Fernanda S. Valdovinos

Associate Professor
Environmental Science & Policy, University of California, Davis
Wickson Hall, 350 E Quad, Davis, CA 95616
fvaldovinos@ucdavis.edu / www.fsvaldovinos.com

POSITIONS

2022-present	Associate Professor of Environmental Science & Policy, University of California, Davis, CA.
2020-2022	Assistant Professor of Environmental Science & Policy, University of California, Davis, CA.
2020-present	Affiliate Faculty, Center for the Study of Complex Systems, Univ. of Michigan, Ann Arbor, MI.
2020-2023	Adjunct Professor of Ecology & Evolutionary Biology, University of Michigan, Ann Arbor, MI.
2018-2020	Assistant Professor of Ecology & Evolutionary Biology, University of Michigan, Ann Arbor, MI.
2018-2020	Assistant Professor of Complex Systems, University of Michigan, Ann Arbor, MI.
2014-2017	Postdoctoral Researcher, Dept. of Ecology & Evolutionary Biology, Univ. of Arizona, Tucson, AZ.
2013	Research Assistant, Dept. of Ecology & Evolutionary Biology, Univ. of Arizona, Tucson, AZ.
2013	Research Assistant, Pacific Ecoinformatics & Computational Ecology Lab, Berkeley, CA.
2012	Research visitor, Pacific Ecoinformatics & Computational Ecology Lab, Berkeley, CA.
2012	Research visitor, Estación Biológica de Doñana, CSIC, Spain.

EDUCATION

2009-2014	PhD in Ecology and Evolutionary Biology, Faculty of Science, University of Chile
2008	Professional degree in Environmental Biology, Faculty of Science, University of Chile. (similar to a professional M.S. in the U.S.A.)
2004-2007	Licenciatura in Environmental Science w/ Biology concentration, Faculty of Science, University of Chile. (similar to B.S. in the U.S.A.)

GRANTS & AWARDS

Total as of August 16, 2023: $1,935,370 (in American dollars).

2023 Sole-PI of NSF 21-085, Dear Colleague Letter: "Research Experience for Post-Baccalaureate Students (REPS) in the Biological Sciences Supplemental Funding Opportunity". Supplement to NSF Collaborative Research: "Collaborative Research: Timescale-dependent effects of transient dynamics in plant-pollinator networks" DEB-2129757. $83,650. (2023-2024)

2023 Lead-PI of NSF grant (2023-2025): "BoCP-Design: Developing network-based models to evaluate functional biodiversity responses to climate change and species invasions" DEB-2224915. $524,000 for 2023-2025. Co-PIs: John Largier & Geerat Vermeij (UC Davis). International collaborators: Sergio Navarrete and Evie Wieters (Catholic University, Chile) and Tamara Robinson (Stellenbosch University, South Africa). (2023-2025)

2022 Ecological Society of America (ESA) Early Career Fellow.

2022 Lead-PI of NSF Collaborative Research: "Collaborative Research: Timescale-dependent effects of transient dynamics in plant-pollinator networks" DEB-2129757. $850,000. Co-PIs: Berry Brosi (University of Washington) & Mark Novak (Oregon State University). (2023-2026)

2021 Sole-PI of Jump-Start Grant, Center for the Advancement of Multicultural Perspectives on Science, UC Davis. $4,220.

2021 Lead-PI of Large Grant, Academic Senate, UC Davis. $25,000. Co-PI: John Largier.

2021 Lead-PI of Grant for Advancing Sustainable Development Goals, Global Affairs, UC Davis. $7,500. Co-PIs: John Largier (UC Davis) and Sergio Navarrete (Catholic University, Chile).

2019 (to present) Faculty Scholar at the Center for the Advancement of Multicultural Perspectives on Science, UC Davis. $100,000 per year in hiring incentives to the hiring Dean. $6,000 in professional funds to the faculty scholar.

2019 Thomas Jefferson Fund: Michigan-Sorbonne Collaboration "Predicting responses of ecological networks to anthropogenic perturbations". $20,000.

2018 Co-PI of NSF Collaborative Research: "RAPID: re-wiring of montane pollination networks under severe drought stress" DEB-1834487. $200,000. Lead-PI: Berry Brosi.

2018 MICDE Catalyst Grant: "Embedded Machine Learning Systems To Sense and Understand Pollinator Behavior" U061182, The Michigan Institute for Computational Discovery & Engineering (MICDE), University of Michigan, Ann Arbor. $90,000

2012 Fellowship for research abroad for PhD students, Becas-Chile, Government of Chile. $7,000

2012 Fellowship for research abroad for graduate students of the University of Chile, Chile. $5,000

2011 Fellowship for visits abroad program MECESUP "Consolidation and globalization of the doctoral program in Ecology and Evolutionary Biology (EBE), UCH 0803", Government of Chile. $8,000

2011 Grant for developing PhD thesis, CONICYT, Chile. $4,000

2009 CONICYT doctoral scholarship for a PhD program in Chile (ranked 10th among 500 awardees chosen from 1000's of applicants). $70,000.

PEER-REVIEWED PUBLICATIONS
(Trainees from my lab in bold)

46. **Valdovinos, F.S.** (2025). Effect of network structure and adaptive foraging on pollination services of species-rich plant-pollinator communities. *Integrative And Comparative Biology*, icaf024.

45. **Glaum*, P.,** Graham*, K.K., **Hartert, J.,** Gibbs, J, Tucker, E., Isaacs, R. & **Valdovinos, F.S.** (2024) A century of wild bee sampling: historical data and neural network analysis reveal ecological traits associated with species loss. *Co-first authors. *Proc. R. Soc.* B 291: 20232837.

44. **Anderson, C. R.**, Curtsdotter, A. R., Staniczenko, P. P., **Valdovinos, F. S.**, & Brosi, B. J. (2024). The Interplay of Binary and Quantitative Structure on the Stability of Mutualistic Networks. *Integrative And Comparative Biology*, icae074.

43. Geerat J. Vermeij, G.J., DeVries, T.J., Griffin, M., Nielsen, S.N., Ochoa, D., Rivadeneira, M.M, Salas-Gismondi, R., **Valdovinos, F.S.** (2024) The temperate marine Peruvian Province: How history accounts for its unusual biota. *Ecology & Evolution*. https://doi.org/10.1002/ece3.70048

42. **Valdovinos, F.S.**, Bodini A, Jordán F. (2024). Connected interactions: enriching food web research by spatial and social interactions. *Phil. Trans. R. Soc. B*; **379**: 20230163. https://doi.org/10.1098/rstb.2023.0163.

41. **Hale, K.R.S.**, Curlis, J., Auteri, G.G., Bishop, S., French, R.L., Jones, L.E., Mills, K.L., Scholtens, B.G., Simons, M., Thompson, C., Tourville, J., **Valdovinos, F.S.** (2024). A highly resolved multiplex network reveals the structural role of insects and plants in terrestrial food webs. *Phil. Trans. R. Soc. B*. https://doi.org/10.1098/rstb.2023.0180

40. **Kushal, A.**, Springborn, M., **Valdovinos, F.S.** (2024) Assessing Impacts of Bycatch Policies and Fishers' Heterogeneous Information on Food Webs and Fishery Sustainability. *Phil. Trans. R. Soc. B*. https://doi.org/10.1098/rstb.2023.0181

39. **Duckwall, C.**, Largier, J.L, Wieters, E.A., **Valdovinos, F.S.** (2024) Modeling time-varying phytoplankton subsidy reveals at-risk species in a Chilean intertidal ecosystem. *Scientific Reports* 14, 6995.

38. **Dritz, S., Nelson, R., & Valdovinos, F.S.** (2023) The role of intra-guild indirect interactions in assembling plant-pollinator networks. *Nature Communications* 14, 5797.
37. **Ávila-Thieme, M.I.**, Corcoran, D., Kusch, E., Castillo, S.P., Valdovinos, F.S., Navarrete, S.A., &Marquet, P.A. (2023). NetworkExtinction: An R package to simulate extinction's propagation and rewiring potential in ecological networks. *Methods in Ecology and Evolution*.
36. **Simon, S. M., Glaum, P., & Valdovinos, F.S.** (2023) Interpreting random forest analysis of ecological models to move from prediction to explanation. *Scientific Reports* 13, 3881.
35. **Valdovinos, F. S.**, **Dritz, S.**, & Marsland III, R. (2023). Transient dynamics in plant-pollinator networks: Fewer but higher quality of pollinator visits determines plant invasion success. *Oikos*. https://doi.org/10.1111/oik.09634
34. **Valdovinos, F. S.**, **Hale, K.R.S., Dritz, S.**, **Glaum, P.**, McCann, K.S., **Simon, S.M.**, Thébault, E., Wetzel, W.C., Wootton, K.L., & Yeakel, J.D. (2023). A bioenergetic framework for aboveground terrestrial food webs. *Trends in Ecology and Evolution*, 38, 301-312.
33. **Hale, K.R.S., Maes, D.P., Valdovinos, F.S.** (2022). Dynamics of pollination and seed dispersal mutualisms at low density. *The American Naturalist*, 200, 202-216.
32. **Hale, K.R.S., & Valdovinos, F.S.** (2021) Ecological theory of mutualism: Qualitative patterns in two-species population models. *Ecology and Evolution,* 00, 1-21.
31. **Morris, J. R.**, Allhoff, K. T., & **Valdovinos, F. S.** (2021). Strange invaders increase disturbance and promote generalists in an evolving food web. *Scientific Reports*, 11, 21274.
30. **Glaum, P.**, Wood, T. J., **Morris, J. R.**, & **Valdovinos, F. S.** (2021). Phenology and flowering overlap drive specialisation in plant–pollinator networks. *Ecology Letters,* 24, 2648-2659.
29. Young, J.G., **Valdovinos, F.S.**, Newman, M.E.J. (2021) Reconstruction of plant–pollinator networks from observational data. *Nature Communications*, 12, 1-12.
28. **Valdovinos, F.S** & Marsland III, R. (2021) Niche theory for mutualism: A graphical approach to plant-pollinator network dynamics. *The American Naturalist*, 197, 393-404.
27. **Ávila-Thieme, M.I.**, Corcoran, D., Pérez-Matus, A., Wieters, E. A., Navarrete, S.A., Marquet, P.A., **Valdovinos, F.S.** (2021) Alteration of coastal productivity and artisanal fisheries interact to affect a marine food-web. *Scientific Reports*, 11, 1765.
26**. Glaum, P. R., Cocco, V.**, **Valdovinos, F.S**. (2020) Integrating Economic dynamics into Ecological Networks: The case of fishery sustainability. *Science Advances*, 6(45), eaaz4891. Press release. Radio Interview.
25**. Hale, K.R.S.**, **Valdovinos, F.S.**, Martinez, N.D. (2020) Mutualism increases diversity, stability, and function of multiplex networks that integrate pollinators into food webs. *Nature Communications*, 11, 1-14, DOI: 10.1038/s41467-020-15688-w
24. **Valdovinos, F.S.** (2019) Mutualistic Networks: Moving closer to a predictive theory. *Ecology Letters*, 22, 1517-1534, DOI: 10.1111/ele.13279
23. Ponisio, L.C., **Valdovinos, F.S.**, Allhoff, K.T., Gaiarsa, M., Guimarães Jr., P.R., Hembry, D. H., Morrison, B., Gillespie, R. (2019) A network perspective for community assembly. *Frontiers in Ecology & Evolution*, DOI: 10.3389/fevo.2019.00103
22. Baiser, B, Gravel, D, Cirtwill, A, Dunne, J.A., Fahimpour, A.K., Gilarranz L.J., Grochow, J.A., Li, D., Martinez, N.D., McGrew, A., Poisot, T., Romnuk, T.N., Stouffer, D.B., Trotta, L.B. **Valdovinos, F.S.**, Williams, R.J., Wood, S.A., Yeakel, J.D. (2019). Ecogeographical Rules and the Macroecology of Food Webs. *Global Ecology and Biogeography* DOI: 10.1111/geb.12925.
21. Bland, S., **Valdovinos, F.S.**, Hutchings, J.A., Kuparinen, A. (2019) The role of fish life histories in allometrically scaled food-web dynamics. *Ecology and Evolution*, 6, 3651-3660.

20. Kuparinen, A., Perälä, T., Martinez, N. D., & **Valdovinos, F. S.** (2018). Environmentally-induced noise dampens and reddens with increasing trophic level in a complex food web, *Oikos,* 128, 608-620.
19. **Valdovinos, F.S.**, Berlow, E.L., Moisset de Espanés, P., Ramos-Jiliberto, R., Vázquez, D.P., Martinez, N.D. (2018) Species traits and network structure predict the success and impacts of pollinator invasions. *Nature Communications*, 9, 2153.
18. Romanuk, T.N., Y. Zhou, **F.S. Valdovinos** and N.D. Martinez (2017) Robustness Trade-Offs in Model Food Webs: Invasion Probability Decreases While Invasion Consequences Increase with Connectance. *Advances in Ecological Research,* 56, 263-291. Academic Press.
17. **Valdovinos, F.S.,** Brosi, B.J., Briggs, H.M., Moisset de Espanés, P., Ramos-Jiliberto, R., Martinez, N.D. (2016). Niche partitioning due to adaptive foraging reverses effects of nestedness and connectance on pollination network stability. *Ecology Letters*, 19, 1277-1286.
16. Davies, N., Field, D., Gavaghan, D., Holbrook, S. J., Planes, S., Troyer, M., Bonsall, M., Claudet, J., Roderick, G., Schmitt, R.J., Zettler, L. A., Berteaux, V., Bossin, H. C., Cabasse, C., Collin, A., Deck, J., Dell, T., Dunne, J., Gates, R., Harfoot, M., Hench, J. L., Hopuare, M., Kirch, P., Kotoulas, G., Kosenkov, A., Kusenko, A., Leichter, J. J., Lenihan, H., Magoulas, A., Martinez, N., Meyer, C., Stoll, B., Swalla, B., Tartakovsky, D. M., Teavai, H. Turyshev, M. S., **Valdovinos, F.**, Williams, R, Wood, Spencer, and IDEA Consortium. Simulating social-ecological systems: the Island Digital Ecosystem Avatars (IDEA) consortium. (2016) *GigaScience*, 5, 1.
15. Kuparinen, A., Boit, A., **Valdovinos, F. S.**, Lassaux, H., Martinez, N. D. (2016) Fishing-induced life-history changes degrade and destabilize harvested ecosystems. *Scientific Reports*, 6:22245, DOI: 10.1038/srep22245.
14. Rominger, A. J., Goodman, K. R., Lim, J. Y., Armstrong, E. E., Becking, L. E., Bennett, G. M., Brewer, M.S., Cotoras, D.D., Ewing, C.P., Harte, J., Martinez, N.D., O'Grady, P.M., Percy, D.M., Price, D.K., Roderick, G.K., Shaw, K.L., **Valdovinos, F.S.**, Gruner, D.S., & Gillespie, R. G. Community assembly on isolated islands: macroecology meets evolution. (2015) *Global Ecology and Biogeography*. DOI: 10.1111/geb.1234
13. Vázquez, D. P., Ramos-Jiliberto, R., Urbani, P., & **Valdovinos, F. S.** (2015) A conceptual framework for studying the strength of plant–animal mutualistic interactions. *Ecology Letters*, 18, 385-400.
12. Smith-Ramírez C., Ramos-Jiliberto R., **Valdovinos F.S.,** Martínez P., Castillo J.A., Armesto J.J. (2014) Decadal trends in the pollinator assemblage of *Eucryphia cordifolia* in Chilean rainforests. *Oecologia*, 176, 157-169.
11. **Valdovinos, F.S.**, Moisset de Espanés, P., Flores J.D, Ramos-Jiliberto, R. (2013) Adaptive foraging allows the maintenance of biodiversity of pollination networks. *Oikos* 122: 907-917.
10. Ramos-Jiliberto, R., **Valdovinos, F.S.**, Moisset de Espanés, P., Flores J.D. (2012) Topological plasticity increases robustness of mutualistic networks. Journal of Animal Ecology 81: 896-904.
9. Ramos-Jiliberto, R., **Valdovinos, F.S.**, Arias, J., Alcaraz, C., García-Bertho, E. (2011) A network-based approach to the analysis of ontogenetic diet shift: an example with the endangered fish *Aphanius iberus*. *Ecological Complexity* 8: 123–129.
8. Ramos-Jiliberto, R., Domínguez, D., Espinoza, C., López, G., **Valdovinos, F.S.**, Medel, R., Bustamante, R.O. (2010) Topology of Andean plant-pollinator networks along an altitudinal gradient. *Ecological Complexity* 7: 86-90.
7. **Valdovinos, F.S.**, Ramos-Jiliberto, R., Urbani, P., Garay-Narváez, Dunne, J.A. (2010b) Consequences of adaptive behavior for the structure and dynamics of food webs. *Ecology Letters* 13: 1546–1559.

6. **Valdovinos, F.S.**, Urbani, P, Ramos-Jiliberto, R. (2010a) Analysis of the consequences of individual adaptive behavior on population stability: The case of optimal foraging. *Revista Chilena de Historia Natural* 83: 207-218.
5. Ramos-Jiliberto, R., Oyanedel, J.P., Vega-Retter, C., **Valdovinos, F.S.** (2009b) Nested structure of plankton communities from Chilean freshwaters. *Limnologica* 39: 319-324.
4. Ramos-Jiliberto, R., Albornoz, A., **Valdovinos, F.S.**, Smith-Ramírez, C., Arim, M., Armesto, J., Marquet, P. (2009a) A network analysis of plant-pollinator interactions in temperate rain forests of Chiloé Island, Chile. *Oecologia*. 160: 697-706.
3. **Valdovinos, F.S.**, Ramos-Jiliberto, R., Flores, J.D., Espinoza, C., López, G. (2009b) Structure and dynamics of pollination networks: the role of alien plants. *Oikos* 118: 1190-1200.
2. **Valdovinos, F.S.**, Chiappa, E., Simonetti, J.A. (2009a) Nestedness of bee assemblages in an endemic South American forest: the role of pine matrix and small fragments. Journal of Insect Conservation 13: 449-452.
1. Guerrero-Bosagna, C., Sabat, P., **Valdovinos, F.S.**, Valladares, L. and Clark, S.J. Epigenetic and Phenotypic Changes Derived from a Continuous Pre and Post Natal Dietary Exposure to Environmental Estrogens in an Experimental Population of Mice (2008) *BMC physiology*, 8:10, doi: 10.1186/1472-6793-8-17. Available in http://www.biomedcentral.com/1472-6793/8/17.

PRE-PRINTS
(Trainees from my lab in bold)

49. **Valdovinos, F. S.**, Kaur, T., & Marsland III, R. (2025) The equalizing effect of adaptive foraging increases plant coexistence in plant-pollinator networks
48. **Hale, K.R.S.**, Thébault, E., & **Valdovinos, F. S.** (2023) A general trait-based model for multiplex ecological networks. https://www.biorxiv.org/content/10.1101/2023.08.08.552546v1. https://www.biorxiv.org/content/10.1101/2023.07.27.550852v1
47. **Nelson, R.A.**, **Dritz, S.**, **Valdovinos, F. S.**, & Aigner, P.A. (2022). The Restoration of Serpentine Plant-Pollinator Mutualisms. https://assets.researchsquare.com/files/rs-2172738/v1/135887cd-e894-47e2-b21a-cfc0518bf245.pdf?c=1666040966

CITATION METRICS

As of July 15, 2025, Google Scholar reports 2,435 citations (1,573 since 2020), h-index 25 (22 since 2020), i10-index 33 (32 since 2020).

SCIENTIFIC LEADERSHIP

2025 Organizer, "*International Workshop on Food Web Dynamics and Climate Change in Global Upwelling Systems*" Stellenbosch University, South Africa. December 8-12.

2024-25 Chair of the Theoretical Ecology Section of the Ecological Society of America.

2022-24 Editor and organizer of special theme issue "*Connected interactions: enriching food web research by spatial and social interactions*" published by Philosophical Transactions of the Royal Society B on July 2024, featuring 18 papers.

2024 Organizer, "*International Workshop on Food Web Dynamics and Climate Change in Global Upwelling Systems*" Bodega Marine Laboratory, CA. September 16-21.

2024 Vice-Chair of the Theoretical Ecology Section of the Ecological Society of America.

2023 Organizer, "*Interdisciplinary approaches for the sustainable development and conservation of marine ecosystems in Chile and California*" International workshop at Catholic University's Estación Costera de Investigaciones Marinas, Las Cruces, Chile. Jan 3-7.

2022 Co-organizer, "*Integrating Empirical and Theoretical Approaches in Mutualistic Networks*" Organized Oral Session, Joined Conference of the Ecological Society of America and the Canadian Society for Ecology and Evolution, Montreal, Canada. Aug 14-19. Speakers: Berry Brosi, Ignasi Bartomeus, Mark Novak, Lauren Ponisio, Fernanda Valdovinos.

2022 Organizer, "*Working group on expanding the Allometric Trophic Network framework to terrestrial food webs*" UC Davis, CA. Participants: Kevin McCann, Elisa Thebault, Justing Yeakel, William Wetzel, Kate Wootton, Kayla Hale, Paul Glaum. Feb 7-9.

2020 Co-organizer, "*Integrating Empirical and Theoretical Approaches in Mutualistic Networks*" Organized Oral Session, 105th Annual Conference of the Ecological Society of America, Salt Lake, UT, (Aug 6). Cancelled due to COVID-19.

2020 Organizer, "*Ecological Complexity in an Era of Global Change*" Symposium and Working Group, Center for the Study of Complex Systems, University of Michigan (April 2-3). Cancelled due to COVID-19.

2019 Organizer, "*Reckless Ideas in Ecological Networks*" Symposium and Working Group, Center for the Study of Complex Systems, University of Michigan (May 9-10). Participants: Phillip Staniczenko, Mark Novak, Benjamin Baiser, Lauren Ponisio, Paul CaraDonna, Luis Zaman, David Hembry, and Allison Barner.

2018 Co-organizer, "*Next-generation ecological network theory and application I*", Santa Fe Institute Working Group (Nov 5-6).

2018 Founder and organizer, "*Complex Networks Group*". Group of 33 scientists (13 PIs) conducting research on Complex Networks across Central Campus of the University of Michigan, including Departments of Physics, Sociology, Epidemiology, Information, Computer Science, Biophysics, Neuroscience, Ecology and Evolutionary Biology, School for Environment and Sustainability, and the Center for the Study of Complex Systems. This group meets every 3rd Tuesday of the month during Winter and Fall semesters at the Center of Complex Systems.

2018 Founder and co-organizer, "*Early-Career Ecological Network Scientists*". Group of 12 early career-scientists (8 Assistant Professors and 4 senior postdocs) conducting cutting-edge research on Ecological Networks in US institutions. This group meets twice a year to collectively influence research in ecology, define a long-term research agenda for ecological networks, and establish a professional support network for early-career researchers.

2018 Organizer, Colloquium on "*Evolution Of & In Ecological Networks*", Center for the Study of Complex Systems, University of Michigan (Sep 27-28). Speakers: Robert Holt, Judith Bronstein, Elisa Thébault, Anna Kuparinnen, Miguel A. Fortuna, Berry Brosi.

2016 Co-organizer, Workshop on "*Understanding the ecological and evolutionary assembly of networks*" UC Berkeley, Berkeley, CA, USA (Oct 23-24).

INVITED LECTURES

2025 Invited speaker, Symposium on *Ecological Network*, Trinational of Ecological Societies of Chile, Argentina and Uruguay. Mendoza, Argentina. Oct 5-10.

2025 Invited lecturer, Complex Systems Sumer School, Santa Fe Institute. Santa Fe, New Mexico, June 16-19.

2025 Invited discussion leader for "*Workshop on Modeling and Theory in Population Biology*", organized by Society for Mathematical and Theoretical Biology at the NSF-Simons National Institute for Mathematics and Theory in Biology (NITMB). Chicago, IL, June 2-6.

2025 Invited speaker, Mini-Symposium "*Evolutionary Dynamics in Ecological, Biological and Social Systems*", Society for Industrial and Applied Mathematics (SIAM) Conference on Dynamical Systems (DS25), Denver, CO, May 11-15.

2025 Invited speaker, ADVANCE Scholar Symposium, UC Davis, CA, April 8th.

2025 Invited speaker for International Conference organized by Centro de Investigación en Ciencias Biológicas, Universidad Autónoma de Tlaxcala, Mexico. Remote. Also streamed via Facebook Live. Jan 28th.

2025 Invited speaker, Symposium "*Pollinator-plant interactions in a changing landscape: embracing integrative approaches across scales*", the Society of Integrative and Comparative Biology, Atlanta, GA. January 3-7.

2024 Invited lecturer, XVIII Encuentro Nacional de Biología Matemática, Casa Matemática Oaxaca de la UNAM en la ciudad de Oaxaca, México.

2024 Invited lecturer, Complex Systems Sumer School, Santa Fe Institute. Santa Fe, New Mexico, June 24-28.

2024 Invited speaker, Symposium "*Naturam totam complectari animo*: Towards a relational ecology", Benedict XVI Hall, Pontifical University of the Holy Cross. Rome, Italy. June 10th.

2023 Invited speaker, Awards Symposium for Early Career Fellows, Ecological Society of America's Annual Meeting, Portland, USA, August 6-11.

2022 Keynote Speaker, NetSci, the flagship conference of the Network Science Society. Shanghai. July 27th. Remote.

2022 Keynote talk, 5th Workshop of Mathematical Modeling of Biological Systems, Universidad Tecnológica Metropolitana, Chile. January 20th. Remote.

2021 University of Sao Paulo Conference, Brazil, October 7th. Remote.

2021 Keynote talk, 40th anniversary of our Graduate Group in Applied Math, UC Davis, CA. October 2nd.

2021 Hilgendorf Lecture, Universität Tübingen, Tübingen, Germany, July 28th. Remote.

2020 2nd Complex Systems Workshop at the University of General Sarmiento, Argentina, Dec 9-11. Remote.

2020 "Integrating Empirical and Theoretical Approaches in Mutualistic Networks" Organized Oral Session, 105th Annual Conference of ESA, Salt Lake, UT, Aug 6. Cancelled due to COVID-19.

2020 "Dynamics of plant-animal mutualistic networks in space and time" Inspire Session, 105th Annual Conference of the Ecological Society of America, Salt Lake, UT, Aug 6.

2020 Hilgendorf Lecture, Universität Tübingen, Tübingen, Germany, July 8th. Postponed due to COVID-19.

2020 Ecological Networks Symposium, Swedish University of Agricultural Sciences, Uppsala, Sweden, May 25. Postponed due to COVID-19.

2019 "Irreversible Processes in Ecological Networks" Working group "Irreversible Processes in Ecological Evolution". Santa Fe Institute, NM, Jan 30.

2018 "Predictive Network Ecology: Mutualism, Evolution and Ecosystem Services" Organized Oral Session, 103rd Annual Conference of the Ecological Society of America, New Orleans, LA, Aug 5-10.

2018 "Human impacts on aquatic species and ecosystems" Symposium, 5th European Congress of Conservation Biology, Jyväskylä, Jun 12.

2016 International Meeting of the Network for Ecological Theory Integration (NETI), Santa Fe Institute, NM.

2015 "Understanding the ecological and evolutionary assembly of networks" Workshop, UC Berkeley, CA, USA.

2014 "Dynamics Of and On Networks" Workshop, Santa Fe Institute, NM, USA, Dec 3.

2014 "So You Want to Save the World? Careers in Environmental Science and Policy" Symposium. SACNAS National Conference, Los Angeles, CA, Oct 16-18.

2014 The Dimensions of Biodiversity Grant on Hawaii, Workshop. UC Berkeley, CA, USA, Apr 25.

2013 "Food webs: Science for Impact" 4th Once-a-decade International Symposium, Marburg, Germany, Nov.

2013 “Structure and Dynamics of Meta-Food Webs” Conference, Center for Interdisciplinary Research (ZiF), Bielefeld University, Germany, Sep 16.
2012 “GlobalWeb II” Workshop, Barcelona, Spain, Jul 10.
2011 "Evolutionary Processes in Ecological Networks" Organized Oral Session, 96th Ecological Society of America Annual Meeting, Austin, Texas, USA, Aug 9.

SEMINARS

2025 Department of Biology Seminar, University of Maryland. April 28th.
2025 Ecology and Evolutionary Biology Seminar, University of Michigan. April 22nd.
2025 BioScience seminar, Rice University. March 31st.
2024 Ecology and Evolutionary Biology Departmental Seminar, Yale University. February 7.
2023 Center for the Study of Complex Systems, University of Michigan. Oct 19.
2023 John and Mary Louise Riley Seminar Series at the Bodega Marine Laboratory (BML). June 28.
2022 Rocky Mountain Biological Laboratory seminar series. July 19.
2022 International Institute of Ecology and Environmental Sciences, Sorbonne University-Pierre and Marie Curie, Paris, France, Jun 1.
2022 CAMPOS Research Colloquium. May 11.
2022 12th Davis Math Day Conference. April 14.
2022 Seminar Series in the Duke University Program in Ecology. April 5.
2021 Complex Systems and Data Science seminar series, Vermont Complex Systems Center. April 14.
2021 Bob Holt’s Zoom International Lab meetings, University of Florida. Feb 1.
2021 Math Bio Seminar, UC Davis. Feb 1.
2020 Complexity Sciences Center, UC Davis. Dec 16.
2020 Spring Seminar, National Socio-Environmental Synthesis Center (SESYNC), Annapolis, MD. April 14th. Cancelled due to COVID-19.
2019 Noon Seminar, Santa Fe Institute, Santa Fe, NM, Nov 14.
2019 Environmental Science and Policy Department, University of California, Davis, CA, May 16.
2019 Entomology and Nematology Department, University of California, Davis, CA, May 15.
2018 Facultad de Agronomía, Universidad de Buenos Aires, Buenos Aires, Argentina, Dec 19.
2018 Facultad de Ciencias Exactas y Naturales, Universidad Nacional de Cuyo, Mendoza, Argentina, Dec 17.
2018 Lab. Ecotono, INIBIOMA (Universidad Nacional del Comahue-CONICET), Bariloche, Argentina, Dec 14.
2018 Kellogg Biological Station, Michigan State University, Hickory Corners, MI, Nov 30.
2018 Pop. Biology, Ecology, and Evolution Graduate Program, Emory University, Atlanta, GA, Nov 16.
2018 Integrative Biology, University of Guelph, Ontario, Canada, Oct 16.
2018 Dept. Ecology & Evolutionary Biology, University of Chile, Santiago, Chile, Jul 27.
2018 Dept. Ecological Sciences, Catholic University, Santiago, Chile, Jul 26.
2017 Dept. Entomology and Nematology, University of California, Davis, CA, May 10.
2016 Arnold Arboretum, Harvard University, Boston, MA. Oct 24.
2016 Dept. Ecology and Evolutionary Biology, University of Michigan, Ann Arbor, MI, USA, Dec 5.
2016 Dept. Ecology, Catholic University of Chile, Santiago, Chile. Sept 9.
2016 International Institute of Ecology and Environmental Sciences, Sorbonne University-Pierre and Marie Curie, Paris, France, Jun 3.
2016 Prof. Morlon Lab, École Normale Supérieure, Paris, France, Jun 2.
2016 Omidyar interview seminar, Santa Fe Institute, NM, Jan 28.

2014 Dept. Ecology and Evolutionary Biology, University of Arizona, Tucson, AZ, USA, Nov 25.

SELECTED WORKING GROUPS & WORKSHOPS

2025 "Terrestrial Food Webs Working Group", Centre for Ecosystem Management (CEM), University of Guelph, ON, Canada, Oct. 20-24.
2019 NSF-funded workshop "Advancing Theory in Ecology", Pennsylvania State University, PA, Oct. 23-25.
2019 Working group "Socio-Environmental Networks to Improve the Management of Socio-Environmental Systems (SES)", National Socio-Environmental Synthesis Center (SESYNC), Annapolis, MD.
2019 Working group "Irreversible Processes in Ecological Evolution". Santa Fe Institute, NM, Jan 29-31.
2016 3rd Network for Ecological Theory Integration (NETI), Santa Fe Institute, Santa Fe NM, Sep. 19-23.
2016 Adaptation and Resilience of Spatial Ecological Networks to human-Induced Changes (ARSENIC) Workshop, Lille University of Science and Technology, Lille, France. Jun 21.
2016 Exploitation and Cheating in Mutualism: Syntheses, Challenges, & New Directions, Maison des Océans et de la Biodiversité, Paris, France. May 30-31.
2015 CNH Systems Moorea Workshop, Gump South Pacific Research Station, UC Berkeley, Moorea, French Polynesia. Jun 1-6.
2015 Gradient-based Ecological Network Research II, Santa Fe Institute Workshop, Santa Fe, NM, Mar 1-3.
2014 IDEA Workshop on Coupled Human-Natural Systems. UC Berkeley, Berkeley, CA, Dec 8-10.
2014 Dynamics Of and On Networks, Santa Fe Institute Workshop, Santa Fe, NM, Dec 1-4.
2013 Moorea Island Digital Ecosystem Avatars Workshop. ETH Zurich, Switzerland. Nov 18-20.
2013 Food webs: science with impact. Justus Liebig University Giessen, Germany, Nov 13-15.

CONTRIBUTED PRESENTATIONS

2025 Ecological Society of America (ESA) Annual Meeting, Baltimore, MD, Aug 10-15.
2024 British Ecological Society (BES) Annual Meeting, Liverpool, UK, Dec 10-13.
2018 NetSci2018: Annual Soc. of Network Science meeting, Paris, France, June 13-15.
2017 102nd Annual Conference of the Ecological Society of America, Portland, OR, USA, Aug 6-11.
2014 99th Annual Meeting of the Ecological Society of America, Sacramento, CA, USA, Aug 10-15.
2014 NetSci2014: Annual Soc. of Network Science meeting. Berkeley, CA, USA, June 2-6.
2013 98th Annual Meeting of the Ecological Society of America, Minneapolis, Minnesota, USA, Aug 4-9.
2012 First Joint Meeting of Botany, Ecology, and Evolution Societies, XXIII Annual Meeting of the Botanical Society of Chile, XIX Annual Meeting of the Ecological Society of Chile and Sixth Annual Meeting of the Chilean Society of Evolution, Concepcion, Chile, Oct 6-9.

UNIVERSITY COURSES TAUGHT

5. *Career Discovery Groups* (3 academic years, 3 quarters each). Undergraduate course for Freshmen and Transfer students, College of Agricultural and Environmental Science, UC Davis, entire academic years **2022-2025**.
4. *Principles of Ecology* (5 quarters). Graduate Group in Ecology, UC Davis, Fall Quarters of **2020-2024**.
3. *Community Ecology* (3 quarters). Undergraduate course, Department of Evolution & Ecology, UC Davis, Fall Quarter. Fall Quarters of **2020, 2021, 2022.**
2. *Ecological Networks* (2 semesters). Center for the Study of Complex Systems, Dept. Ecology and Evolutionary Biology (Cross-listed), University of Michigan, Ann Arbor, Winter Semester of **2019, 2020**.
1. *Population and Community Ecology* (2 semesters). Dept. Ecology and Evolutionary Biology, University of Michigan, Ann Arbor, Fall Semester of **2019, 2020**.

Guest lecture First-Year Seminar "Hablemos de Evolución y Ecología", Winter Quarter 2025. Feb 28th.

POSTDOCTORAL RESEARCHERS SUPERVISED

3. Taranjot Kaur (2023-2025).
2. Paul R Glaum (2018-2022).
1. Alva Curtsdotter (2018).

VISITING SCHOLARS HOSTED

4. Rober Marsland III (2019) Postdoctoral fellow, Boston University, Department of Physics.
3. Elisa Thébault (2018) Professor, Sorbonne University-Pierre and Marie Curie.
2. Korinna Alhoff (2018) Assistant Professor, Institute of Evolution and Ecology (EvE), Tübingen, Germany.
1. Anna Kuparinen (2018) Associate Professor, University of Jyväskylä, Finland.

GRADUATE STUDENTS SUPERVISED

16. Milton Stookey (2023-) PhD student, Graduate Group in Applied Mathematics, UC Davis.
15. Sabine Dritz (2023-) PhD student, Graduate Group in Ecology, UC Davis.
14. Lauren Mossman (2022-) PhD student, Graduate Group in Applied Mathematics, UC Davis.
13. Alaina Stockdill (2022-) PhD student, Graduate Group in Applied Mathematics, UC Davis.
12. Marco Ruiz (2022-2024) PhD student, Graduate Group in Applied Mathematics, UC Davis.
11. Appilineni Kushal (2022-2024) PhD student, Graduate Group in Applied Mathematics, UC Davis.
10. Rebecca Nelson (2022-2025) PhD student, Graduate Group in Ecology, University of California, Davis.
9. Sophia Simon (2021-) PhD student, Graduate Group in Ecology, UC Davis.
8. Casey Duckwall (2021-) PhD student, Graduate Group in Applied Mathematics, UC Davis.
7. Kayla R. S. Hale (2015-2023) PhD candidate in Ecology & Evolutionary Biology, University of Michigan.
6. Margaret Knight (2021-2022) PhD student, Graduate Group in Applied Mathematics, UC Davis.
5. Jonathan Morris (2018-2020) PhD candidate, University of Michigan.
4. Maria Isidora Avila-Thieme (2017-2020) PhD Ecology, Catholic University.
3. Daniel Maes (2019-2020) M.S. in Applied and Interdisciplinary Mathematics, Marjorie Lee Browne Scholar, University of Michigan.
2. Simone Oliphant (2019-2020) M.S. in Ecology & Evolutionary Biology, Frontiers Program, University of Michigan. Graduated.
1. Valentin Cocco (2018) M.S. École Normale Supérieure, Paris, France.

UNDERGRADUATE STUDENTS SUPERVISED

12. Kaila Ryan (2025-), Wildlife, Fish, and Conservation Biology, UC Davis.
11. Paulo Andrade (2024-2025), Environmental Science and Management, Economics, UC Davis.
10. Gabriela Guerrero (2023), Environmental Science and Management, Ecology Biodiversity & Conservation track, UC Davis.
9. Priscila Angiano (2023-2024), Wildlife, Fish, and Conservation Biology, UC Davis.
8. Fernanda Arao (2021-2022), Ecology & Evolutionary Biology, UC Davis.
7. Christopher Yun (2021-2022), Biological Sciences, UC Davis.
6. Sophia Pelletier (2021-2022), Wildlife, Fish, and Conservation Biology and Oceanography, UC Davis.
5. Sophia Simon (2020-2021), Microbiology, Mathematics, University of Michigan.
4. Sabine Dritz (2019-2020) Life Science Informatics, University of Michigan.
3. Kathryne Vorthman (2019-2020), UROP sophomore student.
2. Daniel Kaiser (2019), Mathematics and Complex Systems, University of Michigan.

1. Joseph Hartert (2018-2020), Honors Thesis, Ecology & Evolutionary Biology, University of Michigan.

GRADUATE STUDENTS ADVISORY COMMITTEE SERVICE

14. Connor Magee (2025) PhD student, Graduate Group Ecology, UC Davis. Chair of QE committee
13. Tara Pozzi (2024) PhD student, Graduate Group Ecology, UC Davis. Chair of QE committee
12. Paulina Rojas-Rojas (2023) PhD student, Graduate Group Ecology, UC Davis. Chair of QE committee
11. Mei Blundell (2023) PhD student, Population Biology Graduate Group, UC Davis. Chair of QE committee
10. Kyra Gmoser-Daskalakis (2023) PhD student, Graduate Group Ecology, UC Davis. Chair of QE committee
9. Appilineni Kushal (2022) PhD student, Graduate Group Applied Math, UC Davis. Chair of QE committee
8. Rebecca Nelson (2020-2025) PhD student, Graduate Group in Ecology, UC Davis.
7. Junna Wang (2020-2023) PhD student, Graduate Group in Ecology, UC Davis.
6. Jorge Arroyo Esquivel (2020-2024) PhD student, Graduate Group in Applied Mathematics, University of California, Davis.
5. Jinny Yang (2019-2020) PhD candidate in Ecology & Evolutionary Biology, University of Michigan
4. Zachary Hajian-Forooshani (2018-2020) PhD candidate in Ecology & Evolutionary Biology, University of Michigan.
3. Chatura Vaidya (2018- 2020) PhD candidate in Ecology & Evolutionary Biology, University of Michigan
2. Emily Laub (2018-2020) PhD in Ecology & Evolutionary Biology, University of Michigan.
1. Connor Morozumi (2018-2022) PhD in Population Biology, Ecology and Evolution, Emory University.

UNIVERSITY & DEPARTMENT SERVICE

2025 Moderator of Panel discussion "Preserving biodiversity for the future", 2nd Annual Symposium of the College of Agricultural and Environmental Sciences (CA&ES), UC Davis. May 5th.

2025 Faculty mentor in "Peers and Professors Mixer" organized by Aggie Jumpstart and Aggie Ambassadors. February 27th.

2024 Chair of the organizing committee of the symposium "Understanding Food Web Dynamics from the San Francisco Estuary to the Pacific Ocean". Background: The UC Davis Coastal Marine Science Institute (CMSI) partnered with the Delta Stewardship Council, Delta Science Program to develop symposia focused on San Francisco-Bay Delta, with the goal of engaging policy makers and developing a use-inspired research agenda. May 31st.

2024 Participation as Faculty in the community engagement event "Latinx Faculty and Alumni Night" organized by the UC Davis College of Letters and Science on Wednesday, March 6th, Woodland.

2024 Faculty mentor in "Peers and Professors Mixer" organized by Aggie Jumpstart and Aggie Ambassadors. February 22nd.

2022-*present*. Principles of Community Committee, College of Agricultural and Environmental Science, UC Davis.

2022-*present*. Faculty Lead for cohort 4 of the NSF Research Traineeship (NRT) - Sustainable Oceans, UC Davis.

2021-*present*. Reviewer for the Admissions Committee, Graduate Group in Ecology, UC Davis.

2020-*present*. Diversity, Equity and Inclusion Committee, Dept. Environmental Science & Policy, UC Davis.

2020-*present*. IT Advisory Committee, Dept. of Environmental Science & Policy, UC Davis.

2021 IT Search Committee, Dept. of Environmental Science & Policy, UC Davis.

2021 Admissions Committee, Graduate Group in Applied Math, UC Davis.

2020-2021. Advancing Faculty Diversity Learning Community, University of California, Davis and Merced.

2019-2020. Executive Committee, Dept. of Ecology & Evolutionary Biology, University of Michigan.

EDITORIAL BOARD - REVIEWS OF MANUSCRIPTS AND PROPOSALS

Editor of Ecology Letters 2021-2024.

Guest editor for the special series "*Connected interactions: enriching food web research by spatial and social interactions*" for the journal Philosophical Transactions B in 2024.

Since 2012 I have reviewed for Science, Nature Communications, Ecology Letters, Trends in Ecology and Evolution, Journal Animal Ecology, Journal of Ecology, Functional Ecology, Oikos, Proceedings of the Royal Society of London, PloS Biology One, Methods in Ecology and Evolution, Ecography, Ecosphere, Biological Invasions, the Sectorial Commission for Scientific Research of Uruguay, and GWIS fellowships, NSF-DEB. I have also served as NSF panelist twice.

OUTREACH

2025 Interview for "Científicos y científicas en escena" hosted by Sociedad Científica Internacional de Biotecnólogos (SOCIBI). Jan 18. https://youtu.be/n8BkU-qlXTQ?si=727AUmeYi4DxdlsH

2024 Short-course on "Integrating Theory and Data in Plant-Pollinator Interactions". Rocky Mountain Biological Laboratory. August 12-14.

2024 Second edition of short-course for Chilean students on "Interdisciplinary approaches for the sustainable development and conservation of marine ecosystems in Chile and California". January 3-7.

2023 Short-course for Chilean undergraduate and graduate students on "Interdisciplinary approaches for the sustainable development and conservation of marine ecosystems in Chile and California". January 3-7.

2022 Guest Lecture for Environmental Biology course at College of the Canyons. April 20.

2022 Hosted two research interns from Davis Senior High School for 70 hours total, from January to May. The Valdovinos Lab trained these high school students, Elika Kiani and Dui Liu, in searching databases, data management, and data organization. They learned about the ecology of marine intertidal ecosystems, the biology of the intertidal organisms, and some computer coding in MatLab to convert data on species interactions they collected to an ecological network.

2021 Guest Lecture for STEM club at Davis Senior High School in Davis, CA. Oct 8.

2021 Environmental Sciences Guest Lecture at Santa Rosa Junior College. May 10.

2020 Interview in Spanish by Univision on the influence of climate change on the wildfires in California. Sep 9.

2020 Scientist Spotlight, Univ. of Michigan, Museum of Natural History as part of Women in Science Day. Canceled due to COVID-19.

2019-20 Science Communication Fellow, University of Michigan Museum of Natural History. Fall & Winter terms.

2019 Scientist Spotlight, Univ. of Michigan Museum of Natural History. I created and led an engaging, hands-on activity on plant-pollinator networks suitable for upper elementary through adult audiences. Dec 8.

2019 College Day Middle School. Program to help diversify STEM by the U-M Center for Educational Outreach and SACNAS. Featured interactive science activities for ~100 students of 6th-8th grades from Cesar Chavez Middle School, Detroit. I created and led an educational activity on plant-pollinator networks. Dec 5-6.

2019 Invited speaker at Michigan Math & Science Scholars (MMSS) Program, a program designed to introduce high school students to current developments and research in the sciences and to encourage the next generation of researchers to develop and retain a love of mathematics and science. Ann Arbor, MI. Jul. 29.

2019 Led the creation of "Plant-pollinator systems under threat", ~5,183 views as of 3/11/2025.

2017 Mentor at the Ask Women of Tucson mentorship event at Desert View High-school, Tucson AZ. Oct. 17.

2017 Speaker at the "Mentorship Mixer I" organized by Ask Women of Tucson, Tucson, AZ Apr. 26.

2016 Interviewed at the Chilean radio show 'Anthropocene' on how my research as a theoretical and computational ecologist generates knowledge to help solve the environmental crisis that our planet is facing, Valdivia, Chile, Sept. 16.

2016 Consulted on a pollinator themed 1.5m x 15m mural in historic downtown Tucson funded by the Tohono O'odham Nation (USA's 2nd largest Native American Nation). Inspired and informed the muralist, Niki

Glen, by developing her lay understanding of pollination and pollinator decline into a more sophisticated understanding of pollination networks and current research on the networks, a scientific visualization of which is depicted on the mural.

2016 Discussed scientific research and careers with athletes of Rincon High School, Tucson, AZ, while teaching a salsa dance class on Mar 22.

2014 Invited speaker for "Conversations with Scientists" SACNAS Conference, Los Angeles, CA, Oct 17.

2014 Mentor at SACNAS National Conference, Los Angeles, CA, Oct 16-18.

2014 Led the creation (with E. Berlow, N. Arbel and M. Barak) of a TED Ed Lesson on "How bees help plants have sex" http://ed.ted.com/lessons/how-bees-help-plants-have-sex-fernanda-s-valdovinos, ~174,947 views as of 03/11/2025.

2013 Participated in organized mentoring sessions at SACNAS National Conference, San Antonio, TX, Oct 3-6.