

Christopher A Klausmeier

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*Theoretical population, community, ecosystem and
evolutionary ecology, particularly microbial & aquatic systems*

Education

- 1995–2000 **PhD in Ecology, Evolution and Behavior**, *University of Minnesota*, St. Paul MN,
Thesis: *The Role of Spatial Heterogeneity in Ecological Communities*.
Advisors: David Tilman and Claudia Neuhauser
- 1991–1995 **BS in Mathematics**, *Harvey Mudd College*, Claremont CA.
Advisor: Steve Adolph

Professional Experience

- 2016– **MSU Foundation Professor**, *Michigan State University*, Kellogg Biological Station
and Department of Plant Biology.
- 2015–2016 **Professor**, *Michigan State University*, Kellogg Biological Station and
Department of Plant Biology.
- 2011–2012 **Visiting Scientist**, *Technical University of Denmark*, DTU Aqua.
- 2009–2015 **Associate Professor**, *Michigan State University*, Kellogg Biological Station and
Department of Plant Biology.
- 2005–2009 **Assistant Professor**, *Michigan State University*, Kellogg Biological Station and
Department of Plant Biology.
- 2003–2005 **Assistant Professor**, *Georgia Institute of Technology*, School of Biology.
- 2001–2002 **Postdoctoral Researcher**, *Princeton University*, Department of Ecology and
Evolutionary Biology, Advisor: Simon Levin.
- 2000–2001 **Research Fellow**, *EAWAG Kastanienbaum*, Department of Aquatic Ecology, Advisors:
Peter Bossard and Taddeusz Kawecki (University of Basel).
- 1998, 1999 **Visiting Researcher**, *University of Maryland*, Advisor: Peter Abrams.

Awards and Honors

- 2011–2012 **EU Marie Curie Incoming International Fellowship (Senior)**
- 2009–2014 **NSF CAREER Award**
- 2000–2001 **NSF International Research Fellowship**

Grants

- 2016–2020 **Genetic, Functional and Phylogenetic Diversity Determines Marine Phytoplankton Community Responses to Changing Temperature and Nutrients**, *NSF Dimensions of Biodiversity*, PI: Elena Litchman, co-PIs: CK, David Hutchins (USC), Tatiana Rynearson (URI), \$2,000,000 total, \$640,989 MSU.
- 2015–2018 **Microscopic Foundations For Macroecological Patterns**, *Simons Foundation*, PI: CK, co-PI: Elena Litchman, \$599,583.
- 2017 **Ecology Meets Systems Biology: Developing a Pan-Microbial Trait-Based Framework for Community Ecology and Ecosystem Functioning**, *NIMBioS Investigative Workshop*, PI: Elena Litchman, co-PIs: CK, Christine Hawkes (UT Austin).
- 2015–2017 **Trait-Based Models for Complex Microbial Communities**, *DARPA Biological Robustness in Complex Settings (BRICS) Program*, PI: CK, co-PI: Elena Litchman, \$801,210.
- 2011–2017 **Lake Baikal Responses to Global Change: The Role of Genetic, Functional and Taxonomic Diversity in the Plankton**, *NSF Dimensions of Biodiversity*, PI: Elena Litchman, co-PIs: CK, Stephanie Hampton (UCSB), Lev Yampolsky (ETSU), Marianne Moore (Wellesley), Edward Theriot (Texas), \$2,000,000 total, \$599,941 MSU.
- 2011–2017 **Experimental and Theoretical Trait-Based Approaches to Optimizing Algal Biofuel Polycultures**, *NSF Division of Chemical, Bioengineering, Environmental, and Transport Systems*, PI: Elena Litchman, co-PI: CK, \$328,537.
- 2009–2015 **Phytoplankton Traits, Functional Groups and Community Organization: A Synthesis**, *NSF Biological Oceanography Program*, PI: Elena Litchman, co-PI: CK, \$544,871.
- 2009–2014 **CAREER: Modeling Complexity in Plankton Communities**, *NSF Ecology Program*, \$835,660.
- 2011–2013 **Trait-Based Ecosystem Models for Deep-Sea Chemosynthetic Microbial Communities**, *Gordon and Betty Moore Foundation*, \$51,000 direct costs.
- 2010–2012 **Food Web Dynamics and Stoichiometric Constraints in Meta-ecosystems**, *NIMBioS Working Group*, PI: Mathew Leibold (Texas), co-PIs: CK, Robert Sterner (Minnesota), and Francois Massol (CEMAGREF).

- 2008–2012 **Soil Moisture as a Master Variable of Microbial Diversity and Metabolic Activity in an Agricultural Landscape**, *USDA*, PI: Jay Lennon, co-PIs: CK and Zach Aanderud, \$319,780.
- 2005–2011 **Plankton Community Assembly: Theory and Practice**, *James S. McDonnell Foundation*, PI: CK, co-PI: Elena Litchman, \$449,968 direct costs.
- 2005–2009 **QEIB: Novel Approaches to Plankton Seasonal Succession**, *NSF Ecology Program*, PI: CK, co-PIs: Elena Litchman and Leonid Bunimovich, \$350,000 plus REU Supplement (\$8,850).
- 2005–2009 **Vertical Distribution of Phytoplankton**, *NSF Ecology Program*, PI: Elena Litchman, co-PI: CK, \$350,000 plus REU Supplement (\$8,850).
- 2005–2006 **Towards a Theory of Local/Regional Community Ecology**, *Michigan State University IRGP*, \$49,908 direct costs.

Publications

- In press Koffel T, Massol F, Daufresne T, **Klausmeier CA**. Plant strategies along resource gradients. *American Naturalist*
- 2018 Stump SM, Johnson EC, Sun Z, **Klausmeier CA**. How spatial structure and neighbor uncertainty promote mutualists and weaken black queen effects. *Journal of Theoretical Biology* 446: 33–60
- Stump SM, Johnson EC, **Klausmeier CA**. Local interactions and self-organized spatial patterns stabilize microbial cross-feeding against cheaters. *Journal of the Royal Society Interface* 15: 20170822
- 2017 Osmond MM, **Klausmeier CA**. An evolutionary tipping point in a changing environment. *Evolution* 71: 2930–2941
- Kremer CT, **Klausmeier CA**. Species packing in eco-evolutionary models of seasonally fluctuating environments. *Ecology Letters* 20: 1158–1168
- Thomas MK, Aranguren-Gassis M, Kremer CT, Gould MR, Anderson K, **Klausmeier CA**, Litchman E. Temperature-nutrient interactions exacerbate sensitivity to warming in phytoplankton. *Global Change Biology* 23: 3269–3280
- Osmond MM, Otto SP, **Klausmeier CA**. When predators help prey adapt and persist in a changing environment. *American Naturalist* 190: 83–98
- Wickman J, Diehl S, Ryabov AB, Blasius B, **Klausmeier CA**, Brännström Å. Determining selection across heterogeneous landscapes: a perturbation-based method and its application to modeling evolution in space. *American Naturalist* 189: 381–395
- Miller ET, **Klausmeier CA**. Evolutionary stability of coexistence due to the storage effect in a two-season model. *Theoretical Ecology* 10: 91–103

- 2016 Bonachela JA, **Klausmeier CA**, Edwards KF, Litchman E, Levin SA. The role of phytoplankton diversity in the emergent oceanic stoichiometry. *Journal of Plankton Research* 38: 1021–1035
- Koffel T, Daufresne T, Massol F, **Klausmeier CA**. Geometrical envelopes: extending graphical contemporary niche theory to communities and eco-evolutionary dynamics. *Journal of Theoretical Biology* 407: 271–289
- Stump SM, **Klausmeier CA**. Competition and coexistence between a syntrophic consortium and a metabolic generalist, and its effect on productivity. *Journal of Theoretical Biology* 404: 348–360
- Edwards KF, Thomas MK, **Klausmeier CA**, Litchman E. Phytoplankton growth and the interaction of light and temperature: a synthesis at the species and community level. *Limnology & Oceanography* 61: 1232–1244
- Lewandowska AM, and 31 others. The influence of balanced and imbalanced resource supply on biodiversity-functioning relationship across ecosystems. *Philosophical Transactions of the Royal Society B* 371: 20150283
- 2015 Litchman E, de Tezanos Pinto P, Edwards KF, **Klausmeier CA**, Kremer CT, Thomas MT. Global biogeochemical impacts of phytoplankton: a trait-based perspective. *Journal of Ecology* 103: 1384–1396
- Edwards KF, **Klausmeier CA**, Litchman E. Nutrient utilization traits in phytoplankton (data paper). *Ecology* 96:2311
- Reed DC, Breier JA, Jiang H, Anantharaman K, **Klausmeier CA**, Toner BM, Hancock C, Speer K, Thurnherr AM, Dick GJ. Predicting the response of the deep-ocean microbiome to geochemical perturbations by hydrothermal vents. *ISME Journal* 9: 1857–1869
- Edwards KF, Thomas MK, **Klausmeier CA**, Litchman E. Light and growth in marine phytoplankton: Allometric, taxonomic, and environmental variation. *Limnology and Oceanography* 60: 540–552
- Litchman E, Edwards KF, **Klausmeier CA**. Microbial resource utilization traits and trade-offs: implications for community structure, functioning and biogeochemical impacts at present and in the future. *Frontiers in Microbiology* 6:254
- 2013 Kremer CT, **Klausmeier CA**. Coexistence in a variable environment: eco-evolutionary perspectives. *Journal of Theoretical Biology* 339: 14–25
- Edwards KF, **Klausmeier CA**, Litchman E. A three-way tradeoff maintains functional diversity under variable resource supply. *American Naturalist* 182: 786–800
- Edwards KF, Litchman E, **Klausmeier CA**. Functional traits explain phytoplankton responses to environmental gradients across lakes of the United States. *Ecology* 94: 1626–1635

- Edwards KF, Litchman E, **Klausmeier CA**. Functional traits explain phytoplankton community structure and seasonal dynamics in a marine ecosystem. *Ecology Letters* 16: 56–63
- 2012 Thomas MK, Kremer CT, **Klausmeier CA**, Litchman E. A global pattern of thermal adaptation in marine phytoplankton. *Science* 338: 1085–1088
- Litchman E, Edwards KF, **Klausmeier CA**, Thomas MK. Phytoplankton niches, traits and eco-evolutionary responses to global environmental change. *Marine Ecology Progress Series* 470: 235–248
- Norberg J, Urban MC, Vellend M, **Klausmeier CA**, Loeuille N. Eco-evolutionary responses of biodiversity to climate change. *Nature Climate Change* 2: 747–751
- Klausmeier CA**, Litchman E. Successional dynamics in the seasonally forced diamond food web. *American Naturalist* 180: 1–16
- Mellard JP, Yoshiyama K, **Klausmeier CA**, Litchman E. Experimental test of phytoplankton competition for nutrients and light in poorly mixed water columns. *Ecological Monographs* 82: 239–256
- Steiner CF, **Klausmeier CA**, Litchman E. Transient dynamics and the destabilizing effects of prey heterogeneity. *Ecology* 93: 632–644
- Grman E, Robinson TMP, **Klausmeier CA**. Ecological specialization and trade affect the outcome of negotiations in mutualism. *American Naturalist* 179: 567–581
- Duffy MA, Ochs JH, Penczykowski RM, Civitello DJ, **Klausmeier CA**, Hall SR. Ecological context influences epidemic size and parasite-driven evolution. *Science* 335: 1636–1638
- Edwards KF, Thomas MK, **Klausmeier CA**, Litchman E. Allometric scaling and taxonomic variation in nutrient utilization traits and maximum growth rate of phytoplankton. *Limnology and Oceanography* 57: 554–566
- 2011 Edwards KF, **Klausmeier CA**, Litchman E. A fundamental three-way tradeoff between nitrogen and phosphorus competitive abilities and cell size in phytoplankton. *Ecology* 92: 2085–2095
- Stomp M, Litchman E, Mittelbach GG, Huisman J, **Klausmeier CA**. Large-scale biodiversity patterns in freshwater phytoplankton. *Ecology* 92: 2096–2107
- Schwaderer A, Yoshiyama K, de Tezanos Pinto P, Swenson N, **Klausmeier CA**, Litchman E. Eco-evolutionary differences in light utilization traits and distributions of freshwater phytoplankton. *Limnology and Oceanography* 56: 589–598
- Mellard JP, Yoshiyama K, Litchman E, **Klausmeier CA**. The vertical distribution of phytoplankton in stratified water columns. *Journal of Theoretical Biology* 269: 16–30
- 2010 Golubski A, **Klausmeier CA**. Control in mutualisms: combined implications of partner choice and bargaining roles. *Journal of Theoretical Biology* 267: 535–545

- Litchman E, de Tezanos Pinto P, **Klausmeier CA**, Thomas MK, Yoshiyama K. Linking traits to species diversity and community structure in phytoplankton. *Hydrobiologia* 653: 15-38
- Klausmeier CA**. Successional state dynamics: a novel approach to modeling nonequilibrium foodweb dynamics. *Journal of Theoretical Biology* 262: 584–595
- 2009 Steiner CF, Schwaderer AS, Huber V, **Klausmeier CA**, Litchman E. Periodically forced food chain dynamics: model predictions and experimental validation. *Ecology* 90: 3099–3107
- Hsu SB, **Klausmeier CA**, Lin CJ. Analysis of a model of two parallel food chains. *Discrete and Continuous Dynamical Systems Series B* 12: 337–359
- Yoshiyama K, Mellard JP, Litchman E, **Klausmeier CA**. Phytoplankton competition for nutrients and light in a stratified water column. *American Naturalist* 174: 190–203
- Litchman E, **Klausmeier CA**, Yoshiyama K. Contrasting size evolution in marine and freshwater diatoms. *Proceedings of the National Academy of Science* 106: 2665–2670
- 2008 Litchman E, **Klausmeier CA**. Trait-based community ecology of phytoplankton. *Annual Review of Ecology, Evolution, and Systematics* 39: 615–639
- Klausmeier CA**. Floquet theory: a useful tool for understanding nonequilibrium dynamics. *Theoretical Ecology* 1: 153–161
- Urban MC, and 13 others. The evolutionary ecology of metacommunities. *Trends in Ecology and Evolution* 23: 311–317
- Klausmeier CA**, Litchman E, Daufresne T, Levin SA. Phytoplankton stoichiometry. *Ecological Research* 23: 479–485
- Jäger CG, Diehl S, Matuschek C, **Klausmeier CA**, Stibor H. Transient dynamics of pelagic producer-grazer systems in a gradient of nutrients and mixing depths. *Ecology* 89: 1272–1286
- Yoshiyama K, **Klausmeier CA**. Optimal cell size for resource uptake in fluids: a new facet of resource competition. *American Naturalist* 171: 59–70
- 2007 Litchman E, **Klausmeier CA**, Schofield O, Falkowski PG. The role of functional traits and trade-offs in structuring phytoplankton communities: scaling from cellular to ecosystem level. *Ecology Letters* 10: 1170–1181
- Lenton TM, **Klausmeier CA**. Biotic stoichiometric controls on the deep ocean N:P ratio. *Biogeosciences* 4: 353–367
- Klausmeier CA**, Litchman E, Levin SA. A model of flexible uptake of two essential resources. *Journal of Theoretical Biology* 246: 278–289
- 2006 Litchman E, **Klausmeier CA**, Miller JR, Schofield OM, Falkowski PG. Multi-nutrient, multi-group model of present and future oceanic phytoplankton communities. *Biogeosciences* 3: 585–606

- Stieglitz M, McKane RB, **Klausmeier CA**. A simple model for analyzing climatic effects on terrestrial carbon and nitrogen dynamics: an arctic case study. *Global Biogeochemical Cycles* 20: GB3016
- De Leenheer P, Levin SA, Sontag ED, **Klausmeier CA**. Global stability in a chemostat with multiple nutrients. *Journal of Mathematical Biology* 52: 419–438
- 2005 Schade JD, Espeleta JF, **Klausmeier CA**, McGroddy ME, Thomas SA, Zhang L. A conceptual framework for ecosystem stoichiometry: balancing resource supply and demand. *Oikos* 109: 40–51
- 2004 **Klausmeier CA**, Litchman E, Daufresne T, Levin SA. Optimal nitrogen-to-phosphorus stoichiometry of phytoplankton. *Nature* 429: 171–174
- Klausmeier CA**, Litchman E, Levin SA. Phytoplankton growth and stoichiometry under multiple nutrient limitation. *Limnology and Oceanography* 49: 1463–1470
- Litchman E, **Klausmeier CA**, Bossard P. Phytoplankton nutrient competition under dynamic light regimes. *Limnology and Oceanography* 49: 1457–1462
- 2002 **Klausmeier CA**, Tilman D. Spatial models of competition. pp. 43–78 in eds. U. Sommer and B. Worm, *Competition and Coexistence*, Springer-Verlag
- van de Koppel J, and 11 others. Spatial interaction and vegetation collapse. *American Naturalist* 159: 209–218
- 2001 **Klausmeier CA**, Litchman E. Algal games: the vertical distribution of phytoplankton in poorly-mixed water columns. *Limnology and Oceanography* 46: 1998–2007
- Litchman E, **Klausmeier CA**. Competition of phytoplankton under fluctuating light. *American Naturalist* 157: 170–187
- Klausmeier CA**. Habitat destruction and extinction in competitive and mutualistic metacommunities. *Ecology Letters* 4: 57–63
- 1999 **Klausmeier CA**. Regular and irregular patterns in semiarid vegetation. *Science* 284: 1826–1828
- 1998 **Klausmeier CA**. Extinction in multispecies and spatially explicit models of habitat destruction. *American Naturalist* 152: 303–310
- [In review/revision](#)
- Edwards KF, Kremer CT, Miller ET, Osmond MM, Litchman E, **Klausmeier CA**. Effects of evolution on the maintenance of species and trait diversity
- Stump SM, Johnson EC, **Klausmeier CA**. How leaking and overproducing resources affect the evolutionary robustness of cooperative cross-feeding
- Sun Z, Stump SM, Koffel T, Grimaud G, **Klausmeier CA**. Cross-feeding gives rise to multiple stable states and promotes species coexistence in a microbial community

O'Donnell DR, Hamman CR, Johnson EC, **Klausmeier CA**, Litchman E. Rapid, divergent thermal adaptation in a marine diatom reveals constraints and trade-offs

Seminars

- 2018 **University of Arizona**, *Department of Ecology and Evolutionary Biology.*
UCLA, *Department of Mathematics.*
University of Calgary, *Department of Biological Sciences.*
- 2017 **Columbia University**, *Department of Ecology, Evolution and Environmental Biology.*
- 2015 **Harvey Mudd College**, *Department of Biology.*
EAWAG, *Department of Aquatic Ecology.*
- 2013 **University of Leipzig**, *German Centre for Integrative Biodiversity Research (iDiv).*
University of Zurich, *Institute of Evolutionary Biology and Environmental Studies.*
- 2012 **University of Minnesota**, *Department of Ecology and Evolutionary Biology.*
Umeå University, *IceLab.*
University of Hamburg, *Institute for Hydrobiology and Fisheries Science.*
Carl von Ossietzky University of Oldenburg, *Institute for Chemistry and Biology of the Marine Environment.*
Helmholtz Centre for Environmental Research, *Department of Aquatic Ecosystem Analysis.*
Technical University of Denmark, *Department of Mathematics.*
- 2011 **Technical University of Denmark**, *DTU Aqua.*
Oakland University, *Department of Physics.*
- 2009 **Umeå University**, *Department of Ecology and Environmental Science, LEREC Lecturer.*
University of Wisconsin-Milwaukee, *Department of Biological Sciences.*
- 2008 **University of Amsterdam**, *Institute for Biodiversity and Ecosystem Studies.*
Michigan State University, *Ecology, Evolutionary Biology and Behavior Program.*
Kalamazoo College, *Center for Complex Systems Study.*
- 2007 **Kalamazoo College**, *Department of Mathematics and Computer Science.*
Japan Agency for Marine-Earth Science and Technology, *Yokohama Institute for Earth Sciences.*
Kyoto University, *Center for Ecological Research.*

- 2006 **University of Groningen**, *Centre for Ecological and Evolutionary Studies*, Graduate Student Invited Speaker.
Kenyon College, *Department of Mathematics*.
- 2005 **University of North Carolina**, *Department of Biology*.
University of Michigan, *Department of Ecology and Evolutionary Biology*.
University of Kansas, *Department of Ecology and Evolutionary Biology*.
Michigan State University, *Kellogg Biological Station and Department of Zoology*.
- 2004 **Indiana University**, *Department of Biology*.
University of Guelph, *Department of Zoology*.
University of Oxford, *Department of Zoology*.
University of Toronto, *Department of Zoology*.
Georgia Institute of Technology, *School of Mathematics*.
McGill University, *Department of Biology*.
- 2003 **Georgia Institute of Technology**, *BiComB*.
- 2001 **Georgia Institute of Technology**, *School of Biology*.
University of California Los Angeles, *Department of Organismic Biology, Ecology, and Evolution*.
University of Texas, *Department of Integrative Biology*.
EAWAG, *Limnological Research Center*.
- 2000 **University of Amsterdam**, *Aquatic Microbial Ecology*.
University of Basel, *Zoological Institute (×2)*.
- 1999 **University of Minnesota**, *Department of Mathematics*.
- 1998 **Rice University**, *Department of Ecology and Evolutionary Biology*.

Presentations

Invited talks

- 2017 **Klausmeier CA**, Kremer CT, Miller ET. Trait-based perspectives on species coexistence in variable environments. *ESA Annual Meeting*, Portland, Oregon.
Klausmeier CA. Trait-based approaches to ecology and evolution. *First Symposium on Functional Marine Biodiversity*, Helmholtz Institute for Functional Marine Biodiversity, Oldenburg, Germany.
Litchman E, **Klausmeier CA**. Trait-based approaches to community ecology and evolution. *Simons Foundation Conference on Theory and Biology*, New York NY.

- 2016 **Klausmeier CA**, Litchman E. Trait-based approaches to plankton ecology. *Global Co-evolution of the Ocean Environment and its Ecology Workshop*, Bristol, UK.
- 2014 **Klausmeier CA**. Trait-based approaches to plankton ecology. *JST CREST Workshop: Advances in the Plankton Ecosystem Model and the Evaluation of Biodiversity*, Tokyo, Japan.
- Klausmeier CA**. ADventures in space and time. *Modelling and Analysis of Innovation and Competition Processes*, Milan Italy.
- 2013 **Klausmeier CA**. Trait-based approaches to species abundance distributions. *International Workshop on Trait-based Approaches to Ocean Life*, Copenhagen, Denmark.
- Klausmeier CA**. Plankton as a model system for community ecology. *Ecological Society of America Annual Meeting, Special Session "Ecological theory in Microbial ecology"*, Minneapolis MN.
- 2012 **Klausmeier CA**, Litchman E. Vertical distribution of phytoplankton. *Everything Disperses to Miami*, Miami FL.
- 2011 **Klausmeier CA**, Litchman E. Theoretical approaches to plankton ecology. *Helsinki Bio-Math Day*, Helsinki, Finland.
- Klausmeier CA**, Litchman E. Trait-based approaches to plankton ecology. *Danish Marine Ecological Modelling Center Annual Meeting*, Charlottenlund, Denmark.
- Klausmeier CA**, Litchman E. Theoretical approaches to phytoplankton ecology. *Mathematical Models in Ecology and Evolution*, Groningen, Netherlands.
- 2010 **Klausmeier CA**, Litchman E. The vertical distribution of phytoplankton. *NCTS Workshop on PDE Models of Biological Processes*, National Tsing-Hua University, Hsinchu, Taiwan.
- Klausmeier CA**, Litchman E, Daufresne T, Levin SA. Phytoplankton stoichiometry. *IMBER IMBIZO II*, Crete, Greece.
- 2009 **Klausmeier CA**, Litchman E. The vertical distribution of phytoplankton. *Workshop on Adaptive Movement of Interacting Species*, Fields Institute, Toronto, Canada.
- Litchman E, **Klausmeier CA**. Trait-based community ecology of phytoplankton. *ASLO Meeting*, Nice, France.
- Klausmeier CA**, Litchman E. Trait-based community ecology: theoretical approaches. *ASLO Meeting*, Nice, France.
- 2008 **Klausmeier CA**, Litchman E. Modeling plankton seasonal succession. *Ecological Society of America Annual Meeting*, Milwaukee WI.
- Lennon JT, Aanderud ZT, **Klausmeier CA**. Maintenance of microbial diversity in soils: Assessing the importance of habitat heterogeneity and physiological stress with theory and experiments. *Ecological Society of America Annual Meeting*, Milwaukee WI.

- 2007 **Klausmeier CA**, Litchman E, Daufresne T, Levin SA. Phytoplankton stoichiometry. *Ecological Society of Japan Annual Meeting*, Matsuyama, Japan.
- 2006 **Klausmeier CA**, Litchman E, Daufresne T, Levin SA. Phytoplankton stoichiometry. *Gordon Conference on Metabolic Basis of Ecology*, Lewiston, ME.
- Klausmeier CA**, Litchman E, Daufresne T, Levin SA. Phytoplankton stoichiometry. *Mathematical Biosciences Institute, Global Ecology Workshop*, Columbus, OH.
- Klausmeier CA**, Litchman E, Daufresne T, Levin SA. Phytoplankton stoichiometry. *Gordon Conference on Biomathematics and Theoretical Biology*, Tilton, NH.
- Klausmeier CA**, Litchman E. Theoretical approaches to plankton ecology. *Modeling Approaches in Biodiversity Workshop*, Sede Boqer, Israel.
- 2005 **Klausmeier CA**, Litchman E, Daufresne T, Levin SA. Phytoplankton stoichiometry. *ASLO Meeting*, Santiago de Compostela, Spain.
- 2002 **Klausmeier CA**, Litchman E, Daufresne T, Levin SA. Functional stoichiometry. *Biodiversity of Planktonic Communities: Scaling Up and Down*, Ann Arbor, MI.
- Litchman E, **Klausmeier CA**, Bossard P. 2002. Phytoplankton nutrient competition and stoichiometry under dynamic light regimes. *Biodiversity of Planktonic Communities: Scaling Up and Down*, Ann Arbor, MI.
- Klausmeier CA**. Theoretical approaches to plankton community ecology. *Biodiversity and Ecosystem Functioning, NERC-NSF-JSPS Joint Trilateral Program Workshop*, Sapporo, Japan.

Contributed presentations

- 2017 Wollrab S, Litchman E, Hampton SE, Silow EA, Lyubov I, **Klausmeier CA**. The interplay of biotic and abiotic factors in determining spring bloom dynamics in Lake Baikal with climate warming. *ESA Annual Meeting*, Portland, Oregon.
- Sun Z, Stump SM, Koffel T, Grimaud G, **Klausmeier CA**. Cross-feeding gives rise to multiple stable states and promotes species coexistence in a microbial community. *ESA Annual Meeting*, Portland, Oregon.
- Grimaud G, Litchman E, Kwong W, Moran N, **Klausmeier CA**. The model of bacterial cross-feeding interactions in the bee gut. *ESA Annual Meeting*, Portland, Oregon.
- Stump SM, Johnson E, Sun Z, **Klausmeier CA**. Space promotes mutualistic cross-feeding and reduces Black Queen effects, even in well mixed environments. *ESA Annual Meeting*, Portland, Oregon.
- Johnson E, Stump SM, **Klausmeier CA**. Distance makes the heart grow stronger: how space makes mutualisms robust to cheaters. *ESA Annual Meeting*, Portland, Oregon.
- Umemura K, Litchman E, **Klausmeier CA**. Dynamical modeling of species abundance distributions using metacommunity and trait-based approaches. *ESA Annual Meeting*, Portland, Oregon.

- Ranjan R, **Klausmeier CA**. How do resource use and the resource spectrum determine the structure of competitive communities? *ESA Annual Meeting*, Portland, Oregon.
- 2016 Koffel T, Daufresne T, Massol F, **Klausmeier CA**. Adaptation and diversification of plant strategies in response to the combined selective pressures of nutrient limitation and herbivore grazing. *Ecological Society of America Annual Meeting*, Fort Lauderdale, FL.
- Stump SM, **Klausmeier CA**. Competition and coexistence between a syntrophic consortium and a metabolic generalist, and its effect on productivity. *Ecological Society of America Annual Meeting*, Fort Lauderdale, FL.
- Osmond MM, **Klausmeier CA**. When predators help prey adapt and persist. *Evolution Meeting*, Austin TX.
- 2014 Litchman E, De Tezanos Pinto P, Edwards KF, **Klausmeier CA**, Kremer CT, Thomas MK. Biogeochemical impacts of phytoplankton community structure and their alteration by global change stressors. *Ecological Society of America Annual Meeting*, Sacramento CA.
- Edwards KF, Thomas MK, **Klausmeier CA**, Litchman E. How light and temperature interact to determine growth in phytoplankton: a synthesis. *Ecological Society of America Annual Meeting*, Sacramento CA.
- Miller E, **Klausmeier CA**. Temporal variation and coexistence: Ecological but not evolutionary coexistence of generalists and specialists in a two-season world. *Ecological Society of America Annual Meeting*, Sacramento CA.
- Klausmeier CA**, Nathan J, Yoshiyama K. Phytoplankton species coexistence along vertical gradients of nutrients and light. *ASLO Ocean Sciences Meeting*, Honolulu HI.
- Edwards KF, Thomas MK, **Klausmeier CA**, Litchman E. Light and phytoplankton growth: allometry, taxonomic variation, and biogeography. *ASLO Ocean Sciences Meeting*, Honolulu HI.
- Reed DC, Breier JA, Jiang H, **Klausmeier CA**, Dick GJ. Coupled microbial-geochemical dynamics in a model deep-sea hydrothermal plume. *ASLO Ocean Sciences Meeting*, Honolulu HI.
- Litchman E, De Tezanos Pinto P, **Klausmeier CA**. Diversity of competitive outcomes between a nitrogen-fixer and a non-fixer and the extension of the nitrogen-fixers' competitive niche. *ASLO Ocean Sciences Meeting*, Honolulu HI.
- 2013 **Klausmeier CA**. Trait-based approaches to species abundance distributions. *Ecological Society of America Annual Meeting*, Minneapolis MN.
- Edwards KF, **Klausmeier CA**, Litchman E. A three-way tradeoff maintains functional diversity under variable resource supply. *Ecological Society of America Annual Meeting*, Minneapolis MN.

Kremer CT, **Klausmeier CA**. Traveling between extremes: the shape of temporal variation alters competition and evolution in fluctuating environments. *Ecological Society of America Annual Meeting*, Minneapolis MN.

Miller E, **Klausmeier CA**, Litchman E, Edwards KF. Trait-based investigation of phytoplankton communities reveals predictable responses to seasonal environmental variation. *Ecological Society of America Annual Meeting*, Minneapolis MN.

- 2012 Reed D, Jiang H, Breier J, **Klausmeier C**, Toner B, Dick G. A trait-based model of microbial-geochemical dynamics in deep-sea hydrothermal plumes. *ISME14*, Copenhagen, Denmark.

Miller E, **Klausmeier C**. Seasonal succession in phytoplankton cell size contrasted with an adaptive dynamic food-web model in a periodic system: how zooplankton regulate seasonal turnover in phytoplankton traits. *Ecological Society of America Annual Meeting*, Portland OR.

Edwards KF, Litchman E, **Klausmeier C**. Functional traits predict phytoplankton community structure and successional pattern in a marine ecosystem. *Ecological Society of America Annual Meeting*, Portland OR.

- 2011 Duffy MA, Housley JM, Penczykowski RM, **Klausmeier CA**, Hall SR. Ecological context influences parasite-driven evolution and host-parasite dynamics. *Ecological Society of America Annual Meeting*, Austin TX.

Kremer CT, Thomas MK, Litchman E, **Klausmeier CA**. Adapting to variable thermal environments: A trait-based, eco-evolutionary approach. *Ecological Society of America Annual Meeting*, Austin TX.

Thomas MK, Kremer CT, **Klausmeier CA**, Litchman E. Ocean warming drives productivity changes and range shifts in the fundamental niches of marine phytoplankton. *Ecological Society of America Annual Meeting*, Austin TX.

Stomp M, Litchman E, Mittelbach GG, Huisman J, **Klausmeier CA**. Large-scale biodiversity patterns in freshwater phytoplankton. *Ecological Society of America Annual Meeting*, Austin TX.

Edwards KF, **Klausmeier C**, Litchman E. Evidence for a three-way tradeoff between nitrogen and phosphorus competitive abilities and cell size in phytoplankton. *Ecological Society of America Annual Meeting*, Austin TX.

Klausmeier CA, Litchman E. Modeling plankton seasonal succession. *ASLO Aquatic Sciences Meeting*, San Juan, Puerto Rico.

Kremer CT, **Klausmeier CA**, Litchman E. Detecting the role of resource competition in driving nitrogen fixing cyanobacteria blooms: a mechanistic approach. *ASLO Aquatic Sciences Meeting*, San Juan, Puerto Rico.

- Litchman E, **Klausmeier CA**. Linking traits and ecological niches of phytoplankton to predict community structure and ecosystem functioning. *ASLO Aquatic Sciences Meeting*, San Juan, Puerto Rico.
- Edward KF, **Klausmeier CA**, Litchman E. Evidence for a fundamental three-way tradeoff in a trait compilation of marine and freshwater phytoplankton. *ASLO Aquatic Sciences Meeting*, San Juan, Puerto Rico.
- 2010 Litchman E, Schwaderer A, Yoshiyama K, de Tezanos Pinto P, Swenson N, **Klausmeier CA**. Eco-evolutionary differences in light utilization traits help explain phytoplankton distribution patterns. *Ecological Society of America Annual Meeting*, Pittsburgh PA.
- Thomas MK, Litchman E, **Klausmeier CA**. Phytoplankton temperature-response traits determine biogeography and seasonal succession patterns. *Ecological Society of America Annual Meeting*, Pittsburgh PA.
- Kremer CT, Litchman E, de Tezanos Pinto, Dworkin I, **Klausmeier CA**. Revisiting the causes of cyanobacteria blooms: a mixture model analysis of resource competition and abiotic factors. *Ecological Society of America Annual Meeting*, Pittsburgh PA.
- Ruppe D, **Klausmeier CA**. The effect of grazers on the vertical distribution of phytoplankton. *Ecological Society of America Annual Meeting*, Pittsburgh PA.
- Grman E, Robinson TMP, **Klausmeier CA**. Trade-based mutualism: How stoichiometry, uptake efficiencies, population sizes, and resource availability affect the price and the benefit of trade. *Ecological Society of America Annual Meeting*, Pittsburgh PA.
- 2009 Kremer CT, **Klausmeier CA**. Examining the evolutionary stability of coexistence: competition in fluctuating resource environments. *Ecological Society of America Annual Meeting*, Albuquerque NM.
- Duffy MA, Hall SR, **Klausmeier CA**. Resistance trade-offs, community context, and the evolution of host populations. *Ecological Society of America Annual Meeting*, Albuquerque NM.
- Steiner CF, **Klausmeier CA**, Litchman E. The effects of prey heterogeneity and enrichment on the transitory dynamics and persistence of aquatic food webs. *Ecological Society of America Annual Meeting*, Albuquerque NM.
- Mellard JP, Yoshiyama K, Litchman E, **Klausmeier CA**. The games algae play: competition for nutrients and light in poorly-mixed water columns. *Ecological Society of America Annual Meeting*, Albuquerque NM.
- 2008 Litchman E, **Klausmeier CA**. Trait-based community ecology of phytoplankton. *Ecological Society of America Annual Meeting*, Milwaukee WI.
- Mellard JP, Yoshiyama K, Litchman E, **Klausmeier CA**. The vertical distribution of phytoplankton in stratified water columns. *Ecological Society of America Annual Meeting*, Milwaukee WI.

- Yoshiyama K, Mellard JP, Litchman E, **Klausmeier CA**. Phytoplankton competition in stratified water columns. *Ecological Society of America Annual Meeting*, Milwaukee WI.
- Steiner CF, Schwaderer A, Huber V, Litchman E, **Klausmeier CA**. Periodically forced food chain dynamics: Model predictions and experimental validation. *Ecological Society of America Annual Meeting*, Milwaukee WI.
- Vellend M, Norberg J, **Klausmeier CA**, Urban MC, Loeuille N. Relative roles of species sorting and evolution for determining biodiversity under climate change. *Ecological Society of America Annual Meeting*, Milwaukee, WI.
- 2007 **Klausmeier CA**, Litchman E. A novel approach to seasonally-forced food web dynamics. *Ecological Society of America Annual Meeting*, San Jose, California.
- 2004 **Klausmeier CA**, Litchman E, Daufresne T, Levin SA. Phytoplankton N:P stoichiometry. *Gordon Research Conference on Metabolic Basis of Ecology*, Lewiston, ME.
- 2003 **Klausmeier CA**, Litchman E. Seasonal succession in plankton communities. *Ecological Society of America Annual Meeting*, Savannah, GA.
- Litchman E, **Klausmeier CA**, Schofield O, Falkowski PG. Resource-based niches of phytoplankton functional groups. *Ecological Society of America Annual Meeting*, Savannah, GA.
- Klausmeier CA**, Litchman E, Daufresne T, Levin SA. Optimal N:P stoichiometry of phytoplankton. *ASLO Meeting*, Salt Lake City, UT.
- Litchman E, **Klausmeier CA**, van de Schootbrugge B, Schofield OM, Falkowski PG. Applying phytoplankton community models to understanding phytoplankton distributions in the paleocean. *ASLO Meeting*, Salt Lake City, UT.
- 2002 Litchman E, **Klausmeier CA**, van de Schootbrugge B, Schofield O, Falkowski PG. Applying phytoplankton community models to understanding phytoplankton distributions in the paleocean. *JGOFS Synthesis and Modeling Project Workshop*, Woods Hole, MA.
- Klausmeier CA**, Daufresne T. Functional stoichiometry. *Biocomplexity² Meeting Spring*, Princeton, NJ.
- 2001 **Klausmeier CA**, Tilman D. Competition in heterogeneous landscapes. *Ecological Society of America Annual Meeting*, Madison, WI.
- 2000 Litchman E, Bossard P, **Klausmeier CA**. Phytoplankton resource competition: effects of variable nutrient uptake rates. *ASLO Annual Meeting*, Copenhagen, Denmark.
- 1999 **Klausmeier CA**. Regular and irregular patterns in semiarid vegetation. *NATO-ASI on Mathematical Problems Arising from Biology*, Toronto, Ontario.

- Klausmeier CA.** Pattern formation in semiarid vegetation. *Institute for Mathematics and its Applications, Workshop on Local Interaction and Global Phenomena in Vegetation and Other Systems*, Minneapolis, MN.
- Klausmeier CA,** Litchman E. Phytoplankton competition for light and nutrient in unmixed and partially mixed water columns. *Ecological Society of America Annual Meeting*, Spokane, WA.
- Fargione JE, **Klausmeier CA,** Lehman CL. Community invasibility is increased by habitat destruction. *Ecological Society of America Annual Meeting*, Spokane, WA.
- 1998 Litchman E, **Klausmeier CA.** Competition and coexistence under fluctuating light: model analysis. *ASLO Ocean Sciences Meeting*, San Diego, CA.
- Klausmeier CA.** Pattern formation in semiarid vegetation: tiger bush. *Gordon Research Conference on Theoretical Biology and Biomathematics*, Tilton, NH.
- Klausmeier CA.** Pattern formation in semiarid vegetation: tiger bush. *Ecological Society of America Annual Meeting*, Baltimore, MD.
- 1997 **Klausmeier CA.** Extinction in multispecies and spatially-explicit models of habitat destruction. *Ecological Society of America Annual Meeting*, Albuquerque, NM.

Invited Workshops & Working Groups

- 2017 **First Symposium on Functional Marine Biodiversity**, *Helmholtz Institute for Functional Marine Biodiversity*, Oldenburg, Germany.
- 2016 **Global Co-evolution of the Ocean Environment and its Ecology**, *University of Bristol*, Bristol, UK.
- 2014–15 **Advancing the Ecological Foundations of Sustainability Science**, *Tansley Working Group*, Silwood Park, UK.
- 2013 **sDiv Workshop sTOICHFUN**, *Synthesis Centre for Biodiversity Sciences (sDiv)*, Leipzig, Germany.
- 2013 **International Workshop on Trait-based Approaches to Ocean Life**, *Centre for Ocean Life*, Copenhagen, Denmark.
- 2013 **Innovative Approaches in Marine Environment Modelling (AIMEN)**, *Labex MER*, Brest, France.
- 2013 **Microbial Ecology and Biogeochemistry of Oxygen-Deficient Marine Waters**, Santa Cruz, Chile.
- 2013 **Merging Complex “-omic” Data and Computational Ecosystem Models**, *Gordon and Betty Moore Foundation*, Miami FL.
- 2010–2012 **Food Web Dynamics and Stoichiometric Constraints in Meta-ecosystems**, *NIM-BioS*, Knoxville TN.

- 2010 **Advanced School in Complexity, Adaptation and Emergence in Marine Ecosystems**, *Abdus Salam International Centre for Theoretical Physics*, Trieste, Italy.
- 2010 **IMBER IMBIZO II**, Crete, Greece.
- 2009 **LEREC Workshop “Modeling Aquatic Systems”**, Umeå, Sweden.
- 2008 **National Academies Keck Futures Initiative Conference: Complex Systems**, Irvine CA.
- 2008 **Workshop on Plankton Complexity**, *Stazione Zoologica Anton Dohrn*, Naples, Italy, Discussion Leader.
- 2007 **TraitNET, NSF Research Coordination Network**, *Columbia University*, New York NY.
- 2006–2007 **Evolving Metacommunities**, *National Center for Ecological Analysis and Synthesis*, Santa Barbara CA.
- 2004 **Workshop on Present and Future of Ecological Stoichiometry (Woodstoich 2004)**, Finse, Norway.

Teaching

International Summer Schools

- 2016 **Global Co-evolution of the Ocean Environment and its Ecology Summer School**, Bristol, UK. 1 hour lecture “Resource Competition Theory”.
- 2014 **Modelling and Analysis of Innovation and Competition Processes Summer School**, Milan, Italy, with S. Geritz. 3 days.

Michigan State University

- Fall 2017 **Population & Community Ecology** (IBIO 896), with E. Litchman (15/30 lectures). 4 credits, 21 students.
- Spring 2017 **Metacommunity Ecology** (FW 893), with P. Zarnetske and Q. Read. 1 credit, 9 students.
- Fall 2016 **Population & Community Ecology** (IBIO 896), with G. Mittelbach and E. Litchman (5/30 lectures). 4 credits, 23 students.
- Population & Community Ecology Theory Lab** (PLB 898). 1 credit (3 hours/wk), 6 students.
- Fall 2015 **Population & Community Ecology** (ZOL 896), with G. Mittelbach and E. Litchman (4/30 lectures). 4 credits, 17 students.
- Population and Community Ecology Theory Lab** (PLB 898). 1 credit (3 hours/wk), 5 students.
- Spring 2015 **Quantitative Microbial Ecology & Evolution** (ZOL 890), with E. Litchman and S. Evans. 1 credit, 14 students.

- Fall 2014 **Population & Community Ecology Theory Lab** (PLB 898). 1 credit (3 hours/wk), 5 students.
- Spring 2014 **Contemporary Concepts in Ecology** (PLB 802), with Gary Mittelbach. 1 credit, 7 students.
- Fall 2013 **Population & Community Ecology Theory Lab** (PLB 898). 1 credit (3 hours/wk), 4 students.
- Integrative Topics in Plant Biology** (PLB 803), with Y. Shachar-Hall. 2 credits, 20 students.
- Summer 2013 **ELME: Metacommunity Ecology & Evolution**, with M. Leibold. Non-credit advanced workshop (3 weeks), 26 students.
- Fall 2012 **Population & Community Ecology Theory Lab** (PLB 898). 1 credit (3 hours/wk), 16 students.
- Summer 2011 **ELME: Adaptive Dynamics & Game Theory** (PLB 809-431), with S. Geritz. 1–3 credits (3 weeks), 6 students enrolled (18 non-credit students).
- Fall 2010 **Population & Community Ecology** (ZOL 896), with E. Litchman. 4 credits, 20 students.
- Quantitative Microbial Ecology & Evolution** (PLB 800/ZOL 895/MMG 890), with E. Litchman, J. Lennon, and J. Lau. 1 credit, 9 students.
- Summer 2010 **ELME: Theoretical Population & Ecosystem Ecology** (Math 490). 1 credit (1 week), 10 students.
- Fall 2009 **Advances in Microbial Community Ecology & Biogeography** (PLB 800), with E. Litchman and J. Lennon. 1 credit, 7 students.
- Population & Community Ecology Theory Lab** (PLB 809). 1 credit (3 hours/wk), 11 students.
- Summer 2009 **ELME: Adaptive Dynamics & Game Theory** (MTH 490). 1 credit (1 week), 11 students.
- Fall 2008 **Population & Community Ecology Theory Lab** (PLB 809). 1 credit (3 hours/wk), 5 students.
- Summer 2008 **ELME: Theoretical Population & Ecosystem Ecology** (Math 490). 1 credit (1 week), 14 students.
- Fall 2007 **Population & Community Ecology Theory Lab** (PLB 809). 1 credit (3 hours/wk), 8 students.
- Summer 2007 **ELME: Theoretical Population & Ecosystem Ecology** (MTH 490). 1 credit (1 week), 17 students.
- Spring 2007 **Mathematical Biology** (MTH 370), with C. Chiu. 3 credits, 10 students.

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Spring 2006 **Exploring the Roles of Heterogeneity in Plant Communities** (PLB 802-4), with K. Gross. 1 credit, 7 students.

[Georgia Institute of Technology](#)

Spring 2005 **Mathematical Biology** (Math/Biol 4755). 3 credits, 25 students.

Spring 2004 **Theoretical Ecology** (Biol 4423/8803). 3 credits, 18 students.

Fall 2003 **Mathematical Biology** (Math/Biol 4755). 3 credits, 25 students.

Students and Postdocs Supervised

Postdoctoral researchers

2016– **Colin Kremer**.

2016– **Thomas Koffel**.

2016– **Kaito Umemura**.

2015–2017 **Zepeng Sun**.

2016–2017 **Ghjuvan Grimaud**, *Current position: CEO & Co-Founder, BioMathematica*.

2015–2017 **Simon Stump**, *Current position: Postdoc, Comita Lab, Yale University*.

2013–2014 **Sabine Wollrab**, *Current position: Group Leader, Leibniz-Institute of Freshwater Ecology and Inland Fisheries, Lake Stechlin, Germany*.

2013–2014 **Maria Stockenreiter**, *Current position: Assistant Professor, University of Munich, Munich, Germany*.

2010–2013 **Kyle Edwards**, *Current position: Assistant Professor, University of Hawaii, Manoa HI*.

2009–2010 **Donald Schoolmaster**, *Current position: Research Associate, USGS, New Orleans LA*.

2008 **Maayke Stomp**, *Deceased*.

2006–2008 **Kohei Yoshiyama**, *Current position: Assistant Professor, University of Shiga Prefecture, Hikone, Japan*.

2006–2008 **Mary Anne Evans**, *Current position: Research Ecologist, USGS, Ann Arbor MI*.

2005–2008 **Chris Steiner**, *Current position: Associate Professor, Wayne State University, Department of Biology, Detroit MI*.

2006–2007 **Anne Schwaderer**.

Graduate students

2015– **Ravi Ranjan**, *Ph.D. student, MSU Department of Plant Biology*.

2009–2016 **Elizabeth Miller**, *Ph.D., MSU Department of Plant Biology, Current position: Postdoc, Bohannan Lab, University of Oregon*.

- 2009–2014 **Colin Kremer**, *Ph.D., MSU Department of Plant Biology*, Current position: Postdoc, Klausmeier-Litchman Lab, MSU.
- 2003–2010 **Jarad Mellard**, *Ph.D., Georgia Tech School of Biology and MSU Department of Plant Biology*, Current position: Postdoc, University of Tromsø.
- 2003–2005 **Liliana Lettieri**, *Ph.D. student, Georgia Tech School of Biology*.
- [Undergraduate students](#)
- 2015–2016 **Evan Johnson**, *Biology & Mathematics major, Kalamazoo College*.
- 2009 **Dennis Ruppe**, *Mathematics major, SUNY Geneseo*.
- 2004–2005 **Wes Angel**, *Biology/ISyE major, Georgia Tech*.
- 2004–2005 **Julie Bjornstad**, *Mathematics major, Georgia Tech*.
- 2004–2005 **Leo Dachevsky**, *Electrical and Computer Engineering major, Georgia Tech*.
- [Graduate committees](#)
- 2017– **Lana Bolin**, *MSU, Department of Plant Biology*.
- 2016– **Laura Twardochleb**, *MSU, Department of Fisheries & Wildlife*.
- 2014– **Lauren Simmons**, *University of Wisconsin, Milwaukee, Department of Biology*.
- 2012–2017 **Pat Hanly**, *MSU, Department of Zoology*.
- 2013–2016 **Jacob Nalley**, *MSU, Department of Zoology*.
- 2014–2015 **Daniel Brickley**, *MSU, Department of Plant Biology*.
- 2013–2015 **Masoud Mirmomeni**, *MSU, Department of Computer Science*.
- 2007–2013 **Mridul Thomas**, *MSU, Department of Zoology*.
- 2013 **Melanie Davis**, *MSU, Department of Fisheries & Wildlife*.
- 2013 **Justin Marleau**, *McGill University, Department of Biology*, External doctoral thesis reader.
- 2010–2013 **Nathaniel Walton**, *MSU, Department of Entomology*.
- 2011–2012 **Andreas Nørreslet**, *Technical University of Denmark, DTU Aqua*, M.S. Thesis.
- 2011–2012 **Lai Zhang**, *Technical University of Denmark, Department of Mathematics and DTU Aqua*.
- 2010–2012 **Megan Larsen**, *MSU, Department of Microbiology*.
- 2009–2011 **Emily Grman**, *MSU, Department of Plant Biology*.
- 2006–2010 **Todd Robinson**, *MSU, Department of Plant Biology*.
- 2008 **Maayke Stomp**, *University of Amsterdam*.
- 2004–2005 **Alan Wilson**, *Georgia Tech, School of Biology*.

Visiting Students

- 2017 **Amy Kendig**, *University of Minnesota*.
- 2014, 2015, 2016–2017 **Thomas Koffel**, *INRA Montpellier*.
- 2013 **Matthew Osmond**, *McGill University*.
- 2012 **Helene Weigang**, *University of Vienna*.
- 2011 **Jake Gillette**, *SUNY ESF*.
- 2010 **Jason Cepela**, *MSU*.
- 2010 **Kateryna Rybachuk**.
- 2008–2009 **Colin Kremer**, *SUNY Geneseo*.
- 2008, 2009, 2011 **Yonatan Natan**, *Ben Gurion University*.
- 2007 **Veronika Huber**, *Leibniz Institute of Freshwater Ecology and Inland Fisheries*.
- 2007 **Hagai Guterman**, *Ben Gurion University*.
- 2007 **Asaf Sadeh**, *Haifa University*.

Service

Editorial

- Ongoing Ad hoc journal and proposal reviewer (circa 6 per year)
- 2015, 2017 Tenure & Promotion Reviews, other institutions
- 2006–2010, 2014– Associate Editor, *The American Naturalist*
- 2016 Member, Helmholtz Institute for Functional Marine Biology Review Panel
- 2008–2015 Associate Editor, *Journal of Theoretical Biology*
- 2007, 2008, 2012, 2015 NSF Panelist
- 2014 Panelist, German Research Foundation (DFG) Priority Program DynaTrait
- 2012–2013 Co-organizer, Special Issue in Honor of Peter Abrams, *Journal of Theoretical Biology*
- 2012–2013 External Member, Theoretical Ecology Faculty Search Committee, Umeå University
- 2010–2012 Member, Faculty of 1000, Theoretical Ecology section

Advisory Boards

- 2011– Danish Center of Excellence “Life in a Changing Ocean”
- 2007– Center for Complex Systems Studies, Kalamazoo College

Organizational

- 2014 Co-organizer, Special Session on “Impact of Microbial Biodiversity on Aquatic Ecosystem Functioning and Biogeochemistry”, ASLO Meeting
- 2014 Scientific committee member, Innovations in Collaborative Modeling Conference, MSU
- 2013 Scientific committee member, International Workshop on Trait-based Approaches to Ocean Life workshop, Copenhagen Denmark
- 2012 Co-organizer, Special Session on “Vertical structure of aquatic ecosystems: observations, experiments, and theories”, ASLO Meeting
- 2009 Co-organizer, Special Session on “Trait-Based Approaches to Plankton Ecology”, ASLO Meeting
- 2005 Co-organizer, Special Session on “Advances at the Interface of Theoretical and Empirical Plankton Ecology”, ASLO Meeting

Michigan State University

- 2016– Member, Reappointment, Promotion & Tenure Committee, Dept. of Plant Biology
- 2016– Chair, Graduate Committee, KBS
- 2016– Member, Academic Program Planning Committee, KBS
- 2010–2011, KBS Representative to Plant Sciences Recruiting Committee
- 2013–
- January 25, 2017, Panelist, Getting a National Science Foundation Grant, OVPRGS
- 2005–2006, Member, Graduate Committee, KBS
- 2013–2016
- 2014–2015 Member, Quantitative Ecology/Evolution Search Committee, EEBC
- 2013–2015 Member, Faculty Advisory Committee, KBS
- 2012–2015 Chair, Housing Committee, KBS
- 2012–2013 Member, Web Committee, KBS
- 2012–2013 Member, Aquatic Microbial Ecologist Search Committee, KBS
- 2010–2011 Chair, Academic Program Planning Committee, KBS
- Fall 2008, Member, College of Natural Sciences Faculty Advisory Committee
- Spring 2010,
- Spring 2011
- 2008–2010 Member, Sociologist Search Committees, KBS
- 2008–2009 Member, Web Committee, Dept. of Plant Biology
- 2007 Member, Associate Director for Education and Outreach Search Committee, KBS

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- 2006 Co-organizer, Dept. of Plant Biology Retreat
- 2006–2009 Chair, Web Committee, KBS
- 2005–2006 Member, Plant Ecologist Search Committee, KBS & Dept. of Plant Biology
[Georgia Institute of Technology](#)
- 2004–2005 Advisor, Biology Graduate Student Association
- 2004–2005 Seminar Coordinator, School of Biology
- 2004 Member, Bioinformatics Search Committee