, University of Colorado, Boulder

PRESENTATIONS

International Symposium on New Developments in Environmental Economics, Tokyo, Japan, November, 2008. “Bayesian adaptive management with learning.”

2008 AAEA & ACCI Joint Annual Meeting, Orlando, Florida, July 2008. “Policies and processes of environmental risk.”

16th EAERE Annual Conference, Gothenburg, Sweden, June 2008. “Bayesian adaptive management with learning.”

Economic and Ecological Science and Management of Invasive Species, Tempe, Arizona, October 2007. “Bayesian profiling with learning.”

CU (University of Colorado) Environmental and Resource Economics Workshop, Vail, Colorado, September 2007. “Bayesian profiling with learning.”

European Summer School in Resource and Environmental Economics, Venice, Italy, June 2007. “Unintended biological invasions: Does risk vary by trading partner?”

15th EAERE Annual Conference, Thessaloniki, Greece, June 2007. “Optimal mitigation and R&D policy for stochastic environmental threats”

15th EAERE Annual Conference, Thessaloniki, Greece, June 2007. “Unintended biological invasions: Does risk vary by trading partner?”

9th Biennial Conference of International Society for Ecological Economics, New Delhi, India, December 2006. “Research versus development: optimal policy for stochastic environmental threats.”

9th Biennial Conference of International Society for Ecological Economics, New Delhi, India, December 2006. “Unintended biological invasions: Does risk vary by trading partner?”

8th Occasional California Workshop on Environmental and Resource Economics, October 2005. “Unintended biological invasions: Does risk vary by trading partner?”

Association of Environmental and Resource Economists, Natural Resources at Risk workshop, June 2005. “International trade and exotic species introductions: impacts by region of origin.”

National Science Foundation, IGERT Program workshop, May 2005 (poster session). “International trade and exotic species introductions: impacts by region of origin.”

American Geophysical Union, Joint Assembly Meeting, May 2005 (poster session).
“A mass balance analysis of total mercury flux through a large, managed floodplain.”

ACADEMIC EXPERIENCE

Assistant Professor - Department of Environmental Science and Policy, U.C. Davis (2008-present)

Instructor - Environmental Policy and Economics, U.C. Santa Barbara (2007-2008)

Teaching Assistant – Introduction to Psychology, University of Colorado (1999)

Assistant Teaching Assistant - Deviance in U.S. Society, University of Colorado (1997)

OTHER PROFESSIONAL ACTIVITIES

Service

Member, National Center for Ecological Analysis and Synthesis, working group on “Effects of trade policy on management of non-native forest pests and pathogens” (2008-2009).

Member, working group on “Synthesizing and Predicting Infectious Disease while accounting for Endogenous Risk (SPIDER)” supported by the National Institute for Mathematical and Biological Synthesis (NIMBioS) (2009).

Referee activity

Journal of Environmental Economics and Management (2007-2009); *Mathematical Biosciences* (2008-2009); *Journal of Environmental Management* (2009), *Bioeconomics of Invasive Species: Integrating Ecology, Economics, Policy & Management* (2008, book chapter).

Reviewer

U.S. Department of Agriculture, Economic Research Service contractor report (2007)

ADDITIONAL PROFESSIONAL EMPLOYMENT

Photovoltaic Efficiency Analyst (1/06-3/06)

Consultant to NGEN Partners, Santa Barbara, CA

Accounts Receivable Manager and Sales Supervisor (9/99-8/02)

McMaster-Carr Industrial Supply Company, Atlanta, GA