

PROMOTION RECOMMENDATION  
The University of Michigan  
School for Environment and Sustainability

Jennifer Blesh, assistant professor of environment and sustainability, School for Environment and Sustainability, is recommended for promotion to associate professor of environment and sustainability, with tenure, School for Environment and Sustainability.

Academic Degrees

Ph.D 2012 Cornell University, Soil and Crop Sciences, Ithaca, New NY  
M.S. 2008 Cornell University, Soil and Crop Sciences, Ithaca, NY  
B.S. 2003 University of Georgia, Ecology, Athens, GA

Professional Record

2014 - present Assistant Professor, School for Environment and Sustainability (formerly School of Natural Resources and Environment), University of Michigan  
2012 - 2013 Post-Doctoral Fellow: National Science Foundation International Research Fellowship Program, Faculty of Agronomy and Veterinary Medicine, Federal University of Mato Grosso, Cuiabá, MT, Brazil, and Department of Development Sociology, Cornell University, Ithaca, NY  
2005 - 2011 Graduate Research Assistant: Department of Horticulture, Cornell University, Ithaca NY  
1999 - 2000 AmeriCorps Member: Habitat for Humanity International, Americus, GA.

Summary of Evaluation:

Teaching: Over the past six years, Professor Blesh has developed an outstanding teaching program in SEAS. Her student evaluations are overwhelming positive, especially for her Agroecosystem Management course, in which she consistently scores >4.0 for “Was this an outstanding course” and “Was this an outstanding instructor.” By integrating ecological and social lenses, her courses provide students with the necessary theoretical grounding and tools to understand, manage, and conserve ecosystems, which are central goals of SEAS and the Conservation Ecology specialization.

Her novel seminar, entitled “Food Literacy for All,” was selected by 135 students and it was a unique collaboration between the university and community – approximately 100 community members attended the seminar on a regular basis. She engaged a community partner, who served as a coordinator and liaison with the Detroit community. This serves as a unique model for further community engagement and education in SEAS. By all measures, Professor Blesh has established an outstanding program of teaching in her formal courses as well as seminars. Aside from formal modes of teaching assessment, further evidence of her outstanding classroom performances comes from nomination to the Golden Apple Award, a university-wide award selected by the student body. Professor Blesh is actively engaged in graduate student mentoring, and currently advises three doctoral students and has been active with both master’s thesis and project students. She is beginning to publish with her students, and we believe that there is much more to come in the future.

Research: Professor Blesh has established a unique program of scholarship that combines agricultural ecology with development sociology to offer a synthetic understanding of biological

and societal factors influencing sustainable food production. In 2014, Professor Blesh formed the Soil and Agroecosystems Laboratory at the University of Michigan. This research group has resulted in the development of new facilities at UM, including a shared field laboratory and new experimental sites, both at Matthaei Botanical Gardens. Professor Blesh has been very successful obtaining funding to support this lab. Her extramural support totals \$1.1M as the PI and \$87 K as a co-PI, and her funding sources are diverse: NSF, USDA and private foundations. She has also been successful obtaining competitive university funding, over \$144 K as PI and over \$24 K as a co-PI.

As of September 2019, Professor Blesh's peer-reviewed publications include 25 refereed articles, and four other manuscripts under review. Her publications have received 252 citations (223 without self-citations) on the Web of Sciences and 668 citations on Google Scholar. Her H-index is 9 in the Web of Sciences and 13 in Google Scholar. Publications from her M.S. and Ph.D. work have been highly cited, and citations from recent publications while at the University of Michigan are rapidly increasing. The number of citations per year has risen from 16 in 2016 to 84 in 2018, indicating that her work is being well received. A comparison of scholarly records shows that Professor Blesh has a similar publication record and has been cited as often or more than other soil scientists at a similar career stage.

Professor Blesh's publications demonstrate that she is an outstanding collaborator, as evidenced by her multiple authored publications, while still maintaining independent productivity, clearly showing her ability to be an intellectual leader, as well as a person who works well as a member of an interdisciplinary research team. Two standout publications are her first authored papers in 2018 (*Journal of Applied Ecology*) and 2019 (*Ecological Applications*), both of which provide novel insights into emerging interdisciplinary research fields, and will likely be regarded as foundational papers within a few years. These two papers also provide the framework and intellectual rationale of Professor Blesh's developing research directions in linking crop diversity and ecosystem function in agroecosystems, as funded by two recent \$0.5M awards from the USDA. In her time at the University of Michigan, she has also mentored several graduate students and one post-doctoral research fellow, which has resulted in five peer-reviewed publications and two manuscripts in review.

#### Recent and Significant Publications:

- Jain, M., Singh, B., Rao, P., Srivastava, A.K., Poonia, S., Blesh, J., Azzari, G., McDonald, A.J., and D.B. Lobell. (in press). Using satellite data to evaluate and target sustainable intensification interventions can double their impact. *Nature Sustainability*.
- Blesh, J. 2019. Feedbacks between nitrogen fixation and soil organic matter increase ecosystem functions in diversified agroecosystems. *Ecological Applications*.  
<https://doi.org/10.1002/eap.1986>.
- Valencia, V., Wittman, H., and J. Blesh. 2019. Structuring markets for resilient farming systems. *Agronomy for Sustainable Development* 39: 25. <https://doi.org/10.1007/s13593-019-0572-4>. (IF=4.1)
- Blesh, J. 2018. Functional traits in cover crop mixtures: biological nitrogen fixation and multifunctionality. *Journal of Applied Ecology* 55: 38-48. (IF=5.2).
- King, A.E. and J. Blesh. 2018. Crop rotations for increased soil carbon: perennality as a guiding principle. *Ecological Applications* 28: 249-261. (IF=4.4).
- Jones A.D., Hoey, L., Blesh, J., Miller, L., Green, A., and L. Shapiro. 2016. A systematic review of the conceptualization and measurement of sustainable diets. *Advances in Nutrition* 7: 641- 664. <https://doi.org/10.3945/an.115.011015>. (IF=5.2)

Schipanski, M.E., MacDonald, G.K., Rosenzweig, S., Chappell, M.J., Bennett, E.M., Bezner-Kerr, R., Blesh, J., Crews, T., Drinkwater, L.E., Lundgren, J., and C. Schnarr. 2016. Realizing resilient food systems. *BioScience* 66: 600-610. doi:10.1093/biosci/biw052. (IF=6.6)

Blesh, J. and S.A. Wolf. 2014. Transitions to agroecological farming systems in the Mississippi River Basin: toward an integrated socioecological analysis. *Agriculture and Human Values* 31: 621- 635. (IF=2.6).

Service: Professor Blesh has been actively involved with service contributions to our school, the university and the broader community. In SEAS, she was the program director for the Graduate Certificate in Sustainability, as well as a member of the DEI, Doctoral Student Admissions, and Sustainable Food Systems Initiative Committees. She has participated as member of several search committees, including those for the Campus Farm Manager and the Sustainable Food Systems Cluster Faculty Hire. She lists a range of community engagement activities, the majority of which focus on educating individuals outside the university on the issues and developments in sustainable food systems.

External Reviewers:

Reviewer A: “Professor Blesh ranks very high when compared to scholars at her stage in their career in fields that address the complex issues she addresses. Her record of publications in places where they will be read by those scholars, change agents, and farmers (not necessarily exclusive categories) is outstanding.”

Reviewer B: “Jennifer Blesh is clearly emerging as a nationally and internationally recognized leader in one of the most challenging and important areas of Environment and Sustainability – Agriculture. Balancing the needs for food production and environmental sustainability is truly one of the most ‘wicked problems’ that society faces.”

Reviewer C: “Dr. Blesh has established a well-justified reputation for producing innovative research around ecological or diversified farming methods, transitions to agroecology, and food security/nutrition. The Soil and Agroecosystems Laboratory has become known as a key node of knowledge-making for sustainable agriculture in the US. Dr. Blesh’s own research program is one of the most interdisciplinary and multi-faceted that I have seen, not just for food and agriculture, but more broadly.”

Reviewer D: “Her scientific papers demonstrate innovative approaches for studying agroecological diversity including studying practices across a set of farms in a landscape, conducting meta-analysis of types of crop rotations, and comparing farming operations in different regions. These papers show a clear grasp of ecological theory and agricultural science, with the goal of transformation toward sustainable food systems.”

Reviewer E: “Dr. Jennifer Blesh has an outstanding record of accomplishment, significantly higher than most people at her stage of career. I see every evidence that she will continue to grow in her profession and become one of the top scientists in her field. She is doing innovative work at the intersection of agroecology, soil science, social sciences, and political ecology.”

Reviewer F: “When compared to her peer group working in the same field, I estimate that Dr. Blesh’s standing is very high based on her innovative and multidisciplinary research approach nationally and internationally, publications and funding for this stage at her career.”

Reviewer G: “Dr. Blesh is a scientific leader in each of these areas (e.g., socio-ecological systems, nutrient cycling, and carbon management). In terms of peers, Dr. Blesh has created a unique oeuvre of highly accomplished scientific research scholarship that is comparable to her most successful counter parts in the interdisciplinary area comprised of agroecology and social-ecological systems.”

Summary of Recommendation: Professor Blesh has established a unique program of scholarship that combines agricultural ecology with development sociology to offer a synthetic understanding of biological and societal factors influencing sustainable food production. Professor Blesh is clearly emerging as a complete scholar, evidenced by her outstanding scholarship in research, teaching and service. It is with the support of the School for Environment and Sustainability Executive Committee that I recommend Jennifer Blesh for promotion to associate professor of environment and sustainability, with tenure, School for Environment and Sustainability.

A handwritten signature in black ink, appearing to read 'J. Overpeck', written over a horizontal line.

Jonathan T. Overpeck  
Samuel A. Graham Dean  
School for Environment and Sustainability

May 2020