

Curriculum Vitae
Fernanda S. Valdovinos

Assistant Professor
Department of Ecology and Evolutionary Biology
Center for the Study of Complex Systems
University of Michigan
1105 North University Ave, Biological Sciences Building
Ann Arbor, MI 48109, USA
fsvaldov@umich.edu / www.fsvaldovinos.com

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.)

POSITIONS

- 2018-present Assistant Professor of Ecology & Evolutionary Biology, University of Michigan, Ann Arbor, MI.
2018-present Assistant Professor of Complex Systems, University of Michigan, Ann Arbor, MI.
2014-2017 Postdoctoral Researcher, Department of Ecology & Evolutionary Biology, University of Arizona, Tucson, AZ.
2013 Research Assistant, Department of Ecology & Evolutionary Biology University 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.

GRANTS & AWARDS

- 2019 Thomas Jefferson Fund: Michigan-Sorbonne Collaboration "Predicting responses of ecological networks to anthropogenic perturbations". \$20,000 (UM \$10,000)
2018 NSF Collaborative Research: "RAPID: re-wiring of montane pollination networks under severe drought stress" DEB-1834487. \$200,000 (UM \$44,369)
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 stays abroad for PhD students, Becas-Chile, Government of Chile. \$7,000
2012 Fellowship for research short stays abroad for doctoral and master 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

- 2008 Top ranked applicant for doctoral program of Ecology and Evolutionary Biology, University of Chile, Chile.
- 2008 Award for being highest (1st) ranked among ~40 graduates from the professional Environmental Biology program, University of Chile, Chile.
- 2008 Award for being highest (1st) ranked among ~60 graduates from Licenciatura in Environmental Science w/ Biology concentration, Univ. of Chile, Chile.
- 2007 Selected for Research Experiences for Undergraduates (REU), Santa Fe Institute, USA.
- 2004 Irma Salas Award (1 of 4) for female accepted applicants to all college programs of the University of Chile, University of Chile.

SCIENTIFIC LEADERSHIP

- 2019 Organizer, “*Reckless Ideas in Ecological Networks*” Symposium and Working Group, Center for the Study of Complex Systems, University of Michigan (May 9-10)
- 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 Co-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 Kuperinnen, 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).

PEER-REVIEWED PUBLICATIONS

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* <https://doi.org/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., Kuperinnen, A. (2019) The role of fish life histories in allometrically scaled food-web dynamics. *Ecology and Evolution*, 00:1–10. <https://doi.org/10.1002/ece3.4996>

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*, doi: 10.1111/oik.05575
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>.

MANUSCRIPTS IN PROGRESS

25. Glaum, P. R., Cocco, V., **Valdovinos, F.S.** (*in review*) Fisheries as components of food webs: Integrated Economic-Ecological dynamics determine fishery sustainability.
26. Sale-Hale, K.R., **Valdovinos, F.S.**, Martinez, N.D. (*in review*) Pollinators in food webs: Mutualistic interactions increase diversity, stability, and function in multiplex networks.
27. Young, J.G., **Valdovinos, F.S.**, Newman, M.E.J. (*in review*) Reconstruction of plant–pollinator networks from observational data.
28. **Ávila-Thieme M.I.**, Corcoran, D., Pérez-Matus, A., Navarrete, S.A., Marquet, P.A., **Valdovinos, F.S.** (*in prep*) Impact of artisanal fisheries on food-webs: The case of the Central Coast of Chile.
29. Allhoff, K., Loeuille, N., **Valdovinos, F.S.** (*in prep*) The effect of invasions on the structure, stability and evolution of food webs.
30. **Valdovinos, F.S.** (*in prep*) The egalitarian effect of connectance in plant-pollinator networks.

CITATION METRICS

- As of 23 September 2019, [Google Scholar](https://scholar.google.com/citations?user=...) reports 763 citations (563 since 2014), h-index 14 (13 since 2014), i10-index 16 (14 since 2014).

INVITED LECTURES

- 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 3rd International Meeting of the Network for Ecological Theory Integration (NETI), Santa Fe Institute, NM, Sept. 20.
- 2015 “Understanding the ecological and evolutionary assembly of networks” Workshop, UC Berkeley, CA, USA, Oct 23.
- 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 14.
- 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

- 2020 Spring Seminar, National Socio-Environmental Synthesis Center (SESYNC), Annapolis, MD.
- 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

(People from my lab in bold)

- 2019 “Redundancy, extinction and robustness in rocky intertidal food webs” L. Tralma, **M.I. Ávila-Thieme**, S.A. Navarrete, P.A. Marquet, **F.S. Valdovinos**, P.A. Camus. The International Society for Ecological Modelling Global Conference. Salzburg, Austria, Oct 1-5.
- 2019 “Eigenvector-based algorithm detect the most detrimental deletion sequence in both topological and dynamical networks extinctions analysis” **M.I. Avila-Thieme**, D. Corcoran, A. Perez-Matus, P.A. Marquet, S.A. Navarrete, **F.S. Valdovinos**. The International Society for Ecological Modelling Global Conference. Salzburg, Austria, Oct 1-5.

-
- 2019 “Contrasting Topological and Quantitative Structures Drive Stability in Mutualistic Networks” **Curtsdotter, A.**, Brosi B.J., Staniczenko, P.P.A. and **Valdovinos, F.S.** 4th Symposium on Ecological Networks. Paris, France, Sep 11-13.
- 2018 “Mutualism in food webs: Persistent pollinators facilitate positive diversity-stability relationships” **Sale-Hale, K.R.**, **Valdovinos, F.S.** and Martinez, N.D. Organized Oral Session, 103rd Annual Conference of the Ecological Society of America, New Orleans, LA, Aug 5-10.
- 2018 “Contrasting Topological and Quantitative Structures Drive Stability in Mutualistic Networks” **Curtsdotter, A.**, Brosi B.J., Staniczenko, P.P.A. and **Valdovinos, F.S.** Oral Session, 103rd Annual Conference of the Ecological Society of America, New Orleans, LA, Aug 5-10.
- 2018 “Impact of guild structure on the stability of ecological communities” **Curtsdotter, A.**, Staniczenko, P.P.A. **Valdovinos, F.S.** and Brosi B.J. 103rd Annual Conference of the Ecological Society of America, New Orleans, LA, Aug 5-10.
- 2018 “Effects of Artisanal Fisheries on Food Webs: The Case of Chilean Intertidal and Subtidal Ecosystems” **Avila, M. I.**, Corcoran, D., Marquet, P. A., Navarrete, S. A. and **Valdovinos, F.S.** 103rd Annual Conference of the Ecological Society of America, New Orleans, LA, Aug 5-10.
- 2018 “The effect of invasions on the structure, stability and evolution of food webs” Allhoff, K., Loeuille, N., Martinez, N.D. and **Valdovinos, F.S.** Organized Oral Session, 103rd Annual Conference of the Ecological Society of America, New Orleans, LA, Aug 5-10.
- 2018 “Informing economic complexity with ecological complexity: Studying sustainable fisheries with complex food-web models” **Glaum, P. R.**, **Cocco, V.** and **Valdovinos, F.S.** 103rd Annual Conference of the Ecological Society of America, New Orleans, LA, Aug 5-10.
- 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 “Sustaining Economic Exploitation of Complex Ecosystems in Computational Models of Coupled Human-Natural Networks” Martinez, N.D. and **Valdovinos, F.S.** Conference on Complex Systems, Cancun, Mexico. Sep 17-22.
- 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.
- 2015 “Fishing-induced life-history changes degrades and destabilizes fishery ecosystems” Martinez, N.D., **Valdovinos, F.S.**, Kuparinen, A., Boit, A., Lassaux, H., Tonin, P. 100th Annual Conference of the Ecological Society of America, Baltimore, MD, USA, Aug 9-14.
- 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.
- 2011 “The effect of adaptive behavior on the robustness of pollination networks against species extinctions” **Valdovinos, F.S.**, Moisset de Espanés, P., Flores, J.D., Ramos-Jiliberto, R. Sao Paulo Advanced Science School on Ecological Networks, Sao Paulo, Brazil, Sep 16-25.
- 2010 “Topological plasticity in a pollination network increases its robustness against species loss” **Valdovinos, F.S.**, Ramos-Jiliberto, R., Flores, J.D. 4th Binational Ecology Meeting, Buenos Aires, Argentina, Aug 8-13.
- 2009 “Effect of a pollutant as disturbance agent in a system of one predator-two prey” Garay-Narváez, L., Urbani Reininger, P., González-Barrientos, J., **Valdovinos, F.S.**, Ramos-Jiliberto, R. 9th Chilean Annual Meeting of Biomathematics. Olmué, Chile. Nov 5-7.
- 2009 “Effects of alien plants on the dynamics of a pollination network” **Valdovinos, F.S.**, Ramos-Jiliberto, R., Flores, J.D. 16th Annual Meeting of Ecological Society of Chile. Valdivia, Chile. Oct 8-10.
- 2009 “Structure and dynamics of pollination networks: the role of alien plants” **Valdovinos, F.S.**, Ramos-Jiliberto, R., Flores, J.D. Workshop on Theoretical Ecology and Global Change. ICTP - The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy. Mar 2-13.
- 2007 “Stream contamination and nested subset theory” **Valdovinos, F.S.**, Valdovinos, C.E., Ramos-Jiliberto, R., Mattar, C., Sotomayor, P. 4th Congress of Limnology Chilean Society. Santiago. Chile. Oct 22-25.
- 2007 “Nested Subset Theory applied to Environmental Impact Estimations: The case of Aconcagua river (Chile)” **Valdovinos, F.S.**, Valdovinos, C.E., Ramos-Jiliberto, R., Mattar, C., Sotomayor, P. 7th Congress of Society of Environmental Toxicology and Chemistry Latin America (SETAC LA). Montevideo. Uruguay. Oct 8-11.
- 2007 “Nested Structure of freshwater planktonic communities of Chile” Ramos-Jiliberto, R. Oyanedel, JP. Vega-Retter, **Valdovinos, F.S.**. 50th Annual Meeting of Biology Society of Chile. Pucón. Chile. Oct 7-11.
- 2007 “Consequences of a Continuous Pre and Post Natal Exposure to Dietary Isoflavones on Life History and Morphometric Characters in an Experimental Population of Mice” Guerrero-Bosagna, C.M., **Valdovinos, F.**, Valladares, L.E, Sabat, P.. Endocrine Society's 89th Annual Meeting. Toronto. Canada. Jun 2-5.
- 2007 “Revisiting Paradox of Enrichment by mean of a Logistic Model Reconstruction. 7th Chilean Annual Meeting of Biomathematics” **Valdovinos, F.S.**, Valiente, A., Razeto-Barry, P. & Ramos-Jiliberto, R.. Valparaíso. Chile. Mar 29-30.
- 2006 Contributed poster “Effect of the Forest Fragmentation on the Richness and Abundance of Bees in an endemic forest of Chile” **Valdovinos, F.**, Simonetti, J.A., Chiappa, E. 28th Annual Meeting of the Chilean Entomological Society. Temuco. Chile. Nov 29-Dec 1.

UNIVERSITY COURSES TAUGHT

- 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.

- 2010 Teaching Assistant, Graduate “Population Ecology” course Ecology and Evolutionary Biology, University of Chile, Santiago, Chile.
- 2008 Teaching Assistant, Undergraduate “General Ecology” course at Department of Ecological Sciences, University of Chile, Santiago, Chile.
- 2007 Guest Lecture to Undergraduate “Complex Networks in Biology” course, Universidad Alberto Hurtado, Santiago, Chile.
- 2006 Teaching Assistant, Undergraduate “Linear Algebra” course for Biology majors, Facultad de Ciencias, University of Chile, Santiago, Chile.

SHORT COURSES TAUGHT

- 2011 Lecture on “Ecological Networks”, VIII Complex System Summer School “Complexity and diversity: From genes to societies”, Valparaíso Complex Systems Institute (ISCV), Valparaíso, Chile. Jan 12.

POSTDOCTORAL RESEARCHERS SUPERVISED

- 1. Paul R Glaum (2018-)
- 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) 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. Sale-Hale (2015-) PhD candidate in Ecology & Evolutionary Biology, University of Michigan
- 2. Maria Isidora Avila (2017-) PhD candidate in Ecology, Catholic University
- 3. Jonathan Morris (2018-) PhD pre-candidate, University of Michigan
- 4. Valentin Cocco (2018) M.S. École Normale Supérieure, Paris, France.
- 5. Daniel Maes (2019-) M.S. in Applied and Interdisciplinary Mathematics, Marjorie Lee Browne Scholar, University of Michigan.
- 6. Simone Oliphant (2019-) M.S. in Ecology & Evolutionary Biology, Frontiers Program, University of Michigan.

UNDERGRADUATE STUDENTS SUPERVISED

- 1. Joseph Hartert (2018-), Ecology & Evolutionary Biology, University of Michigan
- 2. Daniel Kaiser (2019), Mathematics and Complex Systems, University of Michigan

GRADUATE STUDENTS ADVISORY COMMITTEE SERVICE

- 1. Zachary Hajian-Forooshani (2018-) PhD candidate in Ecology & Evolutionary Biology, University of Michigan
- 2. Chatura Vaidya (2018-) 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 Student, Population Biology, Ecology and Evolution, Emory University

DEPARTMENT COMMITTEE SERVICE

1. Dept. Seminar Committee, Ecology & Evolutionary Biology, University of Michigan, 2018-2020
2. Executive Committee, Ecology & Evolutionary Biology, University of Michigan, 2019-2021

PARTICIPATION IN WORKING GROUPS, WORKSHOPS AND SUMMER SCHOOLS

- 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): Meeting 2”, National Socio-Environmental Synthesis Center (SESYNC), Annapolis, MD, Jun. 10-12.
- 2019 Working group “Socio-Environmental Networks to Improve the Management of Socio-Environmental Systems (SES): Meeting 1”, National Socio-Environmental Synthesis Center (SESYNC), Annapolis, MD, Apr. 4-5.
- 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 Prof. Loeuille Group Workshop, Centre de Recherche en Ecologie Expérimentale et Prédictive & Ecotron Ile-de-France, Foljuif, France. Jun 28-29.
- 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.
- 2014 Expanding Potential: A workshop on navigating the hurdles faced by women in STEM fields, UC Berkeley, Berkeley, CA. Nov 15.
- 2014 Workshop on Global Change, UC Berkeley, Berkeley, CA. May 19-21.
- 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.
- 2011 Sao Paulo Advanced Science School on Ecological Networks, Sao Paulo, Brazil, Sep. 16-25.
- 2009 Workshop on Theoretical Ecology and Global Change. ICTP -The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy. Mar 2-13.
- 2009 Species Interactions and Global Change Impacts. Coyhaique, Chile. Institute of Ecology and Biodiversity (IEB). Jan 5-20.
- 2008 Complex System Summer School Bariloche, Argentina. Santa Fe Institute. Dec 1-15.
- 2008 3rd Discrete Mathematics Summer School Valparaíso, Chile. Valparaíso Complex Systems Institute (ISCV). Jan 15-19.
- 2007 2nd ISCV Thematic Workshop: Biologically-Inspired Computing. Valparaíso, Chile. Valparaíso Complex Systems Institute (ISCV). Dec 3-7.
- 2007 5th Complex Systems Summer School. Valparaíso, Chile. Valparaíso Complex Systems Institute (ISCV). Jan 15-19.
- 2007 2nd Discrete Mathematics Summer School. Valparaíso, Chile. Valparaíso Complex Systems Institute (ISCV). Jan 8-12.

- 2006 Statistical physics models, networks and Complex Systems. Valparaíso, Chile. Valparaiso Complex Systems Institute (ISCV). Dec 18-22.
- 2006 Networks in Statistical physics, Social and Ecological Systems. Valparaíso, Chile. Valparaiso Complex Systems Institute (ISCV). Dec 11-15.
- 2006 Networks in Cognitive Systems / Trends and Challenge in Biomedicine: From Cerebral Process to Mathematical Tools Design. Valparaiso Complex Systems Institute (ISCV). Valparaíso, Chile. Dec 11-15.

REVIEWS OF MANUSCRIPTS AND PROPOSALS

For Ecology Letters, Trends in Ecology and Evolution, Journal Animal Ecology, Journal of Ecology, Functional Ecology, Oikos, Nature Communications, Trends in Ecology & Evolution, 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

- 2019 Science Communication Fellow, University of Michigan Museum of Natural History. Fall & Winter terms.
- 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 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>, viewed ~117,889 times as of 7/31/2019.
- 2013 Participated in organized mentoring sessions at SACNAS National Conference, San Antonio, TX, Oct 3-6.
- 2005 Volunteer Environmental Educator at the Environmental Information Center of the Puyehue National Park, Chile. Feb 1-28.

- 2005 EXPLORA-CONICYT project ED9/04/001 volunteer. Introduced methods for studying Chilean wild life to Santiago (Chile) high school students.
- 2004 EXPLORA-CONICYT project ED7/02/021 volunteer. Introduced methods for studying environmental impacts to Santiago (Chile) high school students.