A. John Woodill

College of Earth, Ocean, and Atmospheric Sciences
104 CEOAS Administration Building
Oregon State University
Corvallis, OR, USA 97331

Phone: (858) 210 - 9667
Email: johnwoodill@gmail.com
Website: http://www.johnwoodill.com

EDUCATION

2018 Ph.D. Economics, University of Hawaii at Manoa
Fields: Environmental and Resource, International Trade and Macroeconomics, Finance

2015 M.A. Economics, University of Hawaii at Manoa

2013 B.A. Economics—Quantitative Analysis, San Diego State University, *Summa Cum Laude*

2010 A.S. Computer and Information Science, San Diego Mesa/City College

2004 Civil Engineer Journeyman, Community College of the Air Force

SCIENTIFIC EXPERTISE

I am an interdisciplinary economist with expertise in environmental, resource, agriculture, and fisheries economics, as well as food security, climate change, econometrics, and data science. I also have extensive knowledge in international and macroeconomics, finance, geospatial statistics, earth-system modeling, ecology, biological oceanography, complex systems, information theory, and entomology.

PROFESSIONAL APPOINTMENTS

2019—present **Postdoctoral Scholar,** College of Earth, Ocean, and Atmospheric Sciences
Oregon State University—Advisor: James R. Watson

2014—2018 **Graduate Research Assistant,** Natural Resources and Environmental Management
University of Hawaii at Manoa—Advisors: PingSun Leung and Stuart T. Nakamoto

2015 **Research Analyst,** Food and Agriculture Organization of the United Nations
University of Hawaii at Manoa—Advisor: Philippe Jeanneaux

2013 **Research Assistant,** San Diego State University—Advisor: Thitima Puttitanun

HONORS AND AWARDS

2018 Economic Department Travel Award - University of Hawaii

2018 College Travel Funds for Professional Development in Research
University of Hawaii

2018 Graduate Student Organization Travel Award - University of Hawaii

2015 Food and Agriculture Organization of the United Nations Travel Award
University of Hawaii

2013 Weintraub Paper Award—"Mining for Bitcoins: an Econometric Analysis."
San Diego State University

2011 Future Scholars Award - San Diego State University

PATENTS

Watson, James R., **Woodill, A. John**, Kavanaugh, Maria. "An Operational Forecasting System Based On Anomalous Behaviors In Complex Systems". U.S. Patent Application No. *******, May 20, 2020.

PEER REVIEWED PUBLICATIONS

In review

[7] Watson, James R. and **Woodill, A. John**. "Anticipating Illegal Maritime Activities from Anomalous Multiscale Fleet Behavior". In review at Conservation Letters. [Complex Systems / Fisheries]

[6] **Woodill, A. John,** Kavanaugh, Maria, Harte, Michael, and Watson, James R. "Predicting Illegal Fishing on the Patagonian Shelf." In review at Fish and Fisheries. [Machine Learning / Fisheries]

[5] **Woodill, A. John**, Nakamoto, S. T., Kawabata, A. M., Leung, PingSun. "Optimal Spraying and Harvesting Strategy to Combat CBB: A Dynamic Approach." In review at Journal of Agriculture and Food Research. [Decision Theory / Precision Agriculture]

Published

[4] **Woodill, A. John**, Nakamoto, Stuart T., Kawabata, Andrea M., Arita, Shawn, and Leung, PingSun. "The Impact of CBB on the Economics of Coffee Production in Hawai 'i: 2007–2012 USDA Census Analysis." *College of Tropical Agriculture and Human Resources, University of Hawaii at Manoa, Insect Pests,* IP-46 (May 2019). [Agriculture]

[3] **Woodill, A. John**, Nakamoto, S. T., Kawabata, A. M., Leung, PingSun. "To Spray or Not to Spray: A Decision Analysis of Coffee Berry Borer in Hawaii." *Insects* (2017): 1-16 [Decision Theory / Precision Agriculture]

[2] **Woodill, A. John**, Hemachandra, Dilini, Nakamoto, Stuart T., and Leung, PingSun. "The Economics of Coffee Production in Hawai'i." *Economic Issues* 25 (2014): 1-9. [Agriculture]

[1] Richardson, G. Manning, Bowers, Janet, **Woodill, A. John**, Barr, Joseph R., Gawron, Jean Mark, and Levine, Richard A. "Topic Models: A Tutorial with R." *International Journal of Semantic Computing* 8, no. 01 (2014): 85-98. [Natural Language Processing]

Working papers

Woodill, A. John "Estimate Temperature Exposure for the Contiguous United States from 1900-2013: A Relative Anomaly Spline Interpolation Technique." [Climate / Data Product]

Woodill, A. John "Nonlinear Temperature Effects and Short-run Adaptation of the American Dust Bowl" [Climate Econometrics / Agriculture]

Woodill, A. John and Roberts, Michael J. "Adaptation and the Envelope Theorem" [Climate Econometrics / Agriculture]

Woodill, A. John and Roberts, Michael J. "Adaptation to Climate Change: Disentangling Revenue and Crop Responses" [Climate Econometrics / Agriculture]

Villarino, Ernesto, Watson, James R., **Woodill, A. John**, Jonsson, Bror, Barton, Andrew D., Gasol, Josep M., Massana, Ramon, Giner, Caterina R., Salazar, Guillem, Duarte, Carlos, Irigoien, Xabier, Chust, Guillem. "Large-scale microbial connectivity across ocean depth." [Oceanography]

TEACHING

2020 **Guest Lecturer,** Geography 351 and 561—Climate Econometrics
Oregon State University

2017 **Graduate Student Instructor (Online),** Economics 358—Environmental Economics
University of Hawaii

2012 **Teaching Assistant**, Math 150—Calculus I
San Diego State University

PROFESSIONAL SERVICE

Chaired Sessions in Conferences

2018 **6th World Congress of Environmental and Resource Economists (WCERE)**
Dimensions of Adaptation and its Potential to Mitigate Harm to Agriculture
Co-host with Michael J. Roberts
University of Gothenburg, Sweden

Journal Referee

Journal of the European Economic Association, Environmental Research Letters, Agricultural and Forest Meteorology, Journal of Environmental Economics and Management, Nature Communications, Sustainability

Professional Memberships

Association of Environmental and Resource Economists, Agricultural & Applied Economics Association, American Geophysical Union

PRESENTATIONS

Seminars/Workshops

2019 Watson, James R. and **Woodill, A. John** "Anticipating Illegal Maritime Activities from Anomalous Multiscale Fleet Behavior." NASA Biodiversity and Ecological Forecasting Team Meeting, Washington D.C.

Woodill, A. John and Roberts, Michael J. "Adaptation and the Envelope Theorem." Applied Economics Working Group, Oregon State University.

2017 **Woodill A. John.** "Blinder-Oaxaca Decomposition Workshop." Applied Microeconomics Workshop, University of Hawaii at Manoa.

Woodill A. John. "Crop Choice and Climate Change." Applied Microeconomics Workshop, University of Hawaii at Manoa.

Woodill, A. John and Roberts, Michael J. "Adaptation Along the Envelope: Evidence from U.S. Agriculture." Seminar in Energy and Environmental Policy, University of Hawaii at Manoa.

2016 **Woodill A. John.** "Optimal Water Extraction in California's Central Valley Under Snow Pack Uncertainty." Applied Microeconomics Workshop, University of Hawaii at Manoa.

Woodill, A. John, Stuart T. Nakamoto, Andrea M. Kawabata, and PingSun Leung. "Decision Tree Analysis of Coffee Berry Borer in Hawaii." CTAHR/COE Student Research Symposium, University of Hawaii at Manoa.

2015 **Woodill, A. John**, Stuart T. Nakamoto, Andrea M. Kawabata, and PingSun Leung. "Decision Tree Analysis of Coffee Berry Borer in Hawaii." Seminar in Energy and Environmental Policy, University of Hawaii at Manoa.

Invited Presentation

2020 **Woodill, A. John,** Kavanaugh, Maria, Harte, Michael, and Watson, James R. "Predicting Illegal Fishing on the Patagonian Shelf.**"** Ocean Sciences, San Diego, CA.

2019 **Woodill, A. John,** Kavanaugh, Maria, Harte, Michael, and Watson, James R. "Predicting Illegal Fishing on the Patagonian Shelf.**"** AGU Fall conference, San Francisco, CA.

Woodill, A. John and Roberts, Michael J. "Adaptation and the Envelope Theorem." Association of Environmental and Resource Economists Summer Conference, Lake Tahoe, CA.

2018 **Woodill, A. John** and Roberts, Michael. J. "Adaptation to Climate Change: Disentangling Revenue and Crop Responses." World Congress of Environmental and Resource Economists, Gothenburg, Sweden

2016 **Woodill, A. John**, Stuart T. Nakamoto, Andrea M. Kawabata, and PingSun Leung. "Decision Tree Analysis of Coffee Berry Borer in Hawaii." Coffee Berry Borer Conference, Kona, Hawaii.

Woodill, A. John, Stuart T. Nakamoto, Andrea M. Kawabata, and PingSun Leung."Decision Tree Analysis of Coffee Berry Borer in Hawaii." Coffee Berry Borer Summit, CTAHR, Komohana Research and Extension Center, Hilo, Hawaii.

2015 **Woodill, A. John**, Stuart T. Nakamoto, Andrea M. Kawabata, and PingSun Leung. "CBB Decision Tree Model." VetAgro Seminar of EIDER/METAFORT Team, Clermont- Ferrand, France.

Woodill, A. John, Stuart T. Nakamoto, Andrea M. Kawabata, and PingSun Leung. "Geographical Indication of Kona Coffee." World Expo: Forum Origin, Diversity, and Territories, Milan, Italy.

Woodill, A. John, Stuart T. Nakamoto, Andrea M. Kawabata, and PingSun Leung. "Geographical Indication of Kona Coffee." Università Cattolica del Sacro Cuore of Piacenza, Piacenza, Italy.

TECHNICAL SKILLS

Statistical/Mathematical Methods

Non/Semi/Parametric Regressions, Machine/Deep Learning—Classification and Regression, Bayesian, Dynamic Programming, Stochastic Programming, Complex Systems, Information Theory, Agent-based Modeling, and Natural Language Processing

Programming/Statistical Languages: Python (10 yrs), R (10 yrs), STAN, STATA, SAS, SQL, Matlab, C/C++, Julia, Bash

Cloud Platforms: Google Cloud, Amazon Web Services, Microsoft Azure

Tools: ETL/Production Workflows, Docker, Kubernetes, Shiny, Flask, Dash, Plotly, Travis CI, Github Actions, Jupyter, git, LaTeX, Python-pypi, R-dev-tools