

Arizona State University
School of Complex Adaptive Systems
Engineering Center - A Building (ECA)
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ACADEMIC EMPLOYMENT

2025 - Present Associate Research Professor, School of Complex Adaptive Systems, Arizona State University, Tempe, AZ.

2019-2025 Assistant Research Professor, School of Complex Adaptive Systems, Arizona State University, Tempe, AZ.

2018-2019 Postdoctoral Research Scholar, Center for Social Dynamics and Complexity, Arizona State University, Tempe, AZ.

2017-2018 Postdoctoral Research Scholar, School of Human Evolution and Social Change, Arizona State University, Tempe, AZ.

EDUCATION

2016 Ph.D., Anthropology, Arizona State University

2005 M.A., Anthropology, University of Tulsa

2003 B.A., Anthropology, University of Notre Dame

RESEARCH INTERESTS

Long-term Socioecological Dynamics, Agent Based Modeling, GIS and Spatial Analysis, Complex Adaptive Systems, Subsistence Change, and Prehistoric Migration

PUBLICATIONS

Articles in Peer-Reviewed Journals

2023 Bergin, S., and G. Snitker. ArchaeoSRP: An R package for extracting and synthesizing federal cultural resources data for research and management. *Advances in Archaeological Practice*. 11(4):402–412.

2023 Brooke, C., C. Marean, C. Wren, **S. Bergin**, B. P. Fahey and J. Venter. Drivers of large mammal distribution: an overview and modelling approach for palaeoecological reconstructions of extinct ecosystems. *Biological Journal of the Linnean Society*. 141(3):307–322

2023 Cegielski, W., G. Snitker, C. M. Barton, A. Cortell-Nicolau, S. Pardo Gordó, **S. Bergin** and A. Diez-Castillo. A Multi-method Approach with Machine Learning to Evaluating the Distribution and Intensity of Prehistoric Land Use in Eastern Iberia. *Quaternary International*. 677–678: 78-94.

2017 Henry, D. O., M. Belmaker and **S. Bergin**. The effect of terrain on Neanderthal ecology in the Levant. *Quaternary International*. 435: 94-105.

2016 Barton, C. M., I. Ullah, **S. Bergin**, H. Sarjoughian, G. Mayer, J. Bernabeu Aubán, A. Heimsath, M. Acevedo, J. Riel Salvatore, J. Arrowsmith. Experimental socioecology: Integrative science for anthropocene landscape dynamics. *Anthropocene*. 13: 34-45.

2015 Pardo Gordó, S., J. Bernabeu Aubán, O. García Puchol, C. M. Barton, **S. Bergin** The origins of agriculture in Iberia: a computational model. *Documenta Praehistorica*, XLII: 117-131.

2015 Bernabeu Aubán, J., C. M. Barton, S. Pardo Gordó, **S. Bergin**. Modeling initial Neolithic dispersal. The first agricultural groups in West Mediterranean. *Ecological Modelling*. 307: 22–31.

2014 Henry, D. O., S. Kadowaki and **S. Bergin**. Reconstructing Early Neolithic Social and Economic Organization Through Spatial Analysis at Ayn Abū Nukhayla. *American Antiquity*. 79(3): 401-424.

2014 Rollins, N. D., C. M. Barton, **S. Bergin**, M. Janssen and A. Lee. A Computational Model Library for publishing model documentation and code. *Environmental Modelling & Software*. 61: 59-64.

2012 Barton, C. M., I. Ullah, and **S. Bergin**, H. Mitasova, and H. Sarjoughian. Looking for the Future in the Past: Long-Term Change in Socioecological Systems. *Ecological Modelling*. 241: 42-53.

2010 Barton, C. M., I. Ullah, and **S. Bergin**. Land use, water, and Mediterranean landscapes: modelling long-term dynamics of complex socio-ecological systems. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*. 368 (1931): 5275 -5297.

2008 Janssen, M., L. Na Alessa, C. M. Barton, **S. Bergin** and A. Lee. Towards a Community Framework for Agent-based Modelling. *Journal of Artificial Societies and Social Simulation*. 11(2).

Books and Monographs

2021 Pardo Gordó, S. and **S. Bergin** (Eds). *Simulating Transitions to Agriculture in Prehistory*. Computational Social Sciences. Cham: Springer International Publishing.

Articles in Edited Volumes

2021 **Bergin, Sean**. The Essential Geography of the Impresso-Cardial Neolithic Spread. In *Simulating Transitions to Agriculture in Prehistory*. Salvador Pardo-Gordó and Sean Bergin, eds. Pp. 29–46. Computational Social Sciences. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-83643-6_3

2021 **Bergin, Sean**, and Salvador Pardo-Gordó. An Introduction to Simulating Transitions to Agriculture in Prehistory. In *Simulating Transitions to Agriculture in Prehistory*. Salvador Pardo-Gordó and Sean Bergin, eds. Pp. 1–16. Computational Social Sciences. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-83643-6_1

2017 Pardo Gordó, S., **S. Bergin**, J. Bernabeu Aubán, C. M. Barton. Alternative Stories of Agricultural Origins: The Neolithic Spread in the Iberian Peninsula. In *Times of Neolithic Transition Along the Western Mediterranean*, edited by O. García Puchol and D. C. Salazar García. Springer, New York pp 101-134.

2014 **Bergin, S.** Under the Microscope: Edge Wear Analysis of Chipped Stone Artifacts. In *The Sands of Time: The Desert Neolithic Settlement at Ayn Abū Nukhayla*, edited by D. Henry and J. Beaver, Ex Oriente: Berlin pp 193-203.

2014 Henry, D. O., S. Kadowaki and **S. Bergin**. Stratigraphic Identification and Spatial Examination of House Floors at Ayn Abū Nukhayla. In *The Sands of Time: The Desert Neolithic Settlement at Ayn Abū Nukhayla*, edited by D. Henry and J. Beaver, Ex Oriente: Berlin pp 287-313.

2012 Ullah, I. and **S. Bergin**. Modeling the Consequences of Village Site Location: Least Cost Path Modeling in a Coupled GIS and Agent-Based Model of Village Agropastoralism in Eastern Spain. In *Least Cost Analysis of Social Landscapes: Archaeological Case Studies*, edited by D.A. White and S. L. Surface-Evans, University of Utah Press, Salt Lake City, pp 155-173.

2011 Henry, D. O., **S. Bergin** and S. Kadowaki. Tracing Floors and Fills in Early Neolithic Pithouses: An Example from the Excavation of Ayn Abū Nukhayla, Southern Jordan. In *Between Sand and Sea. The Archaeology and Human Ecology of Southwestern Asia*, edited by N.J. Conard, R.H. Meadow, A. Morales, and P. Drechsler. Festschrift in Honor of Hans-Peter Uerpmann. pp. 91-112. Kerns Verlag: Tübingen.

Additional Published Reports and Articles

2016 Diez-Castillo, A., O. Garcia-Puchol, J. Bernabeu Aubán, C. M. Barton, S. Pardo Gordó, G. Snitker, W. Cegelski, **S. Bergin**. Resiliencia y cambio durante el Holoceno en La Canal de Navarrés (Valencia): recientes trabajos de prospección. *Archivo de Prehistoria Levantina*. XXXI: 169-185.

2006 **Bergin, S.** and M. Senn. Book Review: Shovel Bum: Comix of Archaeological Field Work by Trent de Boer. *Lithic Technology* 31(2):147

GRANTS, FELLOWSHIPS & AWARDS

Research Grants

2024-2026 Collaborative Research: The nexus of long-term human pyrogeography, environmental change, and climate in the high-elevation social-ecological systems of Washington's Cascade Range. PI: Grant Snitker, co-PI: Sean Bergin, Megan Walsh and Michelle Steen-Adams. \$311,021

2024-2026 Collaborative Research: Archaeological analysis and dynamic modeling of ecosystem change and adaptive human foraging across glacial cycling in coastal South Africa. PI: Colin Wren, co-PI: Sean Bergin, Janet Franklin, and Curtis Marean. \$191,700

2021-2026 Frameworks: Collaborative Research: Integrative Cyberinfrastructure for Next-Generation Modeling Science. NSF 20-592 Cyberinfrastructure for Sustained Scientific Innovation (CSSI). PI: Michael Barton, co-PI: Marco Janssen, Allen Lee, Sean Bergin and Kenneth Buetow. \$3,686,464

2014-2016 New Perspectives in Archaeology: The Socio-ecological Agent-based Modeling of the Early Bronze Age I of Arslantepe (Malatya). PI: B. Arikan. Foreign Researchers: I.I.T. Ullah, and S. Bergin (PI's/CI's limited to Turkish nationals only). Research grant from TUBITAK, The Scientific and Technological Research Council of Turkey, Research and Development Funding Program.

Fellowships

2015-2016 Arizona State University Dissertation Completion Fellowship

Awards

2012 The Reynold Ruppé Prize in Archaeology, awarded each year to the best paper in archaeology by a graduate student at Arizona State University. Paper entitled: Complex objects, entangled lives: using Germanic animal art as a record of culture contact in early medieval England.

2012 Outstanding Graduate Student Paper Award – Arizona Center for Medieval and

Renaissance Studies.

2003 Rev. Raymond W. Murray C.S.C. Award: award in Anthropology, for the outstanding senior majoring in Anthropology, University of Notre Dame.

RESEARCH

Major Research Projects

Network for Computational Modeling for Socio-ecological Science (CoMSES)

Position: Senior Researcher. Host Institution: Arizona State University. Principle Investigators: C. M. Barton and Marco Janssen. Objective: The development and maintenance of a research network of computational modeling as well as the preservation and development of computational models. Period of affiliation: 2008–Present.

Cascade Corridor Landuse Project

Position: Co- Principle Investigator. Host Institution: Arizona State University. Objective: The first systematic study of human-environmental relationships in the high-elevation, alpine and subalpine meadows within the Central Cascade Mountains of Washington State. Period of affiliation: 2019–Present.

Communicating Hazard Information in the Modern Environment (CHIME) ABM

Position: Researcher. Host Institution: Arizona State University. Objective: Continuing the development of an agent-based model to study the flow of information leading up to and during hazardous weather events and how people who may be affected assess risk and make protective decisions. Period of affiliation: 2020–Present.

Mediterranean Landscape Dynamics Project

Position: Senior Researcher. Host Institution: Arizona State University. Principle Investigator: C. M. Barton. Field work locations: Jordan, Spain, Italy. Objective: Interdisciplinary project investigating early coupled human-natural systems in the Mediterranean, combining field survey with computational modeling. Period of affiliation: 2007–Present.

Peer-Reviewed Computational Models

2022 Bergin, S., Michael Barton, Joshua Watts, Joshua Alland, and Rebecca Morss. CHIME ABM of Hurricane Evacuation. The Communicating Hazard Information in the Modern Environment (CHIME) agent-based model (ABM) is a Netlogo program that facilitates the analysis of information flow and protective decisions across space and time during hazardous weather events. Retrievable from: CoMSES Computational Model Library, doi:[10.25937/fqah-sj53](https://doi.org/10.25937/fqah-sj53).

2015 Barton, C. M., Isaac Ullah, Gary Mayer, **Sean Bergin**, Hessam Sarjoughian, Helena Mitasova. MedLanD Modeling Laboratory v.1. This is a modeling environment that couples an agent-based model of small-holder agropastoral households with a cellular landscape evolution model that simulates changes in erosion, deposition, soils, and vegetation. Retrievable from: CoMSES Computational Model Library, www.openabm.org/model/4609/

2012 **Bergin, S.** Torsten Hägerstrand's Spatial Innovation Diffusion Model. The purpose of this model is to understand the processes which create a "nebula-distribution," a common spatial pattern. This model explores the way that the diffusion of ideas across a social network might produce this pattern. Retrievable from: CoMSES Computational Model Library, www.openabm.org/model/3163/

Computational Models

2023 **Bergin, S.**, C. Brooke, and C. Marean. The PaleoscapeHerbivoreABM. The PalaeoscapeHerbivoreABM is an agent-based model created to investigate how vegetation preference, a need for water, animal speed and lion predation affect the habitation patterns, encounter locations and kill locations of herbivores on the Paleo-Agulhas Plain. Retrievable from: Zenodo. Doi: 10.5281/zenodo.8092792 /

2021 **Bergin, S.** and J. Applegate. Model of Rental Evictions in Phoenix During the Covid-19 Pandemic. The purpose of this model is to explore the dynamics of residency and eviction for households renting in the greater Phoenix (Arizona) metropolitan area. Retrievable from: CoMSES Computational Model Library, <https://www.comses.net/codebases/4db84f11-90a2-4d2e-a2c9-ea43574b5c46/>

2020 **Bergin, S.** The Geographic Expansion Model. This model simulates different the effect of ecological conditions upon the spread of agriculture in the Western Mediterranean. Retrievable from: CoMSES Computational Model Library, <https://www.comses.net/codebases/d57edeb8-0513-43a1-9842-7a8404c32472/>

2020 Claudine Gravel-Miguel, **Sean Bergin**. Game of Thrones model. CoMSES Computational Model Library. Retrievable from: <https://www.comses.net/codebases/08e45650-f6a9-4c26-a99f-2938e7d8cbdc/releases/1.7.0/>

2016 **Bergin, S.** The Cardial Spread Model. This model simulates different ecological conditions and spread hypotheses proposed for the introduction of agriculture in the Western Mediterranean. Retrievable from: CoMSES Computational Model Library, www.openabm.org/model/5278/

2015 **Bergin, S.**, C. Michael Barton, Salvador Pardo Gordó, Joan Bernabeu Aubán. Neolithic Spread Model Version 1.0. This model simulates different spread hypotheses proposed for the introduction of agriculture on the Iberian peninsula.

We include three dispersal types: neighborhood, leapfrog, and ideal despotic distribution (IDD). Retrievable from: CoMSES Computational Model Library, www.openabm.org/model/4447/

2013 **Bergin, S.**, and Christopher Roberts. Relational Social Interaction Model of Migration (RSIMM). Current trends suggest that when individuals of different cultural backgrounds encounter one another, their social categories become entangled and create new hybridized or creole identities. To understand the effects this entanglement has on styles of material culture we created an agent-based model that plays out the process of cultural entanglement and tracks the results this has on human action. Retrievable from: CoMSES Computational Model Library, www.openabm.org/model/2297/

2008 **Bergin, S.** Hegmon's Model of Sharing. This is a replication of a model developed by Michelle Hegmon to aid an understanding the effect sharing strategies have on household survival. Retrievable from: CoMSES Computational Model Library, www.openabm.org/model/2217/

TEACHING EXPERIENCE

University Courses

2025 Agent-based Modeling. Spring Session, Arizona State University, Tempe, AZ.

2024 Applied Project. Fall Session, Arizona State University, Tempe, AZ.

2024 Socioecological Complex Systems. Fall Session, Arizona State University, Tempe, AZ.

2024 Agent-based Modeling. Spring Session, Arizona State University, Tempe, AZ.

2023 Socioecological Complex Systems. Fall Session, Arizona State University, Tempe, AZ.

2023 Agent-based Modeling. Spring Session, Arizona State University, Tempe, AZ.

2022 Socioecological Complex Systems. Fall Session, Arizona State University, Tempe, AZ.

2022 Socioecological Complex Systems. Spring Session, Arizona State University, Tempe, AZ.

2022 International Winter School: Agent-Based Modeling of Social-Ecological Systems. January 18-28, Arizona State University, Tempe, AZ.

2021 Socioecological Complex Systems. Fall Session, Arizona State University, Tempe, AZ.

2021 International Winter School: Agent-Based Modeling of Social-Ecological Systems. January 4-15, Arizona State University, Tempe, AZ.

2020 International Winter School: Agent-Based Modeling of Social-Ecological Systems. January 6-10, Arizona State University, Tempe, AZ.

2019 Agent-based Modeling in Archaeology. Fall Session. Arizona State University, Tempe, AZ.

2019 International Winter School: Agent-Based Modeling of Social-Ecological Systems. January 7-11, Arizona State University, Tempe, AZ.

2018 Human Impacts on the Environment: An Archaeological Perspective. Spring Session. Arizona State University, Tempe, AZ.

2011 Castro de Néixon International Field School. Summer Session. Arizona State University, Tempe, AZ.

2006 Prehistory of the Near East. Spring Semester. University of Tulsa, Tulsa OK.

PROFESSIONAL PRESENTATIONS

Symposia Organized

2018 Modeling the Spread of Agriculture: The Application of Computational Modeling Techniques to the Neolithic Transition. Symposium organized by Sean Bergin and Salvador Pardo-Gordó for the European Archaeological Association in Barcelona, Spain.

2017 Simulation in Archaeology: New Approaches to Old Questions. Symposium organized by Sean Bergin for the CoMSES Net Virtual Conference, Fall.

2016 Human-Environmental Interactions in the Mediterranean Basin. Symposium organized by Sean Bergin and Grant Snitker at the 81st annual meeting of the Society for American Archaeology, in Orlando, FL.

2013 New Directions in Modeling Dynamics in Coupled Social-Natural Systems. Symposium organized by Sean Bergin and chaired by C. Michael Barton and Sander van der Leeuw at the 78th annual meeting of the Society for American Archaeology, in Honolulu, HI.

2007 The Multi-Disciplinary Research Results: Investigation of Ayn Abū Nukhayla, An Early Neolithic Settlement in Southern Jordan. Symposium organized by Donald Henry, Joseph E. Beaver and Sean Bergin at the 72nd annual meeting of the Society for American Archaeology, in Austin, TX.

Presented Papers and Posters

2024 Michael Barton, **Sean Bergin**, Marisa Brazil, Kenneth Buetow, Marco Janssen, Allen Lee, Scott Foster, Manuela Vanegas Ferro, Mark Piper and Jordan Reed. Network for Computational Modeling in Social & Ecological Sciences (CoMSES.Net) Integrative Cyberinfrastructure for Next-Generation Modeling Science. Poster Presentation at the NSF CSSI Principal Investigator (PI) Meeting.

2024 **Sean Bergin**. Panelist for the Co-Creating Climate Interventions Workshop held at Arizona State University as part of the research project: Collaborative Research: GCR: Generating Actionable Research to Investigate Combined Climate Intervention Strategies for Stakeholder Use, April 10-12.

2023 Snitker, Grant., **Sean Bergin**, Jonathon. Paige and Anna Jansson. *Exploring High-Elevation Social-Ecological Relationships through Two Pilot Field Seasons of the Central Cascades Alpine Land-Use and Fire History Project*. Paper Presented at the 87th Annual Meeting of the Society for American Archaeology.

2023 Michael Barton, **Sean Bergin**, Marisa Brazil, Kenneth Buetow, Marco Janssen, Allen Lee, Scott Foster, Manuela Vanegas Ferro, Mark Piper and Jerad Bales. Network for Computational Modeling in Social & Ecological Sciences (CoMSES.Net) Integrative Cyberinfrastructure for Next-Generation Modeling Science. Poster Presentation at the NSF CSSI Principal Investigator (PI) Meeting.

2022 Michael Barton, **Sean Bergin**, Marisa Brazil, Kenneth Buetow, Marco Janssen, Allen Lee, Laura Swantek, Mark Piper and Jerad Bales. Network for Computational Modeling in Social & Ecological Sciences (CoMSES.Net) Integrative Cyberinfrastructure for Next-Generation Modeling Science. Poster Presentation at the NSF CSSI Principal Investigator (PI) Meeting.

2021 Snitker, G. and **S. Bergin**. *R-based solutions for synthesizing archaeological survey data to assess changing land-use patterns in the Okanagan-Wenatchee National Forest, WA*. Poster Presentation at the 85th Annual Meeting of the Society for American Archaeology.

2021 Alland, Joshua J. Rebecca E Morss, Christopher A Davis, Jennifer Boehnert, Olga Wilhelm, **Sean Bergin**, and C Michael Barton. *Evacuation Decision-Making During Hurricane Michael (2018): A Comparison Between Perfect and Imperfect Forecasts*. Paper Presented at the 34th Conference on Hurricanes and Tropical Meteorology.

2019 Barton, C. M., J. Demuth, R.E. Morss and **S. Bergin**. *Modeling risk and decision-making in an information-rich social environment: the CHIME project*. Presentation at the Annual Meeting of the Society for Risk Analysis in Arlington, VA.

2019 Snitker, G. and **S. Bergin**. *Did the Neolithic Revolution Revolutionize the European Landscape? An Analysis of the Relationship between Demography, Vegetation, and the*

Arrival of Agro-pastoral Subsistence. Poster Presentation at the 84th Annual Meeting of the Society for American Archaeology in Albuquerque, NM.

2018 **Bergin, S.**, and G. Snitker. *Vegetation Transformation During the European Neolithic: The Effects of Agro-pastoral Subsistence on Plant Communities in Europe.* Presentation at the European Archaeological Association in Barcelona, Spain.

2018 **Bergin, S.** Discussant for the symposium: *The nuts and bolts of agent-based modelling for archaeological science* at the 83rd Annual Meeting of the Society for American Archaeology in Washington D.C.

2018 **Bergin, S.**, and G. Snitker. *Large-scale Socioecological Transformation: The Effects of Subsistence Change on Holocene Vegetation Across Europe.* Poster Presentation at the 83rd Annual Meeting of the Society for American Archaeology in Washington D.C.

2017 **Bergin, S.**, Salvador Pardo Gordó, Michael Barton, Joan Bernabeu Aubán, Nicolas Gauthier, and Ricky Robertson. *Testing Social and Ecological Drivers for the Initial Spread of Agriculture in the Western Mediterranean.* Invited paper presented at the 82nd Annual Meeting of the Society for American Archaeology in Vancouver, Canada.

2017 **Bergin, S.** *Neolithic Agropastoral Expansion: An Evaluation of Theoretical Models Using an Agent-Based Model of the Neolithic Spread in the Western Mediterranean.* Paper presented at the CoMSES Net Virtual Conference.

2017 **Bergin, S.** Discussant for the symposium *Modeling Agro-Pastoralism in Eurasia.* At the 82nd Annual Meeting of the Society for American Archaeology in Vancouver, Canada.

2016 **Bergin, S.** *Neolithic Spread Models, Agricultural Islands and Pivotal Parameters: Impressions Gleaned from Simulating the Spread of Agriculture in the West Mediterranean.* Invited paper presented at the 81st Annual Meeting of the Society for American Archaeology in Orlando, FL.

2015 Barton, C. M., M. A. Janssen, D. Parker, A. Lee, **S. Bergin**, N. D. Rollins. *Opening the Black Box: Enabling Transparency in Scientific Computation.* Invited paper presented at the 80th Annual Meeting of the Society for American Archaeology in San Francisco, CA.

2015 **Bergin, S.** *Modeling the Influx of Agriculture: An Agent-Based Model Exploring Agricultural Spread Scenarios in the Western Mediterranean.* Poster Presentation at the 80th Annual Meeting of the Society for American Archaeology in San Francisco, CA.

2014 **Bergin, S.**, C. M. Barton, S. Pardo Gordó and J. Bernabeu Aubán. *Alternative Histories of Agricultural Origins: Testing models for the spread of food producing economies in the Iberian Peninsula.* Invited paper presented in the symposium “Dispersión humana y cultural durante la transición neolítica. Expansiones humanas y culturales durante la Transición Neolítica: Sistemas Complejos y Prehistoria” at the XVII Mundial Congress of Prehistoric and Protohistoric Sciences, Burgos.

2014 Henry, Donald O., M. Belmaker and **S. Bergin**. *The Influence of Landscape on Neanderthal Range Viewed from the Levant*. Presented in the session “Neanderthals on their own terms: new perspectives for the study of Middle Paleolithic behavior” at the XVII Mundial Congress of Prehistoric and Protohistoric Sciences, Burgos.

2014 **Bergin, S.** *The agent-based modeling of agropastoral land use during the Early Bronze Age-I Arslantepe-Malatya*. Invited paper presented in the symposium “Environmental Change: Data, Process, and Integrated Modeling” at the European Archaeological Association Annual Meeting, Istanbul.

2014 Diez Castillo, A., J. Bernabeu Aubán, C. M. Barton, O. García Puchol, **S. Bergin**, S. Pardo Gordó, W. H. Cegielski, and G. Snitker. *Paperless survey? New methodological approaches to archaeological fieldwork, the case of La Canal de Navarrés (València)*. Paper presented at the “Workshop Dando sentido a la prospección arqueológica, Making sense of archaeological survey,” Jaén.

2013 Barton, C.M., **S. Bergin**, J. Bernabeu Auban and S. Pardo Gordo. *Modeling Neolithic Dispersal in Iberia*. Invited paper presented in the session “Complex Systems in Prehistoric Research” at the European Conference on Complex Systems, Barcelona.

2013 **Bergin, S.** and C. M. Barton. *Dimensions of Human Land-Use Practices: An Exploration of Socio-Natural Interactions in Neolithic Spain*. Invited paper presented in the symposium “New Directions in Modeling Dynamics in Coupled Social-Natural Systems” at the 78th annual meeting of the Society for American Archaeology, Honolulu, HI.

2013 Roberts, C. and **S. Bergin**. *Hypothesis Testing in the Humanities? A Digital Contribution to the Debate on Early “Germanic” Identity*. Presented in the session “The Sciences and Medieval Studies: New Approaches, New Questions,” sponsored by the Department of History, University of Southern California and organized by J. Haar. 48th International Congress on Medieval Studies, Kalamazoo, MI.

2012 **Bergin, S.**, I. Ullah, C. M. Barton, and C. Gravel-Miguel. *Human-Environment Interactions in a Changing Environment: A Computational Model of Agropastoral Practices and Landscapes in Neolithic Spain*. Invited paper presented in the symposium “Socio-natural systems in pastoral and agro-pastoral societies: Archaeological investigations of pastoral landscapes” at the 77th annual meeting of the Society for American Archaeology, Memphis, TN.

2011 Roberts, C. and **S. Bergin**. Complex objects, entangled lives: using Germanic animal art as a record of culture contact in early medieval England. Paper presented at the 76th Annual Meeting of the Society for American Archaeology in Sacramento, CA.

2011 **Bergin, S.** Isaac Ullah, Bulent Arikan, C. Michael Barton, Gary Mayer and Hessam Sarjoughian. *Simulating Neolithic Landscape Dynamics: A Coupled ABM-GIS Model of*

Agro-Pastoral Systems in Eastern Spain. Poster Presentation at the 76th Annual Meeting of the Society for American Archaeology in Sacramento, CA.

2011 Ullah, I. C. M. Barton, **S. Bergin**, H. Sarjoughian and G. Mayer. *Simpler is better: lessons from modeling coupled human and natural systems in the Mediterranean Landscape Dynamics Project.* Poster Presentation at the 76th Annual Meeting of the Society for American Archaeology in Sacramento, CA.

2010 Barton, C. Michael, I. Ullah, G. Mayer, H. Sarjoughian, **S. Bergin**, A. Miller, & H. Mitasova. *Coupled Models for Coupled Systems: Land-Use and Landscape Dynamics in the Mediterranean.* Invited symposium paper presented to the Annual Meeting of the American Association of Geographers, Washington, DC.

2010 **Bergin, S.** Isaac Ullah, Michael Barton, Gary Mayer and Hessam Sarjoughian. *Coupled ABM-GIS Modeling of Agro-Pastoral Systems in Eastern Spain.* Poster Presentation at the 75th Annual Meeting of the Society for American Archaeology in St. Louis, MO.

2009 **Bergin, S.**, Isaac Ullah and Gary Mayer. *A Coupled ABM-GIS model of small-scale farming.* Poster Presentation at the North American Association for Computational Social and Organizational Sciences Meeting in Tempe, AZ.

2009 **Bergin, S.**, and Alexandra E. Miller. *Paleoclimate Modeling and the Drivers of Early Neolithic Expansion in Mediterranean Europe.* Presentation at the 74th annual meeting of the Society for American Archaeology in Atlanta, GA.

2007 **Bergin, S.**, Donald Henry, and Seiji Kadowaki. *The Development of Occupational Histories at Ayn Abū Nukhayla, an 8,500 Year Old Early Neolithic Settlement in Southern Jordan.* Presentation at the 72nd annual meeting of the Society for American Archaeology in Austin, TX.

2007 Janssen, M. and **S. Bergin**. *Developing a Model Library.* Presentation at the Integrating Socio-Ecological Sciences Through a Community Modeling Framework, Workshop at Arizona State University, Tempe, AZ.

2005 **Bergin, S.** *Diachronic Change of Lithic Industries from the Early to Late Medio Period, Chihuahua, Mexico.* Poster Presentation at the 70th annual meeting of the Society for American Archaeology in Salt Lake City, UT.

Media

2021 Holmes, C. *ASU model predicts 80,000 renters at risk for eviction when ban ends.* ABC 15, Arizona. July 27. <https://www.abc15.com/news/rebound/coronavirus-money-help/asu-model-predicts-80-000-renters-at-risk-for-eviction-when-ban-ends>

SERVICE

2021-2024 College of Global Futures Academic Standards Committee Member.

2022-2024 School of Complex Adaptive Systems Admissions Committee Member.

2019 Leader of an Agent-Based Modeling Club for graduate students and faculty in the School of Human Evolution & Social Change. The club is designed to be a forum for reading and discussing research as well as a platform for developing practical Netlogo coding skills.

2009-2010 President of the Association of All Graduate Students in SHESC (AAGS). Responsible for the direction of the School of Human Evolution and Social Change graduate student group and for the representation of SHESC graduate students at monthly faculty meetings.

2008-2009 Treasurer for the Association of All Graduate Students in SHESC (AAGS). Responsible for the finances of the School of Human Evolution and Social Change graduate student group.