Justin D. Yeakel, Ph.D.

Current Positions

University of California, Merced, Merced, CA USA

Biology Program Chair — **July, 2023 - present**
Associate Professor — **July, 2021 - present**
Assistant Professor — **January, 2016 - 2021**
Assistant Research Scientist — **2015 - 2016**

Santa Fe Institute, Santa Fe, NM USA

External Professor — **August, 2024 - present**

Contact Information

Science & Engineering 1, 288
Life & Environmental Sciences
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Research Interests

Paleoecology, Food webs, Stable isotopes, Foraging dynamics, Niche construction, Community assembly, Ecosystem engineering, Human evolution

Past Positions

Santa Fe Institute, Santa Fe, NM USA

Omidyar Fellow — **June, 2014 - 2017**

Simon Fraser University, Vancouver, BC Canada

Postdoctoral Researcher — **June, 2012 - 2014**

Education

University of California, Santa Cruz, Santa Cruz, CA USA

Ph.D. Ecology & Evolutionary Biology — **2006 - 2012**

- Dissertation Topic: "The structure of mammalian food webs: Interpreting, predicting, and updating estimates of species interactions in paleontological and modern communities"
- Advisor troika: Paul L. Koch (Earth & Planetary Sciences), Marc Mangel (Applied Mathematics), James A. Estes (Ecology & Evolutionary Biology).
  External committee member: Paulo R. Guimarães Jr. (University of Sao Pãulo)

Kent State University, Kent, OH USA

B.S. Biological Anthropology (Biology minor), May, 2004 — **1999 - 2004**
Summa cum laude

Fellowships & Grants – In Review

- National Science Foundation, Emerging Mathematics in Biology: *Collaborative Research: Reconstructing Interactions of Species Ensembles (RISE): Generalized dynamical frameworks for exploring the structure and function of ancient marine communities through time.* Role: PI
- W. M. Keck Foundation: *The ecological dynamics of mammalian macroevolution across the Cenozoic.* Role: PI
- National Science Foundation, NRT-HDR: *Data-integrated physical modeling for sustainability applications.* Role: Collaborator
- National Science Foundation, LTER Renewel: *LTER: Sevilleta Site: Environmental variability at dryland ecotones.* Role: Collaborator

Fellowships & Grants – Awarded

- UC Merced COR: *Unraveling ecological drivers of mammalian macroevolution.* (2024) Role: PI w/ Anna Carolina de Almeida; Amount: $10,000; Status: *Awarded*
- UC Merced COR: *Exploring the relationships between morphological variation, dietary breadth, and patterns of extinction among Hawaiian Honeycreepers (Drepanididae).* (2022) Role: PI w/ Irina Birskis Barros; Amount: $5,000; Status: *Awarded*
- National Science Foundation, LTREB: *Collaborative Research: Experimental determination of trophic dynamics and energy flows in a semiarid habitat in Chile.* (2020) Role: PI; Lead PI: Doug Kelt (UC Davis); Amount: $356,376; Status: *Awarded*
- Sevilleta Summer Fellowship. (2019) Role: Single-PI; Amount: $5,000; Status: *Awarded*
- National Science Foundation, LTER: *Sevilleta (SEV) Site: Climate Variability at Dryland Ecotones.* (2018) Role: Senior Collaborator; Lead PI: Jennifer Rudgers (U New Mexico); Amount: $6,400,000; Status: *Awarded*
- National Science Foundation, SGP-Sedimentary Geology & Paleobiology: *Assessing millennial-scale community stability using highly-resolved mammal and vegetation food webs.* (2016) Role: co-PI; Amount: $1,144,448; Status: *Awarded*
- James S. McDonnell Complex Systems Postdoctoral Fellowship to J.P. Gibert (2016-2018) Role: Mentor; Amount: $200,000; Status: *Awarded*
- Santa Fe Institute Working Group grant: *Coupled Grassland and Mammalian Community Dynamics over Ecological and Evolutionary Timescales* (2015) Role: Principle Organizer; Amount: $15,000; Status: *Awarded*
- Santa Fe Institute Workshop grant: *The Evolutionary Ecology of Complex Life Investment Strategies* (2015) Role: Principle co-Organizer; Amount: $25,000; Status: *Awarded*
- Omidyar Postdoctoral Fellowship, Santa Fe Institute. (2014); Amount: $210,000; Status: *Awarded*
- UC Santa Cruz Regents Fellowship. (2011) Amount: $46000; Status: *Awarded*
- UC Santa Cruz Deans Fellowship. (2010) Amount: $46000; Status: *Awarded*
- National Science Foundation Graduate Research Fellowship. (2006) Amount: $138000; Status: *Awarded*

Metrics

h-index = 25; i10-index = 32; Citations = 2562 (as of June 30, 2024)

In Revision

*Contributed equally, †Senior author

43. Dominy N.J., Rosien J., Fannin L., **Yeakel J.D.**, Malaivijitnond S., Tan A. *Food-washing monkeys recognize the law of diminishing returns*. In revision @ eLife.
42. Fannin L.D., Seyoum C.M., Venkataraman V.V., **Yeakel J.D.**, Janis C.M., Cerling T.E., Dominy N.J. *Behavioral drive during human evolution*. In revision @ Science.

Publications

*Contributed equally, †Senior author

41. Suswaram M., Bhat U., †**Yeakel J.D.** 2024. *Rising above the noise: the influence of population dynamics on the evolution of acoustic signaling*. Journal of Physics: Complexity. In Press.
40. Rallings T., Kempes C.P., †**Yeakel J.D.** 2024. *On the dynamics of mortality and the ephemeral nature of mammalian megafauna.* The American Naturalist. In Press.
39. Ritwika V.P.S., Gopinathan A., †**Yeakel J.D.** 2024. *Beyond the kill: The allometry of predation behaviours among large carnivores.* The Journal of Animal Ecology. 00, 1-13.
38. Valdovinos F.S., Hale K.R.S., Dritz S., Glaum P.R., 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. 28, 301-312.
37. *Kim S.L., ***Yeakel J.D.**, Balk M.A., Eberle J.J., Zeichner S., Fieman D., Kriwet J. 2022. *Decoding the dynamics of dental distributions: insights from shark demography and dispersal*. Proceedings of the Royal Society B: Biological Sciences. 289, 20220808.
36. Fannin, L. **Yeakel J.D.**, Venkataraman V.V., Seyoum C., Geraads D., Fashing P., Nguyen N., Fox-Dobbs K., Dominy N.J. 2021. *Carbon and strontium isotope ratios shed new light on the paleobiology and collapse of Theropithecus, a primate experiment in graminivory*. Palaeogeography, Palaeoclimatology, Palaeoecology. 572, 110393.
35. **Yeakel J.D.**, Pires M.M., de Aguiar M.A.M., O'Donnell J.L., Guimarães P.R., Gravel D., Gross T. 2020. *Diverse interactions and ecosystem engineering can stabilize community assembly*. Nature Communications. 11, 3307.
34. Pires M.M., O'Donnell J.L., Burkle L.A., Diaz-Castelazo C., Hembry D.H., **Yeakel J.D.**, Newman E.A., Medeiros L.P., de Aguiar M.A.M., Guimarães Jr. P.R. 2020. *The indirect paths to cascading effects of extinctions in mutualistic networks.* Ecology. e03080.
33. Gross T., Allhoff K.T., Blasius B., Brose U., Drossel B., Fahimipour A.K., Guill C., **Yeakel J.D.**, Zeng F. 2020. *Modern models of trophic meta-communities.* Philosophical Transactions of the Royal Society B. 375 (1814), 20190455.
32. **Yeakel J. D.**, Bhat U., Newsome S.D. 2020. *Caching in or falling back at the Sevilleta: the effects of body size and seasonal uncertainty on desert rodent foraging*. American Naturalist. 169(2) 1-16.
31. Bhat U., Kempes C.P., †**Yeakel J. D.** 2020. *Scaling the risk landscape provides insight into optimal life history strategies and the evolution of grazing*. Proceedings of the National Academy of Sciences. 117(3) 1580-1586.

- See also related PNAS Commentary by J. M. Fryxell. 2020. *Life-history models reconstruct mammalian evolution*. Proceedings of the National Academy of Sciences. 117(4) 1839-1841.

30. de Aguiar M. A. M., Newman E. A., Pires M. M., **Yeakel J. D.**, Boettiger C., Burkle L. A., Gravel D., Guimarães P. R. Jr, O'Donnell J. L., Poisot T., Fortin M., Hembry D. H. 2019. *Revealing biases in the sampling of ecological interaction networks*. PeerJ. 7, e7566.
29. 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 28(9), 1204-1218.
28. Gibert J. P. & †**Yeakel, J. D.** 2019. *Laplacian matrices and Turing bifurcations: revisiting Levin 1974 and the consequences of spatial structure and movement for ecological dynamics*. Theoretical Ecology. 169(2), 1–17.
27. Gibert J. P. & †**Yeakel J. D.** 2019. *Eco-evolutionary origins of diverse abundance, biomass, and trophic structures in food webs.* Frontiers in Ecology and Evolution, 7, 1-15.
26. Delmas E., Besson M., Brice M.-H., Burkle L., Dalla Riva G. V., Fortin M.-J., Gravel D., Guimarães Jr. P. R., Hembry D., Newman E., Olesen J. M., Pires M., **Yeakel J. D.**, Poisot T. 2018. *Analyzing ecological networks of species interactions*. Biological Reviews. 94(1), 16-36.
25. **Yeakel J. D.**, Gibert J. P., Gross T., Westley P. A. H., Moore J. W. 2018. *Eco-evolutionary dynamics, density dependent dispersal, and collective behaviour: implications for salmon metapopulation robustness*. 2018. Philosophical Transactions of the Royal Society B: Biological Sciences. 373(1746), 20170018.
24. *__Yeakel J. D.__, *Kempes C. P., *Redner S. 2018. *Dynamics of starvation and recovery predict extinction risk and both Damuth's law and Cope's rule*. Nature Communications. 9, 657.
23. Dominy N. J., **Yeakel J. D.** 2017. *Frankenstein and the horrors of competitive exclusion*. Bioscience. 67, 107-110.
22. Novak M., **Yeakel J. D.**, Noble A. E., Doak D. F., Emmerson M., Estes J. A., Jacob U., Tinker M.T., Wootton J.T. 2016. *Characterizing species interactions: What is the community matrix?* Annual Review of Ecology, Evolution, and Systematics, 47, 409-432.
21. Dominy N. J., **Yeakel J. D.**, Bhat U., Ramsden L., Wrangham R. W., Lucas P. W. 2016. *How chimpanzees integrate sensory information to select figs*. Journal of the Royal Society Interface Focus, 6, 20160001.
20. **Yeakel J. D.**, Bhat U., Elliott Smith E. A., Newsome S. D. 2016. *Exploring the isotopic niche: isotopic variance, physiological incorporation, and the temporal dynamics of foraging*. Frontiers in Ecology and Evolution, 4, 2188.
19. Crowley B., Melin A. D., **Yeakel J. D.**, Dominy N. J. 2015. *Do oxygen isotope values reflect the ecology and physiology of Neotropical mammals?*. Frontiers in Ecology and Evolution, 3, 1-8.
18. Galetti M., Guevara R., Neves C. L., Rodarte R. R., Bovendorp, R. S. Moreira M., Hopkins III, J. B., **Yeakel J. D.** 2015. *Defaunation affects the populations and diets of rodents in Neotropical rainforests*. Biological Conservation, 190, 2-7.

17. **Yeakel J. D.**, Dunne, J. A. 2015. *Modern lessons from ancient food webs*. American Scientist, 103, 188-195.

16. Moore J. W., Beakes M., Nesbitt H. K., **Yeakel J. D.**, Patterson D., Thompson L., Phillis C., Braun D., Favaro C., Scott D., Carr-Harris C., Atlas W. 2015. *Emergent stability in a large free-flowing watershed*. Ecology, 96(2), 340-347.

15. *__Yeakel J. D.__, *Pires, M. M., *Rudolf, L., Dominy, N. J., Koch, P. L., Guimarães, P. R., Jr, & Gross, T. 2015. *Recovering ecological pattern and process in Ancient Egypt*. Proceedings of the National Academy of Sciences. 112(3), E240-E240.

14. **Yeakel J. D.**, Pires, M. M., Rudolf, L., Dominy, N. J., Koch, P. L., Guimarães, P. R., Jr, & Gross, T. 2014. *Collapse of an ecological network in Ancient Egypt*. Proceedings of the National Academy of Sciences. 111(40), 14472–14477.

13. Moore, J. W., **Yeakel J. D.**, Peard, D., Lough, J., & Beere, M. 2014. *Life-history diversity and its importance to population stability and persistence of a migratory fish: steelhead in two large North American watersheds*. Journal of Animal Ecology. 83(5), 1035-1046.

12. **Yeakel J. D.**, Moore, J. W., Guimarães, P. R., Jr, & de Aguiar, M. A. M. 2014. *Synchronisation and stability in river metapopulation networks*. Ecology Letters. 17(3), 273–283.

11. **Yeakel J. D.**, & Mangel, M. 2014. *A generalized perturbation approach for exploring stock recruitment relationships*. Theoretical Ecology. 8(1), 1–13.

10. **Yeakel J. D.**, Dominy, N. J., Koch, P. L., & Mangel, M. 2014. *Functional morphology, stable isotopes, and human evolution: a model of consilience*. Evolution 68, 190–203.

9. **Yeakel J. D.**, Guimarães, P. R., Jr, Bocherens, H., & Koch, P. L. 2013. *The impact of climate change on the structure of Pleistocene food webs across the mammoth steppe*. Proceedings of the Royal Society of London Series B-Biological Sciences 280(1762), 20130239–20130239.

8. **Yeakel J. D.**, Guimarães, P. R., Jr, Novak, M., Fox-Dobbs, K., & Koch, P. L. 2012. *Probabilistic patterns of interaction: the effects of link-strength variability on food web structure*. Journal of the Royal Society Interface 9(77), 3219–3228.

7. Moritz, G. L., Fourie, N., **Yeakel J. D.**, Phillips-Conroy, J. E., Jolly, C. J., Koch, P. L., & Dominy, N. J. 2012. *Baboons, water, and the ecology of oxygen stable isotopes in an arid hybrid zone*. Physiological and Biochemical Zoology 85(5), 421–430.

6. *Newsome, S. D., *__Yeakel J. D.__, Wheatley, P. V., & Tinker, M. T. 2012. *Tools for quantifying isotopic niche space and dietary variation at the individual and population level*. Journal of Mammalogy 93(2), 329–341.

5. **Yeakel J. D.**, Novak, M., Guimarães, P. R., Jr, Dominy, N. J., Koch, P. L., Ward, E. J., et al. 2011. *Merging resource availability with isotope mixing models: the role of neutral interaction assumptions*. PLoS ONE 6(7), e22015.

4. **Yeakel J. D.**, Stiefs, D., Novak, M., & Gross, T. 2011. *Generalized modeling of ecological population dynamics*. Theoretical Ecology 4(2), 179–194.

3. **Yeakel J. D.**, Patterson, B. D., Fox-Dobbs, K., Okumura, M., Cerling, T., Moore, J., et al. 2009. *Cooperation and individuality among man-eating lions*. Proceedings of the National Academy of Sciences of the USA 106, 19040–19043.

2. Dominy, N. J., Vogel, E. R., **Yeakel J. D.**, Constantino, P. J., & Lucas, P. W. 2008. *Mechanical properties of plant underground storage organs and implications for dietary models of early hominins*. Evolutionary Biology 35(3), 159–175.
1. **Yeakel J. D.**, Bennett, N. C., Koch, P. L., & Dominy, N. J. 2007. *The isotopic ecology of African mole rats informs hypotheses on the evolution of human diet*. Proceedings of the Royal Society of London Series B-Biological Sciences 274(1619), 1723–1730.

Workshops – Organizer

- Coupled grassland and mammalian community dynamics over ecological and evolutionary timescales II. Justin Yeakel & Nathaniel Dominy (Organizers). Dartmouth College, May 2016.
- Complex Life Investment Strategies. Justin Yeakel & Eric Libby (Organizers). Santa Fe Institute, October 2015.
- Coupled grassland and mammalian community dynamics over ecological and evolutionary timescales I. Justin Yeakel & Nathaniel Dominy (Organizers). Santa Fe Institute, September 2015.

Workshops & Internships – Participant

- Archaeopathogens in a Thawing World. Stefani Crabtree (Organizer). Santa Fe Institute. March 2024.
- Terrestrial Food Web Model Working Group. Fernanda Valdovinos (Organizer). University of California Davis. February 2022.
- International Center for Theoretical Physics (ICTP), Trieste, Italy. Invited to lecture during the 2-week program: *Quantitative Approaches in Ecosystem Ecology*. December 2020. (online-only due to COVID-19 restrictions)
- NSF-funded Workshop to Advance Ecological Theory. Katriona Shea, Alan Hastings, & Saran Twombly (Organizers). Pennsylvania State University, October 2019.
- NIMBioS: Spatiotemporal variation and dynamics in ecological networks I,II,III,IV. Knoxville, TN, June 2015, December 2015, November 2016, February 2019.
- Next-generation ecological network theory and application. Phillip P.A. Staniczenko, Fernanda S. Valdovinos, & Jennifer A. Dunne (Organizers). Santa Fe Institute, November 2018.
- Predicting the response of host-associated microbiomes to disturbance. Jessica Green & Ashkaan Fahimipour (Organizers). Santa Fe Institute, August 2016.
- Gradient-Based Ecological Network Research II. Jennifer Dunne (Organizer). Santa Fe Institute, March 2015.
- Dynamics On and Of Networks. Jennifer Dunne & Cris Moore (Organizers). Santa Fe Institute, December 2014.
- Networks on Networks workshop. Thilo Gross, Barbara Drossel and Ulrich Bröse (Organizers). Max Planck Institute for the Physics of Complex Systems (MPIPKS), Dresden Germany, September 2014.
- Les Ecologists Seminar Series, Simon Fraser University (Organizer). 2013-2014.

- ESPCA Sao Paulo School on Ecological Networks, Sao Paulo, Brazil, September 16-23 2011
- Max Planck Institute for the Physics of Complex Systems (MPIPKS), Dresden Germany Host: Dr. Thilo Gross and the Dynamics of Biological Networks lab, August 2010.

Invited Seminars

- Bowdoin College. November 2023.
- University of California Merced - Mathematical Biology Series. September 2022.
- University of California Davis - Terrestrial Ecosystems Working Group. April 2022.
- University of Sãu Paulo. October, 2021.
- University of Oldenburg (Helmholtz Inst. for Functional Marine Biodiversity). Sept., 2021.
- University of Maine (School of Biology and Ecology). October, 2019.
- University of California, Santa Cruz (EEB). April, 2019.
- Fresno State University. March, 2019.
- University of California, Riverside. January, 2019.
- UC Merced Mathematical Biology Seminar. 2018.
- University of California, Berkeley. December, 2018.
- University of California, Santa Cruz (Applied Math). November, 2018.
- University of Portland. October, 2018.
- Intelligent Adaptive Systems, University of California Merced. December, 2017.
- University of Nebraska, Lincoln. March, 2017.
- University of Alaska, Fairbanks. February, 2017.
- Santa Fe Institute Complex Systems Summer School. July, 2016-2017.
- University of California Merced EnviroLunch. March, 2016.
- University of New Mexico. September, 2015.
- Santa Fe Institute Complex Systems Summer School. July, 2015.
- Santa Fe Institute, Santa Fe, New Mexico. December 2014.
- University of Göttingen, Göttingen, Germany. September 2014.
- University of California, Merced. March 2014.
- University of New Mexico. February 2014.
- Santa Fe Institute. January 2014.
- Oregon State University. January 2014.
- University of Wyoming. December 2013.
- University of Chicago. December 2013.
- Washington State University, Pullman. June, 2013.
- University of California, Santa Cruz. November, 2012.
- University of Wyoming. September, 2012.

- Simon Fraser University. November, 2011.

Professional Presentations & Posters

- Estuarine Connectivity Symposium, University of California Davis. February 2020.
  Rescue, extinction, and species interactions on complex 'land'scapes
  J.D. Yeakel
- Gordon Research Conference on Plant-Herbivore Interactions. 2019.
  Predicting the diets of herbivorous mammals from plant-herbivore trait interactions
  T. Rallings, U. Bhat, J. Blois, J.D. Yeakel
- Gordon Research Conference on Speciation. 2019.
  Modeling trait evolution and its population dynamics using dynamical systems
  M. Suswaram, J.D. Yeakel, D. Edwards
- American Physical Society. 2018.
  The Fitness Trade-offs of Predation: When to Scavenge and When to Steal
  Ritwika VPS, A. Gopinathan, J.D. Yeakel
- Gordon Research Conference on Unifying Ecology Across Scales. 2018.
  Resource investment strategies in uncertain and patchy environments
  U. Bhat, C.P. Kempes, J.D. Yeakel
- Sevilleta LTER Symposium. September 2018.
  Linking the persistence of the Sevilleta rodent community to alternative caching and foraging strategies
  J.D. Yeakel, S.D. Newsome, U. Bhat
- Ecological Society of America Annual Meeting. August 2018.
  Quantization of ecological interaction networks yields insights into the fundamental processes underlying community assembly
  J.D. Yeakel
- Ecological Society of America Annual Meeting. August 2018.
  Fitness Trade-offs of Predation: When to Scavenge and When to Steal
  R. VPS, A Gopinathan, J.D. Yeakel
- Annual Meeting of the Society for the Study of Evolution. 2017.
  Relative importance of natural and sexual selection in speciation
  M. Suswaram, J.D. Yeakel, D. Edwards
- Society of Vertebrate Paleontology. 2017.
  Mapping mammalian morphological traits to diets with machine learning
  T. Rallings, H. Duran, J.D. Yeakel
- Geological Society of America Annual Meeting. Stable Isotope Workshop. 2017.
  Exploring the isotopic niche: challenges to reconstructing modern and paleo food webs
  J.D. Yeakel
- Geological Society of America Annual Meeting. October 2017.
  Extinction, Cope's Rule, and the dynamics of starvation and recovery
  J.D. Yeakel

- James S. McDonnell/Santa Fe Institute Postdocs in Complexity Workshop. July 2017.
  Quantization of ecological interactions yields insights into community assembly, dynamics, and engineering
  J.D. Yeakel
- QSB Lightening Talk, UC Merced. September 2017.
  Quantization of ecological interactions yields insights into community assembly, dynamics, and engineering
  J.D. Yeakel
- QSB Symposium; University of California, Merced. October 2016.
  The dynamics of starvation and recovery
  J.D. Yeakel
- IDEAS Symposium; Simon Fraser University. January 2014.
- Ecological Society of America Annual Meeting. August 2013.
- IDEAS Symposium; Simon Fraser University. December 2012.
- Ecological Society of America Annual Meeting. August 2012.
- Ecological Society of America Annual Meeting. August 2011.
- American Fisheries Society. September 2011.
- 2010 Species Interaction Workshop; Santa Cruz, CA. December 2010.
- UCSC Graduate Research Symposium. May 2006, 2007, 2008, 2009, 2010, 2011.
- 2009 Species Interaction Workshop; Stanford CA. December 2009.
- Carnivore Conference; Defenders of Wildlife. November 2009.
- Ecological Society of America Annual Meeting. August 2009.
- 26th Annual Physiological Ecology Meeting. June 2008.
- American Association of Physical Anthropologists. April 2008.
- Society of Integrative and Comparative Biology. Jan. 2008.
- Society of Vertebrate Paleontology. Oct. 2007.
- American Association of Physical Anthropologists. March 2007.
- UCSC Plant Sciences Symposium. Feb. 2007, 2009.
- Applications of Stable Isotope Techniques to Ecological Studies. August 2006.
- Society of Vertebrate Paleontology. Oct. 2005.

Teaching – Mentorship: Postdocs

†Graduated or Finished

- †Postdoctoral Fellow Uttam Bhat — 2017-2020
  Currently Research Scientist at Climate LLC, San Francisco CA
- †James S. McDonnell Complex Systems Fellow Jean Philippe Gibert — 2016-2019
  Currently Assist. Prof., Duke University, NC
- †Postdoctoral Fellow Jack Hopkins III — 2016
  Currently Assist. Prof., Unity College, ME

Teaching – Mentorship: Ph.D. Students

†Graduated or Finished

- Ph.D. Student Anna Carolina de Almeida (Quant. Sys. Biol.) — 2023-present
- Ph.D. Candidate Irina Birskis Barros (Quant. Sys. Biol.) — 2018-present
- †Dr. Megha Suswaram (Quant. Sys. Biol.) — 2019-2022
- †Dr. Taran Rallings (Quant. Sys. Biol.) — 2016-2022
- †Dr. Ritwika VPS (Ph.D. in Physics; co-advised w/ A. Gopinathan) — 2016-2021

Teaching – Mentorship: Committee Member

†Graduated or Finished

- Leo Niehorster-Cook; Ph.D. in Cognitive Sci., UC Merced — 2024-present
- Ryan Torres; Ph.D. in Environmental Sys., UC Merced (chair) — 2022-present
- Chanuwas Aswamenakul; Ph.D. in Cognitive Sci., UC Merced — 2021-present
- Corey Moser; Ph.D. in Cognitive Sci., UC Merced — 2021-present
- Alejandro Perez Velilla; Ph.D. in Cognitive Sci., UC Merced — 2021-present
- Luke Fannin; Ph.D. in Ecol., Evol., Environ., & Soc., Dartmouth College — 2020-present
- Ronald Hall; Ph.D. in Quant. Sys. Biol., UC Merced — 2020-present
- Shkula Babi; Ph.D. in Quant. Sys. Biol., UC Merced — 2021-2023
- †Brandon Genko; Ph.D. in Environmental Systems, UC Merced — 2021-2023
- †Tanya Strydom; Ph.D. in Quebec Centre for Biodiversity Sci., U. de Montréal — 2021
- †Molly Karnes; Ph.D. in Environ. Sys., UC Merced — 2019-present
- †Amin Boroomand; Ph.D. in Cog. Sci., UC Merced — 2019-2022
- †Jonathan Anzules; Ph.D. in Quant. Sys. Biol., UC Merced (chair) — 2018-2022
- †Gina Palefsky; Ph.D. in Anthropology, UC Merced — 2017-2019
- †Dr. Jesse Wilson; Ph.D. in Environ. Sys., UC Merced — 2017
- †Natalie Graham; Ph.D. in Environ. Sci., Policy, & Manag., UC Berkeley — 2016-2017
- †Dr. Nathaniel Fox; Ph.D. in Environ. Sys., UC Merced — 2016-2021
- †Dr. Jon Nye; Ph.D. in Environ. Sys., UC Merced — 2016

Teaching – Courses

Professor UC Merced (2016-present)

- Introduction to Biology (Lower Division UG; Service) — S19, S20
- Natural History of Dinosaurs (General Education UG) — S16, S18, S21, F23, S24
- Fundamentals of Ecology (Upper Division UG) — S17, F18, F20, Su21, S22, Su22-24
- Undergraduate Seminar (ESS 190) — F22
- Advanced Topics in Ecology & Evolutionary Biology (Graduate) — F21
- Ecological Dynamics (Graduate) — F17, F19, S23

Service – University

- Biology Program Chair — 2023-
- Life and Environmental Science ad-hoc graduate group committee — 2023-
- Life and Environmental Science Vice-Chair — 2022-23
- Faculty Welfare and Academic Freedom Committee member — 2022-23
- UC Merced Representative for UC Academic Freedom (UCAF) — 2022-23
- UC Merced Representative for the Assembly of the Academic Senate — 2021-22
- Climate Crisis Working Group member — 2021-22
- Faculty Advisory Committee on Sustainability ex officio member — 2021-22
- Action Plan for Advancing Faculty Success Task Force member — 2021
- Divisional Council at-large member — 2020-22
- ad-hoc Introductory Biology Restructuring Committee — 2021-22
- Life Sciences Curriculum Committee — 2019-
- Stable isotope lab manager search committee — 2019
- Introduction to Biology service course (2x) — 2019-2020
- Presidential Postdoctoral Fellow search committee chair — 2019
- Host of QSB Seminar Speakers: *A. Hastings*, *A. Fahimipour*, *G. de Leo* — 2016-
- Natural Sciences Executive Committee — 2018-2019
- QSB Admissions Committee — 2018
- QSB Ad-Hoc EEB concentration committee chair — 2018
- Committee on Research Computing member — 2017-2020
- Developed Ecological Dynamics Graduate course — 2017
- Developed Natural History of Dinosaurs GE course — 2016

Service – Editorial

- Review Editor, *eLife* — 2022-

Service – Refereed Journals

Science, Nature Communications, Ecology Letters, Proceedings of the National Academy of Sciences, Proceedings of the Royal Society B: Biological Sciences, Biogeochemistry, Journal of the Royal Society Interface, Functional Ecology, Ecological Applications, Ecosphere, PeerJ, Paleobiology, Science Advances, Environmental Modelling & Software, Nature Scientific Reports, Journal of Human Evolution, Plos Computational Biology, Fisheries Research, Theoretical Ecology, Ecology and Evolution, Biological Conservation, IMA Journal of Applied Mathematics, Current Anthropology, Methods in Ecology and Evolution, Quaternary Science Reviews, Ecography, Oecologia, Oikos, Canadian Journal of Zoology, Geochimica et Cosmochimica Acta, PloS One, Journal of Archaeological Science

Service – Refereed Grant Agencies

French National Research Agency (2022), National Science Foundation-DEB (2016,2018,2019), Irish Research Council (2018), European Research Council (2014)

Press

Print

Santa Fe Institute (2020) "More ecosystem engineers create stability, preventing extinctions"; Santa Fe Institute (2019) "Like a video game with health points, energy budgets explain evolutionary body size"; BBC (2018) "Size matters when it comes to extinction risk"; Vice News (2018) "New Model Predicts the 'Ideal' Mammal Is 2.5 Times Bigger Than an Elephant"; California Academy of Sciences Science News (2016) "Frankenstein and Extinction"; Christian Science Monitor (2016) "A female Frankenstein would lead to humanity's extinction, say scientists"; National Geographic (July, 2015); Science NOW (2014) "Clues to animal extinctions found on the walls of Egyptian tombs"; Smithsonian (2014) "Egypt's mammal extinctions tracked through 6000 years of art"; NBC News (2014) "Ancient Egyptian art opens window on mammal extinctions"; Popular Archeology (2014) "Study shows how ecology transformed through 6000 years of Egyptian history"; Nature News (2013) "Ancient art fills in Egypt's ecological history"; Nature News (2009) "Lions' taste for human flesh dissected"; Science News: (2009) "A body count for two man-eating lions"; (2014) "Clues to animal extinctions found on the walls of Egyptian tombs"; (2009) "A body count for two man-eating lions"; Discovery News (2009); Chicago Sun Times (2009); Chicago Tribune (2009); Science Daily (2009); Telegraph (UK; 2009); San Francisco Chronicle (2007) "UC student roots out clues to pre-human species' diet"; Nature News (2007) "Human ancestors went underground for dinner"; Archaeology Magazine (2007); Christian Science Monitor (2007)

Radio

Santa Fe Radio Cafe (2015); National Public Radio: All Things Considered (2009); CBC Radio: As It Happens (2009); Santa Cruz KZSC (2009)

Public Outreach

- Keynote speaker for the Beckman Humor Project at the University of Portland, discussing scientific concepts with humor (October, 2018). *It's alive! Competition, extinction, and the ecology of reanimation* (see assoc. pub. #23).
- Cover feature for *American Scientist* reviewing food web paleoecology (see pub. #17)

- Co-founder of the podcast *Science... Sort of*. *Science... Sort of* is a podcast that discusses "things that are science, things that are sort of science, and things that wish they were science". The podcast is designed to introduce and discuss science-based topics in a way that is accessible to both scientists and non-scientists, and has a weekly audience of ca. 2000-5000 listeners.

Outdoor Education

- LongAcre Expeditions (Trip Leader) 2003-2004
- Kent State University Adventure Center (Trip Leader) 2001-2004
- National Outdoor Leadership School; Palmer, Alaska (Graduate) 2001