

## **Fernanda S. Valdovinos**

Associate Professor

Environmental Science & Policy, University of California, Davis

Wickson Hall, 350 E Quad, Davis, CA 95616

[fvaldovinos@ucdavis.edu](mailto:fvaldovinos@ucdavis.edu) / [www.fsvaldovinos.com](http://www.fsvaldovinos.com)

### **POSITIONS**

- July 2022- 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 Adjunct Professor of Ecology & Evolutionary Biology, University of Michigan, Ann Arbor, MI.
- 2020-present Affiliate Faculty, Center for the Study of Complex Systems, Univ. 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**

- 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 for 2022-2025. Co-PIs: Berry Brosi (University of Washington) & Mark Novak (Oregon State University).
- 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 Grant for Advancing Sustainable Development Goals, Global Affairs, UC Davis. \$7,500.
- 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)

33. **Hale, K.R.S., Maes, D.P., Valdovinos, F.S.** (*in press*) Dynamics of pollination and seed dispersal mutualisms at low density. *The American Naturalist*.
32. **Hale, K.R.S., & Valdovinos, F.S.** (2021) Ecological theory of mutualism: Qualitative patterns in two-species population models. *Ecology and Evolution*.
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., Martínez, 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. Martínez (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., Martínez, 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., Martínez, 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., Martínez, 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., Martínez, 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

34. **Ávila-Thieme, M. I.**, Corcoran, D., Castillo, S. P., **Valdovinos, F. S.**, Navarrete, S. A., & Marquet, P. A. (2020). NetworkExtinction: An R package to explore the propagation of extinctions through complex ecological networks. <https://www.biorxiv.org/content/10.1101/2020.10.17.305391v1>

#### CITATION METRICS

- As of 19 April 2022, [Google Scholar](#) reports 1,402 citations (962 since 2017), h-index 19 (17 since 2017), i10-index 23 (20 since 2017).

#### SCIENTIFIC LEADERSHIP

- 2022 Co-organizer, “*Integrating Empirical and Theoretical Approaches in Mutualistic Networks*” Organized Oral Session, Jointed 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.
- 2022 Organizer, “*Working group on expanding the Allometric Trophic Network framework to terrestrial food webs*” UC Davis, CA. Participants: Kevin McCann, Elisa Thébault, Justin Yeakel, William Wetzal, Kate Wootton, Kayla Hale, Paul Glaum. April 11-13.
- 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). Participants: Phillip Staniczenko, Mark Novak, Justin Yeakel, Benjamin Baiser, Lauren Ponisio, Paul CaraDonna, Luis Zaman, David Hembry, and Allison Barner.
- 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 3<sup>rd</sup> 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 Kuparinen, 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

- 2022 “Integrating Empirical and Theoretical Approaches in Mutualistic Networks” Organized Oral Session, ESA+CSEE Annual Meeting, Montréal, Canada.
- 2022 Keynote talk, 5th Workshop of Mathematical Modeling of Biological Systems, Universidad Tecnológica Metropolitana, Chile. January 20<sup>th</sup>. 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 2<sup>nd</sup>.
- 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, 105<sup>th</sup> 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, 105<sup>th</sup> 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, 103<sup>rd</sup> 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

- 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 12<sup>th</sup> Davis Math Day Conference. April 14.  
2022 Seminar Series in the Program in Ecology, Duke University, Durham, North Carolina. 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 + CAMPOS Research Colloquium, UC Davis. Feb 1.  
2020 Complexity Sciences Center, UC Davis. Dec 16.  
2020 Spring Seminar, National Socio-Environmental Synthesis Center (SESYNC), Annapolis, MD. April 14<sup>th</sup>. 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.

#### CONTRIBUTED PRESENTATIONS

- 2018 "Invading plant-pollinator networks: Aliens' traits predict their success and network structure predicts their impacts" **Valdovinos, F.S.**, Berlow, E. L. and Martinez, N.D. NetSci2018: Annual Soc. of Network Science meeting, Paris, France, June 13-15.  
2017 "Beyond stability: Adaptive foraging balances conflicts between plants and animals to structure pollination networks" **Valdovinos, F.S.**, Brosi B.J., Briggs H.M., Moisset de Espanés, P., Ramos-Jiliberto R., Martinez, 102nd Annual Conference of the Ecological Society of America, Portland, OR, USA, Aug 6-11.

- 2014 “Resistance and resilience of pollination networks to simulated invasions depend on adaptive foraging, network structure and the invaders' traits” **Valdovinos, F.S.**, Moisset de Espanés, P., Ramos-Jiliberto R., Vázquez, D.P., Martinez, N.D. 99th Annual Meeting of the Ecological Society of America, Sacramento, CA, USA, Aug 10-15.
- 2014 “Adaptive Foraging Stabilizes Pollination Networks via Apparent Altruism” **Valdovinos, F.S.**, Brosi B.J., Briggs H.M., Moisset de Espanés, P., Ramos-Jiliberto R., Martinez, N.D. NetSci2014: Annual Soc. of Network Science meeting. Berkeley, CA, USA, June 2-6.
- 2013 “Adaptive foraging stabilizes pollination networks via apparent altruism” **Valdovinos, F.S.** and Martinez, N.D. 98th Annual Meeting of the Ecological Society of America, Minneapolis, Minnesota, USA, Aug 4-9.
- 2012 “Adaptive foraging yields apparent altruism in pollination networks” **Valdovinos, F.S.** and Martinez, N.D. 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

- 2021 Community Ecology. Undergraduate course, Department of Evolution & Ecology, University of California, Davis, Fall Quarter.
- 2021 Principles of Ecology. Graduate Group in Ecology, University of California, Davis, Fall Quarter.
- 2021 Ecological Networks Seminar. Graduate Group in Ecology, University of California, Davis, Fall Quarter.
- 2020 Community Ecology. Undergraduate course, Department of Evolution & Ecology, University of California, Davis, Fall Quarter.
- 2020 Principles of Ecology. Graduate Group in Ecology, University of California, Davis, Fall Quarter.
- 2020 Ecological Networks. Center for the Study of Complex Systems, Dept. Ecology and Evolutionary Biology (Cross-listed), University of Michigan, Ann Arbor, Winter Term.
- 2019 Population and Community Ecology. Dept. Ecology and Evolutionary Biology, University of Michigan, Ann Arbor, Fall Term.
- 2019 Ecological Networks. Center for the Study of Complex Systems, Dept. Ecology and Evolutionary Biology (Cross-listed), University of Michigan, Ann Arbor, Winter Term.
- 2018 Population and Community Ecology. Dept. Ecology and Evolutionary Biology, University of Michigan, Ann Arbor, Fall Term.

#### POSTDOCTORAL RESEARCHERS SUPERVISED

1. Paul R Glaum (2018-2022)
2. Alva Curtsdotter (2018)

#### VISITING SCHOLARS HOSTED

1. Korinna Alhoff (2018) Assistant Professor, Institute of Evolution and Ecology (EvE), Tübingen, Germany.
2. Anna Kuparinen (2018) Associate Professor, University of Jyväskylä, Finland.
3. Elisa Thébault (2018, 2022) Professor, Sorbonne University-Pierre and Marie Curie.
4. Rober Marsland III (2019) Postdoctoral fellow, Boston University, Department of Physics.

#### GRADUATE STUDENTS SUPERVISED

1. Kayla R. S. Hale (2015- ) PhD candidate in Ecology & Evolutionary Biology, University of Michigan.
2. Maria Isidora Avila-Thieme (2017- 2020) PhD Ecology, Catholic University. Graduated
3. Jonathan Morris (2018-2020) PhD candidate, University of Michigan.
4. Valentin Cocco (2018) M.S. École Normale Supérieure, Paris, France. Graduated

5. Daniel Maes (2019-2020) M.S. in Applied and Interdisciplinary Mathematics, Marjorie Lee Browne Scholar, University of Michigan. Graduated
6. Simone Oliphant (2019-2020) M.S. in Ecology & Evolutionary Biology, Frontiers Program, University of Michigan.
7. Sophia Simon (2021- ) PhD student, Graduate Group in Ecology, UC Davis.
8. Margaret Knight (2021- ) PhD student, Graduate Group in Applied Mathematics, UC Davis.
9. Casey Duckwall (2021-) PhD student, Graduate Group in Applied Mathematics, UC Davis.
10. Appilineni Kushal (2022-) PhD student, Graduate Group in Applied Mathematics, UC Davis.
11. Rebecca Nelson (2022- ) PhD student co-advised with Susan Harrison, Graduate Group in Ecology, University of California, Davis

#### **UNDERGRADUATE STUDENTS SUPERVISED**

1. Joseph Hartert (2018-2020), Honors Thesis, Ecology & Evolutionary Biology, University of Michigan. Graduated
2. Daniel Kaiser (2019), Mathematics and Complex Systems, University of Michigan. Graduated.
3. Sabine Dritz (2019-2020) Life Science Informatics, University of Michigan. Graduated.
4. Kathryne Vorthman (2019-2020), UROP sophomore student.
5. Sophia Simon (2020-2021), Microbiology, Mathematics, University of Michigan. Graduated.
6. Sophia Pelletier (2021-), UC Davis.
7. Christopher Yun (2021-), UC Davis.
8. Fernanda Arao (2021-), UC Davis.

#### **GRADUATE STUDENTS ADVISORY COMMITTEE SERVICE**

1. Zachary Hajian-Forooshani (2018- ) PhD candidate in Ecology & Evolutionary Biology, University of Michigan
2. Chatura Vaidya (2018- 2020) PhD candidate in Ecology & Evolutionary Biology, University of Michigan
3. Emily Laub (2018- ) PhD candidate in Ecology & Evolutionary Biology, University of Michigan
4. Connor Morozumi (2018- ) PhD candidate, Population Biology, Ecology and Evolution, Emory University
5. Jinny Yang (2019-2020) PhD candidate in Ecology & Evolutionary Biology, University of Michigan
6. Jorge Arroyo Esquivel (2020- ) PhD student, Graduate Group in Applied Mathematics, University of California, Davis.
7. Junna Wang (2020- ) PhD student, Graduate Group in Ecology, University of California, Davis.

#### **UNIVERSITY & DEPARTMENT SERVICE**

- 2022-*present*. Faculty Lead of cohort 4 of the NSF Research Traineeship (NRT) - Sustainable Oceans, UC Davis.
- 2020-*present*. Diversity, Equity and Inclusion (DEI) Committee, Dept. Environmental Science & Policy, UC Davis.
- 2020-*present*. IT Advisory Committee, Dept. of Environmental Science & Policy, UC Davis.
- 2022 Reviewer for the Admissions Committee, Graduate Group in Ecology, UC Davis.
- 2021 Admissions Committee, Graduate Group in Applied Math, UC Davis.
- 2021 IT Search Committee, Dept. of Environmental Science & Policy, UC Davis.
- 2020-21. Advancing Faculty Diversity Learning Community, University of California, Davis and Merced.
- 2019-20. Executive Committee, Dept. of Ecology & Evolutionary Biology, University of Michigan.
- 2019-20. Seminar Committee, Dept. of Ecology & Evolutionary Biology, University of Michigan.

#### **SELECTED WORKING GROUPS & WORKSHOPS**



- 2021 American Institute of Mathematics funded workshop “Multiple States and Transition Paths in Marine Ecosystems” under structured Quartet Research Ensembles, San Jose, CA.
- 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 3<sup>rd</sup> 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.

### **EDITORIAL BOARD - REVIEWS OF MANUSCRIPTS AND PROPOSALS**

Editor of Ecology Letters since 2021.

Since 2012 I have reviewed for Science, Nature Communications, Ecology Letters, The Proceedings of the National Academy of Sciences, 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.

### **OUTREACH**

- 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 organized by the U-M Center for Educational Outreach and SACNAS that 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](#)”, viewed ~2,727 times as of 9/23/2019.
- 2017 Mentor at the mentorship event organized by Ask Women of Tucson at Desert View High-school, Tucson AZ. Oct. 17.
- 2017 Speaker and Mentor 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” at SACNAS National Conference, Los Angeles, CA, Oct 17.
- 2014 Participated in organized mentoring sessions at SACNAS National Conference, Los Angeles, CA, Oct 16-18.
- 2014 Led the creation (with E. Berlow, N. Arbel and M. Barak) of TED Ed Lesson “How bees help plants have sex” <http://ed.ted.com/lessons/how-bees-help-plants-have-sex-fernanda-s-valdovinos>, viewed: 151,524 times as of 04/02/2022.
- 2013 Participated in organized mentoring sessions at SACNAS National Conference, San Antonio, TX, Oct 3-6.