Charles B. Sims

Howard H. Baker Jr. Center for Public Policy

Department of Economics

University of Tennessee - Knoxville

1640 Cumberland Ave Knoxville, TN 37996 Phone: 865.974.3825 Fax: 865.974.8777 Email: cbsims@utk.edu

RESEARCH INTERESTS

General: Applied Microeconomic Theory

Focus: Management of natural resources, coupled human and natural systems, risk and uncertainty, invasive species, endangered species, public land management, optimal control theory, dynamic programming, real options, computable general equilibrium

ACADEMIC POSITIONS AND PROFESSIONAL AFFILIATIONS

2013-Present	Faculty Fellow, Howard H. Baker Jr. Center for Public Policy
2017-Present	Associate Professor, Department of Economics, University of Tennessee
2013-2017	Assistant Professor, Department of Economics, University of Tennessee
2009-2013	Assistant Professor, Department of Applied Economics, Utah State
	University
2006-2009	Graduate Teaching and Research Assistant, Department of Economics and
	Finance, University of Wyoming
2004-2005	Research Associate, Department of Forestry, Wildlife & Fisheries,
	University of Tennessee
2002-2004	Graduate Teaching and Research Assistant, Department of Forestry,
	Wildlife & Fisheries, University of Tennessee

EDUCATION

PhD Economics University of Wyoming, 2009

Advisors: David Finnoff and Jason Shogren

M.S. Forestry (Environmental Policy minor) University of Tennessee-Knoxville, 2004

Advisor: Donald G. Hodges

B.S. Forest Resource Management University of Tennessee-Knoxville, 2001

RESEARCH

Editorial Positions

Special Issue Guest Editor, Journal of Economic Behavior & Organization, 2016

Journal Articles

- 22. **Sims, C.**, D. Finnoff, J. Shogren. Taking One For the Team: Is collective action more responsive to ecological change? *Environmental and Resource Economics* forthcoming.
- 21. Heines, B., S. Lenhart, C. Sims. 2018. Assessing the economic tradeoffs between prevention and suppression of forest fires. *Natural Resource Modeling* 31(1): e12159.

- 20. LaRiviere, J., D. Kling, J. Sanchirico, C. Sims, M. Springborn. 2018. Characterizing Uncertainty and Learning in the Economics of Resource and Environmental Management. *Review of Environmental Economics and Policy* 12(1): 92-112.
- 19. **Sims, C.**, D. Finnoff, A. Hastings, J. Hochard. 2017. Listing and delisting thresholds under the Endangered Species Act. *American Journal of Agricultural Economics* 99(3): 549-570.
- 18. **Sims, C.**, D. Finnoff, C. F. Mason. 2016. Thresholds, tipping points, and random events in dynamic economic systems. *Journal of Economic Behavior & Organization* 132(B): 1-4.
- 17. **Sims, C.**, D. Finnoff, S. O'Regan. 2016. Public control of rational and unpredictable epidemics. *Journal of Economic Behavior & Organization* 132(B): 161-176.
- 16. **Sims, C.**, D. Finnoff. 2016. Opposing irreversibilities and tipping point uncertainty. *Journal of the Association of Environmental and Resource Economists* 3(4): 985-1022.
- 15. Burton, M., C. Sims. 2016 Understanding Railroad Investment Behaviors, Regulatory Processes, and Related Implications for Efficient Industry Oversight. *Review of Industrial Organization* 49(2): 263-288.
- 14. Liu, Y., C. Sims. 2016. Spatial-dynamic externalities and coordination in invasive species control. *Resource and Energy Economics* 44: 23-38.
- 13. **Sims, C.**, D. Finnoff, J. Shogren. 2016. Bioeconomics of Invasive Species: Using Real Options Theory to Integrate Ecology, Economics, and Risk Management. *Food Security* 8(1): 61-70.
- 12. Aadland, D., C. Sims, D. Finnoff. 2015. Spatial Dynamics of Optimal Management in Bioeconomic Systems. *Computational Economics* 45(4): 545-577.
- 11. **Sims, C.**, D. Aadland, J. Powell, D. Finnoff, and B. Crabb. 2014. Complementarity in the provision of ecosystem services reduces the cost of mitigating amplified natural disturbance events. *Proceedings of the National Academy of Sciences* 111(47): 16718-16723.
- 10. Caplan, A. J., **C. Sims**, E. Anderson. 2014. Measuring the Environmental Cost of Hypocrisy, *Ecological Economics* 108: 124-135.
- 9. **Sims, C.**, D. Finnoff. 2013. When is a "wait and see" approach to invasive species justified? *Resource and Energy Economics* 35(3): 235-255.
- 8. **Sims, C.** 2013. Influencing natural forest disturbance through timber harvesting: Tradeoffs among disturbance processes, forest values, and timber condition. *American Journal of Agricultural Economics* 95(4): 992-1008.
- 7. **Sims, C.**, D. Aadland, D. Finnoff, J. Powell. 2013. How Ecosystem Service Provision Can Increase Forest Mortality from Insect Outbreaks. *Land Economics*. 89(1): 154-176.
- 6. **Sims, C.** 2013. Hypothetical Market Familiarity and the Disconnect Between Stated and Observed Values for Green Energy. *International Journal of Energy Economics and Policy*. 3(1): 10-19.

- 5. **Sims, C.,** D. Finnoff. 2012. The role of spatial scale in the timing of uncertain environmental policy. *Journal of Economic Dynamics and Control*. 36(3): 369-382.
- 4. **Sims, C.** 2011. Optimal timing of salvage harvest in response to a stochastic infestation. *Natural Resource Modeling* 24(3): 383-408.
- 3. **Sims, C.**, D. Aadland, D. Finnoff. 2010. A Dynamic Bioeconomic Analysis of Mountain Pine Beetle Epidemics. *Journal of Economic Dynamics and Control* 34(12): 2407-2419.
- 2. Finnoff, D., C. McIntosh, J. Shogren, C. Sims, T. Warziniack. 2010. Invasive Species and Endogenous Risk. *Annual Review of Resource Economics* 2: 77-100.
- 1. **Sims C. B.**, D. G. Hodges, J. M. Fly, B. Stephens. 2005. Modeling acceptance of a shuttle system in the Great Smoky Mountains National Park. *Journal of Park and Recreation Administration* 23:25–44.

Book Chapters

- 2. Bossenbroek, J., A. Croskey, D. Finnoff, L. Iverson, S. McDermott, A. Prasad, C. Sims, D. Sydnor. "Evaluating the Economic Costs and Benefits of Slowing the Spread of Emerald Ash Borer in Ohio and Michigan", in Keller, R., Cadotte, M., Sandiford, G. (Eds.), Invasive Species in a Globalized World. University of Chicago Press 2014.
- 1. Finnoff, D., R. Horan, S. McDermott, **C. Sims**, J. Shogren. Economic Control of Invasive Species, in Levin, S (Ed.), <u>Encyclopedia of Biodiversity 2nd Ed.</u> Elsevier/Academic Press 2013.

Working Papers

- "Climate forecasts and flood mitigation investments" with Sarah Null.
- "Wolf and Elk Management in a Spatial Predator-Prey Ecosystem" with David Aadland, David Finnoff, and Jacob Hochard.
- "Rules of thumb for diversifying risk in invasive species control programs" with Amy Ando and Payal Shah
- "To Frack or Not to Frack: Option Value Analysis on the U.S. Natural Gas Market" with Rebecca Davis
- "Fuel switching in electricity generation" with Scott Holladay and Rebecca Davis
- "Hurry up or wait: The effect of climate change and variability on the timing of private adaptation" with Sarah Null and Josue Medellin-Azuara
- "Policy uncertainty and the optimal investment decisions of second-generation biofuel producers" with Evan Markel and Burton English
- "Come on feel the noise: biological foundations in stochastic bioeconomic models" with Richard Horan and Ben Meadows
- "Using agent-based computational economics to understand the evolution of the electric grid in response to increased penetration of distributed solar generation" with Islam El-adaway, Mohamed S. Eid, and Yinan Liu

Research in Progress

- "The economics of dam removal" with Sarah Null
- "Complementarities in the joint production of forest ecosystem services" with Travis Warziniack and Yinan Liu
- "Reconciling methods for measuring U.S. oil dependence costs" with David Greene
- "Land conservation with market and climate uncertainty" with Paul Armsworth, Seong-Hoon Cho, Xingli Giam, and Mona Papes.

Conference and Workshop Presentations

- Hurry up or wait: The effect of climate change and variability on the timing of private Adaptation. Southern Economic Association Annual Meeting: Tampa, FL, November 17-19, 2017.
- Rules of thumb for diversifying risk in invasive species control programs. International Union of Forest Research Organizations Congress: Freiburg, Germany, September 18-22, 2017.
- Hurry up or wait: The effect of climate change and variability on the timing of private adaptation. Agricultural and Applied Economics Association (AAEA) Annual Meeting: Chicago, IL, July 30-August 1, 2017.
- Understanding the impact of distributed generation: An agent-based computational economics approach to investigating dynamic human behavior of electric utility customers. Agent-Based Modeling 17: San Diego, CA, April 20-22, 2017.
- The burden of success: Who should manage species removed from the endangered species list? Southern Economic Association Annual Meeting: Washington, DC, November 19-21, 2016.
- Public control of rational and unpredictable epidemics. Association of Environmental and Resource Economists (AERE) Summer Conference: Breckenridge, CO, June 9-11, 2016.
- Motivations for energy efficiency programs. Energy Efficiency, Conservation & Low-Income Households Workshop: Knoxville, TN, March 31, 2016.
- Assessing the economic tradeoffs between prevention and suppression of forest fires. Southern Economic Association Annual Meeting: New Orleans, LA, November 21-23, 2015.
- Taking one for the team: Is collective action more responsive to ecological change? BIOECON Annual Conference: Cambridge, UK, September 13-15, 2015.
- Rational and unpredictable epidemics. Thresholds and Tipping Points in Dynamic Economic Systems Workshop: Knoxville, TN, July 27-28, 2015.
- Rational stochastic epidemics and the optimal timing of public health interventions. Association of Environmental and Resource Economists (AERE) Summer Conference: San Diego, CA, June 3-5, 2015.
- Opposing irreversibilities in environmental policy: Avoiding the point of no return or delaying the inevitable. Southern Economic Association Annual Meeting: Atlanta, GA, November 22-24, 2014.

- Taking one for the team: Is collective action more responsive to ecological change?. Fifth World Congress of Environmental and Resource Economists, Istanbul, Turkey, June 28-July 2, 2014.
- Linking listing and delisting decisions under the Endangered Species Act: A case study of gray wolves in the Northern Rocky Mountains. Fifth World Congress of Environmental and Resource Economists, Istanbul, Turkey, June 28-July 2, 2014.
- Linking listing and delisting decisions for endangered species: A case study of gray wolves in the Northern Rocky Mountains. Western Agricultural Economics Association Conference: Colorado Springs, CO, June 22-24, 2014.
- Water-saving infrastructure investment under hydrologic uncertainty. University of Tennessee Watershed Symposium: Knoxville, TN, February 18, 2014.
- How Ecosystem Service Provision Can Increase Forest Mortality from Insect Outbreaks. China-US Joint Research Center for Ecosystem and Environmental Change: Gatlinburg, TN, Nov 18-19, 2013.
- Opposing irreversibilities in environmental policy: Avoiding the point of no return or delaying the inevitable. Association of Environmental and Resource Economists (AERE) Summer Conference: Banff, Alberta, Canada, June 6-8, 2013.
- Spatial dynamics of mountain pine beetle outbreaks with optimal forest management. BESTNet Workshop: Princeton, NJ, April 25-26, 2013.
- How Ecosystem Service Provision Can Increase Forest Mortality from Insect Outbreaks. Ecosystem Services Partnership Conference: Portland, OR, July31-August 4, 2012.
- Spatial dynamics of optimal management in a predator-prey system: An application to mountain pine beetle epidemics. Association of Environmental and Resource Economists (AERE) Summer Conference: Asheville, NC, June 3-5, 2012.
- Salvage harvesting following natural forest disturbance: The importance of disturbance characteristics in gauging management response. Association of Environmental and Resource Economists (AERE) Sumer Conference: Asheville, NC, June 3-5, 2012.
- Optimal Timing of Salvage Harvest in Response to Stochastic Infestation. 86th Annual Conference of the Western Economics Association: San Diego, CA, June 29-July 3, 2011.
- The Role of Spatial Scale in the Timing of Uncertain Environmental Policy. American Economic Association Annual Meeting: Denver, CO, January 7-9, 2011.
- The Role of Environmental and Economic Uncertainty in Invasive Species Control Decisions. Fourth World Congress of Environmental and Resource Economists: Montreal, Canada, June 28-July 2, 2010.
- Optimal Control of a Bounded Invasive Species Diffusion Process: An Application to the Emerald Ash Borer. Fourth World Congress of Environmental and Resource Economists: Montreal, Canada, June 28-July 2, 2010.
- Optimal Stochastic Environmental Policies: Implications for Invasive Species

- Management. 52nd Annual Conference on Great Lakes Research: Toledo, OH, May 18-22, 2009.
- The Disconnect Between Hypothetical and Observed Values for green energy in Tennessee. Int. Symposium on Society and Resource Management: Park City, UT. June 17-21, 2007.
- Assessing the Role of Outdoor Recreation in Rural Economic Development: A Case Study for the Obed Wild and Scenic River, TN. Int. Symposium on Society and Resource Management: Keystone, CO, June 2-6, 2004.
- Linking outdoor recreation and economic development: A feasibility assessment of the Obed Wild and Scenic River, Tennessee. Social Aspects and Recreation Research Symposium: San Francisco, CA, Feb 4-6, 2004.
- Travel cost modeling of the demand for rock climbing: An application to the Obed Wild and Scenic River. Annual Southern Forest Economics Workshop: St. Augustine. March 14-16, 2004.
- Modeling the demand for and value of OHV recreation in Tennessee. Southern Forest Economics Workers Annual Meeting: New Orleans, LA, March 17-18, 2003
- Demand and value of off-highway vehicle recreation in Tennessee. Annual Southern Forest Economics Workshop: New Orleans, LA, March 17-18, 2003.

Invited Presentations and Seminars

- Uncertainty and irreversibility in human-environment systems. University of Toronto, Toronto, ON, March 2018.
- Hurry up or wait: The effect of climate change and variability on the timing of private adaptation. Mississippi State University: Starkville, MS, October 2017.
- Do climate change forecasts encourage private adaptation?: Water-saving irrigation investments under uncertainty. East Carolina University: Greenville, NC, February 2017.
- The burden of success: Who should manage species removed from the endangered species list? Yale University: New Haven, CT, November 2016.
- Opposing irreversibilities and tipping point uncertainty. Michigan State University: East Lansing, MI, January 2016.
- Economic Potential of South Knoxville's Urban Wilderness. Great Smoky Mountains Regional Greenways Council: Knoxville, TN, January 2016.
- Linking listing and delisting decisions under the Endangered Species Act: A case study of gray wolves in the Northern Rocky Mountains. Appalachian State University: Boone, NC, February 2015.
- A Transitioning Energy Landscape in Tennessee. Tennessee Gas Association Conference: Knoxville, TN, October 2014.
- Taking one for the team: Is collective action more responsive to ecological change?. Environmental Protection Agency: Washington, D.C., September 17, 2014.
- Complementarity in the provision of ecosystem services reduces the cost of mitigating amplified natural disturbance events. Virginia Tech: Blacksburg, VA, May 2014.

- Complementarity in the provision of ecosystem services reduces the cost of mitigating amplified natural disturbance events. Environmental Sciences Division, ORNL: Oak Ridge, TN, April 2014.
- How ecosystem service provision can increase forest mortality from insect outbreaks. USDA Forest Service: Asheville, NC, November 2013.
- When is a "wait and see" approach to invasive species justified? University of Tennessee: Knoxville, TN, January 2013
- Spatial dynamics of mountain pine beetle epidemics with optimal forest management. Colorado State University: Fort Collins, CO, January 2013.
- Regional Economic Impacts of Coal Bed Methane Water Management in the Powder River Basin of Wyoming. Utah State University: Logan, UT, November, 2010.
- A Dynamic Economic Analysis of the Mountain Pine Beetle Epidemic. University of Tennessee Natural Resource Policy Center Seminar Series: Knoxville, TN, August, 2008.

White Papers, Reports and Popular Press

- **Sims, C.**, Islam El-adaway, Mohamed S. Eid, Yinan Liu. 2018. Using agent-based computational economics to understand the evolution of the electric grid in response to increased penetration of distributed solar generation. The Howard H. Baker Jr. Center for Public Policy, Baker White Paper 1:18.
- **Sims, C.** 2018. Reconciling Methods for Measuring U.S. Oil Dependence Costs. The Howard H. Baker Jr. Center for Public Policy, Baker White Paper 2:18.
- Kim, Bongkyun and C. Sims. 2016. Why is Energy Efficiency Such a Hard Sell? The Howard H. Baker Jr. Center for Public Policy, Baker White Paper 1:16.
- **Sims, C.** Bongkyun Kim, and Matthew Murray. 2016. The Economic Impact of Open Space on Residential Property Values in Tennessee. The Howard H. Baker Jr. Center for Public Policy, Baker Reports 6:16
- **Sims, C.,** Bongkyun Kim, and Jean Peretz. 2016. An Energy Scorecard for the American States: States ranked according to energy, economy, and environment. The Howard H. Baker Jr. Center for Public Policy, Baker Reports 3.16
- **Sims, C.** 2016. The Paris Climate Change Talks: What Did the President Promise and When Did He Promise It? The Howard H. Baker Jr. Center for Public Policy, Policy Brief 1.16.
- **Sims, C**. 2015. The Second Coming of the U.S. as an Oil Powerhouse. *Oil and Gas Monitor*, November 15, 2015.
- **Sims, C.** 2015. How Did Tennessee Fare in the Final Clean Power Plan? The Howard H. Baker Jr. Center for Public Policy, On Point 3:15.
- **Sims, C.**, Rebecca Davis, Bongkyun Kim. 2015. Economic Potential of South Knoxville's Urban Wilderness. The Howard H. Baker Jr. Center for Public Policy, White Paper 2:15.
- Murray, M. C. Sims, Rebecca Davis, Bongkyun Kim. 2015. Coal Mining and Tourism as

- Engines of Economics Development for Campbell County and Claiborne County, Tennessee. The Howard H. Baker Jr. Center for Public Policy, Project Report 2:15
- Murray, M., C. Sims, B. Tonn, J. Peretz, J. Wallace, R. Hansen, L. Alvarado. 2014. A Profile of the Energy Sector in Tennessee. The Howard H. Baker Jr. Center for Public Policy, Project Report 2:14.
- Sims, C. 2014. What Are the Benefits of Federal Carbon Policies and How Well Do We Know Them? The Howard H. Baker Jr. Center for Public Policy, Policy Brief 3.14
- **Sims, C.** 2013. Modeling the coupled nature of forest management and forest disturbance regimes impacted by climate change. Final Report submitted to Utah Agricultural Experiment Station.
- Jackson-Smith, D. et al. 2012. WSC Category 1 Hydrologic and Ecological Impacts of Changes in Human Water Resources Management in Response to Climate Change and Urbanization. Final Report submitted to the National Science Foundation.
- Coupal, R., D. Finnoff, C. Sims. 2008. Regional Economic Impacts of Coal Bed Methane Water Management. Final Report submitted to the Department of Energy.
- Hodges, D. G., C. B. Sims, and A. R. Wells. 2008. Incorporating non-timber objectives in forest management planning on private lands: A case study of the Cumberland Plateau, Tennessee, USA. In: Managerial Economics and Accounting in an Evolving Paradigm of Forest Management, Proceedings of International Symposium organized by IUFRO Group 4.05.00, S. Kant, W. Tzschukpe, J-L Peyron, and H. A. Jobstl, eds. Schriftenreiche der Hochschule für Forstwirtscheft Rottenburg, Band Nr. 22. Pp. 174-185.
- **Sims, C. B.** and D. G. Hodges. 2004. Use, Demographics, and Economic Impacts of Rock Climbing in the Obed Wild and Scenic River Area. Final Report submitted to National Park Service.

Funded Grants and Contracts

"Optimal spatial targeting of payments for forest-based ecosystem services under climate and market risks" USDA-AFRI: \$336,474, Duration: 1/1/2018-12/31/2020

"Integrating Human Health and Well-Being with Ecosystem Services" EPA-STAR: \$399,226, Duration: 10/17-9/20.

"To Quantify the Economic Value of Protected Open Space in the Cumberland Region" Cumberland Region Tomorrow, Amount: \$79,121, Duration: 4/1/17-12/31/17.

"An Economic Analysis of Appalachian Coal Industry Ecosystems" Appalachian Regional Commission, Amount: \$349,999, Duration: 10/16-6/17.

- "Complementarities and tradeoffs between ecosystem service provision and wildfire in the Northern Rockies" USDA Forest Service Rocky Mountain Research Station, Amount Awarded: \$209,408, Duration: 10/16-9/19.
- "Reconciling Methods for Measuring U.S. Oil Dependence" Oak Ridge National Laboratory, Amount Awarded: \$24,998, Duration: 6/16-12/16.
- "Toward a practical application of a real options approach in the regulated evaluation of railroad capital costs" The Association of American Railroads, Amount Awarded: \$60,000, Duration: 4/16-12/16.
- "A Hedonic Analysis of the Economic Value of Open Space in Tennessee" Tennessee Advisory Commission on Intergovernmental Relations, Amount Awarded: \$49,854, Duration: 3/15-8/16.
- "UCOR Economic Impact Study" URS | CH2M Oak Ridge, Amount Awarded: \$20,962, Duration: 4/15-8/15.
- "2015-2016 Energy and Environment Forum" Institute for Secure and Sustainable Environment, Amount Awarded: \$4,000, Duration: 8/15-5/16.
- "Understanding the impact of distributed generation on TVA" Tennessee Valley Authority, Amount Awarded: \$25,000, Duration: 9/15-11/16.
- "DOE Economic Impact Study" Department of Energy, Amount Awarded: \$15,000, Duration: 8/14-4/15
- "TN State Energy Plan" TN State Budget, Amount Awarded: \$19,000, Duration: 5/14-11/14.
- "Coal versus Tourism as Engines of Growth for Tennessee Counties" TN Department of Environment and Conservation, Amount Awarded: \$60,000, Duration: 6/14-11/14.
- "Energy and Environment Indicator Series" Tennessee Valley Authority, Amount Awarded: \$10,000.
- "iUTAH innovative Urban Transitions and Aridregion Hydro-sustainability" National Science Foundation, Amount Awarded: \$20,000,000, Duration: 8/1/12-8/1/17.
- "Managing Interacting Disturbances to Achieve Multiple Environmental Objectives" USDA Forest Service, Western Wildlands Environmental Threat Assessment Center, Amount Awarded: \$43,270, Duration: 9/1/12-8/30/14.

"Measuring the Environmental Cost of Hypocrisy" Utah Agricultural Experiment Station Competitive Grants Program, Amount Awarded: \$19,761, Duration: 6/1/12-6/30/14

"Modeling the Coupled Nature of Forest Management and Forest Disturbance Regimes Impacted by Climate Change" Utah Agricultural Experiment Station Competitive Grants Program, Amount Awarded: \$19,040, Duration: 6/1/11-6/30/13

"Hydrologic and Ecological Impacts of Changes in Human Water Resource Management in Response to Climate Change and Urbanization" National Science Foundation Water Sustainability and Climate Program, Amount Awarded: \$149,943, Duration: 9/1/10 - 9/1/11.

"Use, Demographics, and Economic Impacts of Rock Climbing in the Obed Wild and Scenic River Area" National Park Service, Amount Awarded: \$12,465, Duration: 9/01/02 – 8/31/04.

Other Funded Research

"The Role of Forest Management Objectives in Mountain Pine Beetle Outbreaks" Utah Agricultural Experiment Station, Amount Awarded: \$14,000, Duration: 11/1/09-11/1/14.

TEACHING AND ADVISING

Graduate Courses Taught

ECON 512 Microeconomic Theory II (Univ. of TN); ECON 677 Environmental and Natural Resource Economics (Univ. of TN); ECON 693 Baker Center Interdisciplinary Environmental and Energy Forum (Univ. of TN); APEC 6500 Natural Resource Economics (Utah State); APEC 6510 Environmental Economics (Utah State); APEC 7500 Natural Resource Economics (Utah State); APEC 7360 Mathematical Economics II (Utah State)

Undergraduate Courses Taught

ECON 362 Environmental and Natural Resource Policy (Univ. of TN); APEC 5560 Natural Resource and Environmental Economics (Utah State); ECON 440 Environmental Economics (Univ. of Wyoming)

Graduate Students Supervised as Advisor and Current Employment

Ben Meadows (PhD Economics – Tennessee), in progress
Rebecca Davis (PhD Economics – Tennessee), in progress
Augustina Odame (PhD Economics – Utah State), 2015, Post-doctoral Researcher - Yale
Yanxu Liu (PhD Economics – Utah State), 2013, Assistant Professor – Bethel College
Abhinav Pathak (MS Applied Economics – Utah State), 2011, Chase Bank

Dissertation Committee Member

Binod Chapagain (PhD Forestry, Wildlife & Fisheries – Tennessee), in progress; Mohamed Eid (PhD Civil and Environmental Engineering – Tennessee), 2017; Betsy Heines (PhD Mathematics – Tennessee), 2017; Evan Markel (PhD Agricultural and Resource Economics – Tennessee), 2017; Andrea Armstrong (PhD Sociology – Utah State), 2014; Lassina Coulibaly (PhD Economics – Utah State), 2013

Thesis Committee Member

Anvar Suyundikov (MS Applied Economics – Utah State); Jarod Dunn (MS Applied Economics – Utah State); Elliot Anderson (MS Applied Economics – Utah State)

Undergraduate

Christina Gore (Economics - Tennessee); Brianna Lounsbury (Soil Science - Tennessee); Tyler Hounshell (College Scholars – Tennessee)

SERVICE

Professional Service

Referee for the following journals: Proceedings of the National Academy of Sciences, Journal of Public Economics, Journal of the Association of Environmental and Resource Economists, Journal of Economic Behavior and Organization, Journal of Economic Dynamics and Control, Economic Inquiry, Land Economics, Journal of Environmental Economics and Management, American Journal of Agricultural Economics, Ecological Economics, Resource and Energy Economics, Western Economics Forum, Environmental and Resource Economics, Journal of Agricultural and Resource Economics, Natural Resource Modeling, Forest Policy and Economics, Futures, Water Economics and Policy, Ecology Letters, Ecological Modelling, Society and Natural Resources, European Journal of Operational Research, Journal of Bioeconomics, Forest Science

Reviewer: National Science Foundation (US), Biotechnology and Biological Sciences Research Council (UK)

Discussant: Fifth World Congress of Environmental and Resource Economists 2014, Western Agricultural Economics Association Conference 2014, Annual Conference of the Western Economics Association 2011, American Economic Association Annual Meeting 2011, Fourth World Congress of Environmental and Resource Economists 2010

Award Committee: Western Agricultural Economics Association

Conference participant reviewer: Agricultural and Applied Economics Annual Meetings, Association of Environmental and Resource Economists Meetings

Departmental and College Service

Graduate policies committee (Univ. of TN); Microeconomics qualifier committee (Univ. of TN); Search committee (Univ. of TN); Graduate admissions committee (Utah State); ENR degree planning committee (Utah State); Search committee (Utah State)

University Service

Co-organizer: Working group on ecosystem federalism, Univ of TN, 2017-2018.

Independent study course on learning in economic models for Bredesen Center students

Organizing committee: Energy Efficiency, Conservation & Low-Income Households

Workshop, Univ. of TN, 2016

Organizing committee: Workshop on Threshold and Tipping Points, Univ. of TN, 2015

Judge: Baker Center Policy Challenge, Univ. of TN, 2015

Judge: Cynthia B. Peterson Poster Competition, Univ. of TN, 2015

Panelist: Journalist Workshop on Clear Air Policies, Univ. of TN, 2014

Organizing committee: Energy and Environment Forum, Univ. of TN, 2014-current

Assistant Professor Panelist: New Faculty Orientation, Univ. of TN, 2014

Panelist: 3rd Year Review Panel, Utah State, 2012

Graduate Student Poster Judge: Spring Runoff Conference, Utah State, 2012

Search committee: Department of Sociology, Social Work, and Anthropology, Utah State

Assistant Professor Panelist: New Faculty Teaching Academy, Utah State, 2011

HONORS AND AWARDS

U. of Tennessee Department of Economics Summer Research Award, 2016

U. of Tennessee Quest Scholar of the Week, October 9, 2105

U. of Tennessee Center for Transportation Research Fellow, 2015

Utah State University Ecology Center Fellow, 2011

U. of Wyoming Best Economics PhD Graduate Student Award, 2009

U. of Wyoming William E. Morgan Graduate Award, 2008

U. of Wyoming Environment and Natural Resources Plummer Scholarship, 2005-2008

AFFILIATIONS AND MEMBERSHIPS

American Economic Association

Association of Environmental and Resource Economists

Southern Economics Association