

A. John Woodill

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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 am also interested in international and macroeconomics, finance, geospatial statistics, and information theory.

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. 63/027,651 May 20, 2020.

PEER REVIEWED PUBLICATIONS

In review

- [8] 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." in review at Global Ecology and Biogeography [[Oceanography](#)]
- [7] Watson, James R., and **Woodill, A. John**. "Anticipating Illegal Maritime Activities from Anomalous Multiscale Fleet Behavior". In review at Fish and Fisheries. [[Complex Systems](#) / [Fisheries](#)]

Published

- [6] **Woodill, A. John**, Kavanaugh, Maria, Harte, Michael, and Watson, James R. "Ocean seascapes predict distant-water fishing vessel incursions into exclusive economic zones." Fish and Fisheries. (2021) [[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." *Journal of Agriculture and Food Research*. (2021) [Decision Theory / Precision Agriculture]
- [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 and Roberts, Michael J. "Adaptation and Nonlinear Temperature Effects: Second-Order Impacts of Climate Change that Cancel." [Climate Econometrics / Agriculture]

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

TEACHING

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- 2021 **Guest Lecturer**, Geography 361 and 561—Species Distribution Modeling
Oregon State University
- 2020 **Guest Lecturer**, Geography 361 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

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 (order of exp): Python, R, STAN, STATA, SAS, SQL, Matlab, C/C++, Julia, Bash

Cloud Platforms: Google Cloud, Amazon Web Services

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

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.