Meghan D. Hutchins

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Research Interests

Computational neuroscience with an emphasis on mechanistic modeling of how learning/prediction and circuit dynamics interact to produce durable changes in neural computation, with a focus on threat processing and chronic pain.

Education

2008 - 2010 **University of Michigan** Ann Arbor, MI
M.S. Environmental Informatics
Graduate Certificate: Complex Systems

1997 - 2002 **University of Wisconsin–Eau Claire** Eau Claire, WI
B.S. Computer Science

Academic Research Experience

2008 - 2012 **University of Michigan** Ann Arbor, MI
Agent-Based Modeling (ABM) Research Specialist

School of Natural Resources & Environment | Oct 2008 – May 2012
Developed and implemented spatial agent-based models to simulate human-environment interactions. Focused on emergent land-use patterns resulting from individual agent decision-making rules.

Department of Pediatrics | Sep 2009 – Oct 2011
Applied computational modeling and statistical analysis to pediatric health datasets to track longitudinal disease trends and health outcomes.

Institute for Social Research | Sept 2010 – Oct 2011
Built simulations to explore how local micro-motives lead to global macro-behaviors in social and institutional networks.

Recent Course Work and Projects

03/2026 - Present **Introduction to Neuroscience**
Dr. Bing Wen Brunton
A quarter-long online (YouTube) course from University of Washington (about 30 hours)

05/2026 - Present **Agent-Based Model for <Neuroscience Thing>**
Description of model with link to see it run

Employment

2025 - 2026 **William & Mary** Williamsburg, VA
Programmer & Systems Analyst

Office of the University Registrar | Jul 2025 – Sep 2026
Write Docker containerized Python and SQL programs to extract and process data from the Ellucian Banner database and generate structured reports. Able to automate data collection and allow Registrars to run their own reports via Airflow.

2011 - 2025 **Jamf** Minneapolis, MN
Software Engineering Manager & Full-Stack Developer

Platform & Team Founder (Jamf Nation) | Oct 2011 – Oct 2014
Architected and coded the Jamf Nation community platform from inception as the sole engineer for two years, scaling it into the world's largest peer-led Apple IT network. Built, hired, and led the dedicated engineering team that grew around the platform.

Strategic Leadership (Jamf Now & Jamf Protect) | Oct 2014 – May 2025
Formulated engineering roadmaps and led cross-functional teams across distinct enterprise product lines. Successfully scaled the *Jamf Now* (Device Management) engineering ecosystem before pivoting to direct the engineering team for *Jamf Protect* (Endpoint Security), ultimately advancing to Senior Manager.

2008 – 2012 **University of Michigan** Ann Arbor, MI
Agent-Based Modeling (ABM) Research Specialist
(See Academic Research Experience on page 1)

2009 – 2011 **Matthaei Botanical Gardens & Nichols Arboretum** Ann Arbor, MI
Arboretum Caretaker & Environmental Educator
Managed daily property operations as a live-in caretaker, including ecosystem restoration, invasive species management and controlled burns. Led volunteer workdays to promote ecosystem education and appreciation.

2002 - 2008 **University of Wisconsin Hospital and Clinics** Madison, WI
Full-Stack Web Application Developer

Office of eHealth Innovation and Policy | Nov 2002 – Aug 2008
Built and maintained web-based Java applications. Designed and developed applications based on specifications. Wrote and optimized stored procedures and triggers.

1999 - 2002 **University of Wisconsin–Eau Claire** Eau Claire, WI
Senior Network Software Developer

Technical Services | Dec 1999 – Nov 2002
Developed software for network security, access control, diagnostics, and bandwidth management Designed/deployed bandwidth throttling solutions; built monitoring/diagnostic tools. Configured and maintained network hardware and supporting infrastructure

Publications

Peer-Reviewed Journal Articles

Sauser Zachrison, K., Iwashyna, T. J., Gebremariam, A., **Hutchins, M**., & Lee, J. M. Can longitudinal generalized estimating equation models distinguish network influence and homophily? An agent-based modeling approach to measurement characteristics. *BMC Medical Research Methodology* (2016), 16, 174.

Currie, W. S., Kiger, S., Nassauer, J. I., **Hutchins, M**., Marshall, L. L., Brown, D. G., Riolo, R. L., Robinson, D. T., & Hart, S. K. Multi-scale heterogeneity in vegetation and soil carbon in exurban residential land of southeastern Michigan, USA. *Ecological Applications* (2016), 26 (5), 1421–1436.

Sylvester, K. M., Brown, D. G., Leonard, S. H., Merchant, E., & **Hutchins, M**. Exploring agent-level calculations of risk and returns in relation to observed land-use changes in the US Great Plains, 1870–1940. *Regional Environmental Change* (2015), 15 (2), 301–315.

Sun, S., Parker, D. C., Huang, Q., Filatova, T., Robinson, D. T., Riolo, R. L., **Hutchins, M.**, & Brown, D. G. Market impacts on land-use change: An agent-based experiment. *Annals of the Association of American Geographers* (2014), 104 (3), 460–484.

Nassauer, J. I., Cooper, D. A., Marshall, L. L., Currie, W. S., **Hutchins, M.**, & Brown, D. G. Parcel size related to household behaviors affecting carbon storage in exurban residential landscapes. *Landscape and Urban Planning* (2014), 129, 55–64.

Robinson, D. T., Sun, S., **Hutchins, M.**, Riolo, R. L., Brown, D. G., Parker, D. C., Filatova, T., Currie, W. S., & Kiger, S. Effects of land markets and land management on ecosystem function: A framework for modelling exurban land-change. *Environmental Modelling & Software* (2013), 45, 129–140.

Conference Proceedings & Abstracts

Currie, W., Brown, D. G., Brunner, A., Fouladbash, L., Hadzick, Z., **Hutchins, M.**, Kiger, S. E., Makino, Y., Nassauer, J. I., Robinson, D. T., Riolo, R. L., & Sun, S. Incorporating ecosystem processes controlling carbon balance into models of coupled human-natural systems. *AGU Fall Meeting Abstracts* (2012), B53F-0752.

Sun, S., Parker, D. C., Brown, D. G., Huang, Q., Filatova, T., Robinson, D. R., **Hutchins, M.**, & Riolo, R. Explicitly representing heterogeneous land developers in agent-based modeling of land use change: A preliminary experiment. *Proceedings of the AAG Annual Meeting* (2012).

Robinson, D. T., Filatova, T., Sun, S., Riolo, R. L., Brown, D. G., Parker, D. C., **Hutchins, M.**, Currie, W. S., & Nassauer, J. I. Integrating land markets, land management, and ecosystem function in a model of land change. *5th International Congress on Environmental Modelling and Software* (2010), Ottawa, Canada. https://scholarsarchive.byu.edu/iemssconference/2010/all/75

Brown, D., Robinson, D., Parker, D., Riolo, R., Currie, W., **Hutchins, M.**, Filatova, T., Kiger, S., Nassauer, J., & Page, S. Framework for modeling effects of land use and land management processes on vegetation productivity and carbon storage in exurban Southeastern Michigan. *GLP Open Science Meeting 2010 Land Systems, Global Change and Sustainability, Book of Abstracts* (2010), 94.

Kiger, S., Currie, W. S., Brown, D. G., Riolo, R., **Hutchins, M.,** & Robinson, D. Landscape carbon and nitrogen trajectories in the decades following conversion to exurban residential development. *95th ESA Annual Meeting* (2010).

Hutchins, M. ELMST: An agent-based model of residential land management and carbon storage. *Poster presentation, AAG Annual Meeting* (2010), Washington, DC.

Theses

Hutchins, M. Exploring the effects of yard management and neighborhood influence on carbon storage in residential subdivisions. *Master's Thesis, University of Michigan* (2010). https://hdl.handle.net/2027.42/78211

Community & Outreach

2015 – 2026	Williamsburg Pipes & Drums – *Bagpiper, Instructor, Board Member, Webmaster*
2018 – 2024	Toastmasters International – *Member, VP of Public Relations & Sergeant at Arms*
2013 – 2016	Jamf Nation Global Foundation, *Founding Board Member*
2009 – 2011	Agent-Based Modeling Support Group (University of Michigan), *Founder & Organizer*
2009 – 2010	Environmental Informatics Track Leader (University of Michigan)
2000 – 2001	UW-Eau Claire Student Radio – DJ (curated funk and variety shows)