

Stan L Rhodes Jr.

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TOPIC EXPERTISE

- Computational social science
- Social-ecological systems
- Organizational and institutional analysis
- Resource governance
- Social hierarchies
- Social polarization and social identity

METHODS EXPERTISE

- Agent-based modeling, multi-agent systems
- Experimental games
- Text mining, topic modeling
- GIS
- Network analysis
- Machine learning, statistical learning

EDUCATION

Ph.D. in Environment and Society, 2017–May 2023 (expected), Utah State University, Logan, UT.

Co-advisors: Dr. Stefani Crabtree and Dr. Jacob Freeman.

Dissertation title: Exploring command hierarchy to further our computational understanding of social organizations within their environments

B.Sc. Psychology, 2002, University of Idaho, Moscow, ID.

B.A. English Literature, 2002, University of Idaho, Moscow, ID.

FUNDED RESEARCH ASSISTANTSHIPS

Spring 2022 to Summer 2022. Development of political polarization agent-based model, grant assistance, and research on hierarchical and organizational typologies. Supervisor: Dr. Stefani Crabtree.

Spring 2021 to Summer 2021. NSF Grant writing, book editing, and development of colorblind-friendly agent-based modeling methods. Supervisor: Dr. Stefani Crabtree.

Summer 2020, for NSF IBSS-L: General Intelligence, Social Intelligence, and Robust Cooperation in Social-Ecological Systems. Supervisor: Dr. Jacob Freeman.

Fall 2017 to Spring 2020, for NSF INFEWS Track 1: Mesoscale Data Fusion to Map and Model the U.S. Food-Energy-Water system (INFEWSion). Supervisor: Dr. Jacopo Baggio.

BOOK CHAPTERS

Rhodes, S.L. (2021). Making Colorblind-Friendly ABMs. In Romanowska, I., Wren, C. D., Crabtree, S. A., *Agent-Based Modeling for Archaeology* (pp. 379-394). United States: SFI Press.
<https://doi.org/10.37911/9781947864382>

PAPERS

Rhodes, S.L., Crabtree, S.A., Freeman, J. An agent-based model of hierarchical information-sharing organizations in asynchronous environments. *Journal of Artificial Societies and Social Simulation* (in final review).

Rhodes, S.L., Crabtree, S.A., Freeman, J. What is hierarchy in social science? A computer-aided systematic quantitative literature review. To be submitted to *PLOS ONE* in May 2023 (in prep).

Rhodes, S.L., Organizational Structure Change in U.S. Federal Agencies from 2004–2021. To be submitted to *Journal of Public Administration Research and Theory* in May 2023 (in prep).

Rhodes, S.L., Otis-Laperrière, J., Pattenden, E., Valencia, J.B., Kalvas, F., Cantine, M., and Lee, Y., How Political Polarization Evolves from Social Identity in an Agent-Based Network Model. To be submitted to *Journal of Artificial Societies and Social Simulation* (in prep).

SELECTED PRESENTATIONS

Evolution of Public Opinion Polarization in a Multiplex Network. With František Kalvas, Elle Pattenden, Julien Otis-Laperrière, Marjorie Cantine, Jose Betancourt Valencia, Elizabeth Randolph, Michael Samuels, Ryan McGranaghan, and Yunjo Lee. Santa Fe Institute Complexity Interactive, Santa Fe Institute (online). February, 2022.

An Agent-based Model of How Networks Constrain Groups Adapting to Varied Environments. American Association of Geographers Annual Meeting, Denver, CO. April, 2020 (conference canceled due to COVID-19)

Local offices and HQs: An Agent-based Model of Organizational Coordination Under Varied Environmental Conditions. American Association of Geographers Annual Meeting, Washington, D.C. April, 2019.

An Agent-Based Model of Fundamental Environmental and Social Constraints on Organizations. Environment and Society Research Symposium, Logan UT. April 2019.

An Interdisciplinary FEWS Learning Module: Investigating Dairy Odor. INFEWS-ER Inaugural Workshop, Chicago, IL. March, 2018.

Memory and Decision-Making for Farmer Agents: Implications for Agent-Based-Modeling. With Liu Cheng. Tempe, AZ. January, 2018.

TEACHING EXPERIENCE

Spring 2023. ENVS 1350: Introduction to Environmental Science. Utah State University. Instructor of record. Online class of 50 students.

Fall 2022. ENVS 1350: Introduction to Environmental Science. Utah State University. Instructor of record. Online class of 153 students.

Fall 2021. ENVS 1350: Introduction to Environmental Science. Utah State University. Instructor of record. Online class of 142 students.

Spring 2021. ENVS 4100/6100: Introduction to Modeling Human-Environment Systems. Utah State University. Co-instructor of record. Online class of 21 students.

Fall 2020. ENVS 1350: Introduction to Environmental Science. Utah State University. Teaching Assistant. Online class of 138 students.

SPECIAL TRAINING AND WORKSHOPS

2022 Constructing and Deconstructing Collectives: Signals to Space to Society, Santa Fe Institute (online)

2022 Santa Fe Institute Complexity Interactive, Santa Fe Institute (online)

2021 Mathematics of Human Environmental Systems, Banff International Research Station (online)

2020 Evolution of Collective Computational Abilities of (Pre)Historic Societies, Santa Fe Institute (online)

2019 SESYNC 7th Graduate Student Workshop on Socio-Environmental Synthesis, Annapolis, MD

2019 Workshop PEOPLE 3000, Paleoclimate and the Peopling of the Earth, Vernal, UT

2018 Winter Workshop in Agent-Based Modeling of Social-Ecological Systems, Arizona State University, Tempe, AZ

2018 INFEWS-ER Inaugural Workshop, Chicago, IL

2017 Data Carpentry Workshop, Utah State University, Logan, UT

TECHNICAL STRENGTHS

Programming Languages: R, Python, Visual Basic, Javascript, Rmarkdown for replicable analysis

Modeling Languages: NetLogo

Other Software: AWS, Amazon Mechanical Turk, Git, OBS Studio, RQDA, SQL, Zotero

SERVICE

Reviewer, *Journal of Artificial Societies and Social Simulation*, 2022–Present

Graduate Student Council Chair for the Quinney College of Natural Resources, Utah State University 2019–2020

Graduate Student Council Representative for the Department of Environment and Society, Utah State University 2018–2019

Graduate Representative on Socio-Environmental Modeling Assistant Professorship Hiring Committee in the Department of Environment and Society at Utah State University, Fall 2018

Session Organizer and Chair of Agent-Based Modeling for Informing Natural Resource Management Session, International Symposium on Society and Resource Management (ISSRM), June 2018

Volunteer Session Chair for 5 sessions, International Symposium on Society and Resource Management (ISSRM), June 2018

Board Member and Treasurer, Alberta Co-op, Portland, OR, Aug 2016–Aug 2017

Sergeant at Arms, Swan Island Toastmasters, Portland, OR, Sep 2016–Jul 2017

PRIVATE SECTOR EXPERIENCE

2017 Service Training Developer, Daimler Trucks North America, Portland, OR

2011–2017 Technical Writer, Daimler Trucks North America, Portland, OR

2005–2009 Technical Writer, Daimler Trucks North America, Portland, OR

2005 Technical Writer, WebMD Health Services, Portland, OR

2005 Technical Writer, Providence Health System, Tigard, OR

2002–2004 Technical Writer, Cylant, Inc. (software security startup), Moscow, ID