

Tad Dallas

Assistant professor, U of South Carolina, Biological Sciences

theory + ecology



taddallas.github.io



he/him



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taddallas

Experience

| Dates | Position | Institution | Location |
|-----------|---------------------|---|-----------------|
| 2022– | Assistant Professor | Dept of Biological Sciences, University of South Carolina | Columbia, SC |
| 2019–2021 | Assistant Professor | Dept of Biological Sciences, Louisiana State University | Baton Rouge, LA |
| 2018 | Visiting Researcher | Department of Mathematics, Int Uni of Rijeka | Rijeka, Croatia |
| 2015 | Analytics intern | HP Vertica - Big Data Platform Dev Team. | Boston, MA. |

Education

| Institution | Mentor | Location | Degree or Position | Completion Date |
|--------------------------|-----------------|-----------------|-------------------------|-----------------|
| Truman State University | – | Kirksville, MO. | Biology. B.Sc. | 2009 |
| Truman State University | Stephanie Fore | Kirksville, MO. | Biology. M.Sc. | 2010 |
| University of Georgia | John Drake | Athens, GA | Ecology Ph.D | 2016 |
| University of California | Alan Hastings | Davis | Postdoctoral Researcher | 2018 |
| University of Helsinki | Otso Ovaskainen | Finland | Postdoctoral Researcher | 2019 |

Publications

1. G Foster, TA Dallas. **2025**. Comparing the power of phylogenetic, trait and network structure information to predict plant-frugivore interactions. *Oikos* . doi: 10.1002/oik.11156
2. AW Park, CE Cressler, TA Dallas, MJ Farrell, S Huang, AB Pedersen, RM Varney. **2025**. Costs of parasite generalism revealed by abundance patterns across mammalian hosts . *Proceedings of the Royal Society B* . doi: 10.1098/rspb.2025.1157
3. T Dallas, Michael Krabbe Borregaard. **2025**. Dependencies, archivals, and package development in the R ecosystem. *BioScience* . doi: 10.1093/biosci/biaf148
4. JL Pick, et al.. **2025**. The SORTEE Guidelines for Data and Code Quality Control in Ecology and Evolutionary Biology. *EcoEvoRxiv* . doi: 10.32942/X24P8S
5. P Somervuo, et. al.. **2025**. Human contributions to global soundscapes are less predictable than the acoustic rhythms of wildlife. *Nature Ecology & Evolution* . doi: 10.1038/s41559-025-02786-5
6. C Ten Caten, LA Holian, T Dallas. **2025**. The influence of geographic ranges, climatic niches, and temperature fluctuations on population variability. *Proceedings of the Royal Society B* . doi: 10.1098/rspb.2025.0818
7. T Dallas, C Ten Caten. **2025**. Linking geographic distribution and niche through estimation of niche density. *Journal of Animal Ecology* . doi: 10.1111/1365-2656.70052
8. L Carneiro, et al.. **2025**. Typology of the ecological impacts of biological invasions. *Trends in Ecology & Evolution* . doi: 10.1016/j.tree.2025.03.010
9. C Ten Caten, T Dallas. **2025**. Population variability across geographic ranges: perspectives and challenges. *Proceedings of the Royal Society B* . doi: 10.1098/rspb.2024.1644
10. C Ten Caten, T Dallas. **2024**. Latitudinal specificity of plant-avian frugivore interactions. *Journal of Animal Ecology* . doi: 10.1111/1365-2656.14116
11. T Dallas, LA Holian, C Ten Caten. **2024**. Geographic and temporal distance-decay relationships across taxa. *Oikos* . doi: 10.1111/oik.10269
12. J McKee, T Dallas. **2024**. Structural network characteristics affect epidemic severity and prediction in social contact networks. *Infectious Disease Modeling* . doi: 10.1016/j.idm.2023.12.008
13. T Dallas, C Ten Caten, LA Holian. **2024**. Temporal variability of carabid beetles as a function of geography, environment, and species. *Theoretical Ecology* . doi: 10.1007/s12080-023-00573-1

14. C Ten Caten, T Dallas. **2023**. Thinning presence points does not improve species distribution model performance. *Ecosphere* . doi: 10.1002/ecs2.4703
15. L Holian, C Ten Caten, T Dallas. **2023**. Exploring species diversity across space and time with data from the National Ecological Observatory Network. *Teaching Issues and Experiments in Ecology* . doi:
16. T Dallas, B Elderd. **2023**. Mean-variance scaling and stability in commercial sex work networks. *Social Network Analysis and Mining* . doi: 10.1007/s13278-023-01071-2
17. CA Cleveland, T Dallas, S Vigil, DG Mead, JL Corn, AW Park. **2023**. Vector communities under global change may exacerbate and redistribute infectious disease risk. *Parasitology Research* . doi: 10.1007/s00436-023-07799-2
18. T Dallas, C Carlson, P Stephens, SJ Ryan, D Onstad. **2022**. insectDisease: programmatic access to the Ecological Database of the World's Insect Pathogens. *Ecography* . doi: 10.1111/ecog.06152
19. T Dallas, D Kramer. **2022**. A latitudinal signal in the relationship between species geographic range size and climatic niche area. *Ecography* . doi: 10.1111/ecog.06349
20. G Foster, BD Elderd, RL Richards, T Dallas. **2022**. Estimating R₀ from early exponential growth: Parallels between 1918 influenza and 2020 SARS-CoV-2 pandemics. *PNAS Nexus* . doi: 10.1093/pnas-nexus/pgac194
21. T Dallas, G Foster, RL Richards, BD Elderd. **2022**. Epidemic time series similarity is related to geographic distance and age structure. *Infectious Disease Modeling* . doi: 10.1016/j.idm.2022.09.002
22. C Ten Caten, L Holian, T Dallas. **2022**. Effects of occupancy estimation on abundance-occupancy relationships. *Biology Letters* . doi: 10.1098/rsbl.2022.0137
23. LH Antão, B Weigel, G Strona, M Hällfors, E Kaarlejärvi, T Dallas, et al.. **2022**. Climate change reshuffles northern species within their niches. *Nature Climate Change* . doi: 0.1038/s41558-022-01381-x
24. C Ten Caten, LA Holian, T Dallas. **2022**. Weak but consistent abundance-occupancy relationships across taxa, space, and time. *Global Ecology and Biogeography* . doi: 10.1111/geb.13472
25. RL Richards, LA Holian. **2022**. Infectious disease: Dog diets may drive transmission cycles in human Guinea worm disease. *Current Biology* . doi: 10.1016/j.cub.2022.01.005
26. CJ Carlson, RJ Gibb, GF Albery, L Brierley, RP Connor, T Dallas, EA Eskew, AC Fagre, MJ Farrell, HK Frank, RL Muylaert, T Poisot, AL Rasmussen, SJ Ryan, SN Seifert. **2022**. The Global Virome in One Network (VIRION): an Atlas of Vertebrate-Virus Associations. *mBio* . doi: 10.1128/mbio.02985-21
27. L Fuzessy, G Sobral, D Carreira, DC Rother, G Barbosa, M Landis, M Galetti, T Dallas, VC Cláudio, L Culot, P Jordano. **2022**. Functional roles of frugivores and plants shape hyper-diverse mutualistic interactions under two antagonistic conservation scenarios. *BioTropica* . doi: 10.1111/btp.13065
28. T Dallas, P Jordano. **2022**. Parasite species richness and host range are not spatially conserved. *Global Ecology and Biogeography* . doi: 10.1111/geb.13452
29. O-P Smolander et al.. **2022**. Improved chromosome-level genome assembly of the Glanville fritillary butterfly (*Melitaea cinxia*) integrating Pacific Biosciences long reads and a high-density linkage map. *GigaScience* . doi: 10.1093/gigascience/giab097
30. D Becker, GF Albery, AR Sjodin, T Poisot, T Dallas, EA Eskew, MJ Farrell, S Guth, BA Han, NB Simmons, CJ Carlson. **2022**. Optimising predictive models to prioritise viral discovery in zoonotic reservoirs. *Lancet Microbe* . doi: 10.1016/S2666-5247(21)00245-7
31. GF Albery, DJ Becker, L Brierley, CE Brook, R Christofferson, L Cohen, T Dallas, EA Eskew, A Fagre, MJ Farrell, E Glennon, AL Rasmussen, SJ Ryan, S Seifert, AR Sjodin, EM Sorrell, CJ Carlson. **2021**. The science of the host-virus network. *Nature Microbiology* . doi: 10.1038/s41564-021-00999-5
32. T Dallas, A Kramer. **2021**. Temporal variability in population and community dynamics. *Ecology* . doi: 10.1002/ecy.3577
33. T Dallas, P Jordano. **2021**. Spatial variation in species roles in host-helminth networks. *Philosophical Transactions B* . doi: 10.1098/rstb.2020.0361

34. MJ Farrell, AW Park, C Cressler, T Dallas, S Huang, N Mideo, I Morales-Castilla, TJ Davies, P Stephens. **2021.** The ghost of hosts past: impacts of host extinction on parasite specificity. *Philosophical Transactions B* . doi: 10.1098/rstb.2020.0351
35. I Morales-Castilla, P Pappalardo, MJ Farrell, AA Aguirre, S Huang, ALM Gehman, T Dallas, D Gravel, TJ Davies. **2021.** Forecasting parasite sharing under climate change. *Philosophical Transactions B* . doi: 10.1098/rstb.2020.0360
36. CJ Carlson, et. al.. **2021.** The future of zoonotic risk prediction. *Philosophical Transactions B* . doi: 10.1098/rstb.2020.0360
37. R Gibb, GF Albery, DJ Becker, L Brierley, R Connor, T Dallas, EA Eskew, MJ Farrell, AL Rasmussen, SJ Ryan, A Sweeny, CJ Carlson, T Poisot. **2021.** Data proliferation, reconciliation, and synthesis in viral ecology. *BioScience* . doi: 10.1093/biosci/biab080
38. T Dallas, BA Melbourne, G Legault, A Hastings. **2021.** Initial abundance and stochasticity influence competitive outcome in communities. *Journal of Animal Ecology* . doi: 10.1111/1365-2656.13485
39. T Poisot, G Bergeron, K Cazelles, T Dallas, D Gravel, A MacDonald, B Mercier, S Vissault. **2021.** Global knowledge gaps in species interaction networks data. *Journal of Biogeography* . doi: 10.1111/jbi.14127
40. T Dallas, P Jordano. **2021.** Species-area and network-area relationships in host-helminth interactions. *Proceedings of the Royal Society B* . doi: 10.1098/rspb.2020.3143
41. T Dallas, M Saastamoinen, O Ovaskainen. **2020.** Exploring the dimensions of metapopulation persistence: a comparison of structural and temporal measures. *Theoretical Ecology* . doi: 10.1007/s12080-020-00497-0
42. T Dallas, D Becker. **2020.** Taxonomic resolution affects host-parasite association model performance. *Parasitology* . doi: 10.1017/S0031182020002371
43. T Dallas, L Santini, R Decker, A Hastings. **2020.** Weighing the evidence for the abundant-centre hypothesis. *Biodiversity Informatics* . doi: 10.17161/bi.v15i3.11989
44. C Carlson, AJ Phillips, T Dallas, LW Alexander, A Phelan, S Bansal. **2020.** What would it take to describe the global diversity of parasites?. *Proceedings of the Royal Society B* . doi: 10.1098/rspb.2020.1841
45. T Dallas, B Melbourne, A Hastings. **2020.** Community context and dispersal stochasticity drive variation in spatial spread. *J Animal Ecology* . doi: 10.1111/1365-2656.13331
46. T Dallas, L Holian, G Foster. **2020.** What determines parasite species richness across host species?. *J Animal Ecology* . doi: 10.1111/1365-2656.13276
47. T Dallas, L Santini. **2020.** The influence of stochasticity, landscape structure, and species traits on abundant-centre relationships. *Ecography* . doi: 10.1111/ecog.05164
48. T Dallas, L Santini. **2020.** The abundant-centre is not all that abundant: a comment to Osorio-Olvera et al. *bioRxiv* . doi: 10.1101/2020.02.27.968586
49. T Dallas, LH Antao, J Pöyry, R Leinonen, O Ovaskainen. **2020.** Spatial synchrony is related to the rate of environmental change in Finnish moth communities. *Proceedings of the Royal Society B* . doi: 10.1098/rspb.2020.0684
50. E Van Bergen, T Dallas, M Dileo, AO Kahilainen, A Mattila, MS Luoto, M Saastamoinen. **2020.** Summer drought decreases the predictability of local extinctions in a butterfly metapopulation. *Conservation Biology* . doi: http://dx.doi.org/10.1111/cobi.13515
51. T Dallas, M Saastamoinen, T Schulz, O Ovaskainen. **2019.** The relative importance of local and regional processes to metapopulation dynamics. *Journal of Animal Ecology* . doi: 10.1111/1365-2656.13141
52. T Dallas, CJ Carlson, T Poisot. **2019.** Testing predictability of disease outbreaks with a simple model of pathogen biogeography. *Royal Society Open Science* . doi: 10.1098/rsos.190883
53. T Dallas, A-L Laine, O Ovaskainen. **2019.** Detecting parasite associations within multi-species host and parasite communities. *Proceedings of the Royal Society B* . doi: 10.1098/rspb.2019.1109

54. T Dallas, J Pöyry, R Leinonen, O Ovaskainen. **2019**. Temporal sampling and abundance measurement influences support for occupancy–abundance relationships. *Journal of Biogeography* . doi: 10.1111/jbi.13718
55. A Norberg, N Abrego Antia, F Guillaume Blanchet, FR Adler, BJ Anderson, J Anttila, MB Araújo, T Dallas, D Dunson, J Elith, S Foster, R Fox, J Franklin, W Godsoe, A Guisan, B O’Hara, NA Hill, RD Holt, FKC Hui, M Husby, JA Kålås, A Lehikoinen, M Luoto, HK Mod, G Newell, I Renner, TV Roslin, J Soininen, W Thuiller, JP Vanhatalo, D Warton, M White, NE Zimmermann, D Gravel, OT Ovaskainen. **2019**. A comprehensive evaluation of predictive performance of 33 species distribution models at species and community levels. *Ecological Monographs* . doi: 10.1002/ecm.1370
56. Cornelius Ruhs, E, Borden, DM, T Dallas, Pitman, E. **2019**. Do feather traits convey information about bird condition during fall migration?. *Wilson Journal of Ornithology* . doi: 10.1676/18-174
57. T Dallas, Gehman, AL, Aguirre, AA, Budischak, SA, Drake, JM, Farrell, MJ, Ghai, R, Huang, S, Morales-Castilla, I. **2019**. Contrasting latitudinal gradients of body size in helminth parasites and their hosts. *Global Ecology and Biogeography* . doi: 10.1111/geb.12894
58. T Dallas, Han, BA, Nunn, CL, Park, AW, Stevens, PR, Drake, JM. **2019**. Host traits associated with species roles in parasite sharing networks. *Oikos* . doi: 10.1111/oik.05602
59. T Dallas, Melbourne, BA, Hastings, A. **2018**. When can competition and dispersal lead to checkerboard distributions?. *Journal of Animal Ecology* . doi: 10.1111/1365-2656.12913
60. T Dallas, Hastings, A. **2018**. Habitat suitability estimated by niche models is largely unrelated to species abundance. *Global Ecology and Biogeography* . doi: 10.1111/geb.12820
61. T Dallas, Aguirre, AA, Budischak, S, Carlson, C, Ezenwa, VO, Han, BA, Huang, S, Stevens, PR. **2018**. Gauging support for macroecological patterns in helminth parasites. *Global Ecology and Biogeography* . doi: 10.1111/geb.12819
62. T Dallas, Decker, R, Hastings, A. **2018**. Multiple data sources and freely available code is critical when investigating species distributions and diversity: a response to Knouft (2018). *Ecology Letters* . doi: 10.1111/ele.13105
63. T Dallas, Gehman, AL, Farrell, MJ. **2018**. Variable Bibliographic Database Access Could Limit Reproducibility. *BioScience* . doi: 10.1093/biosci/biy074
64. AW Park, Farrell, MJ, Schmidt, JP, Huang, S, T Dallas, Pappalardo, P, Drake, JM, Stephens, PR, Poulin, R, Nunn, CL, Davies, TJ. **2018**. Characterizing the phylogenetic specialism-generalism spectrum of mammal parasites. *Proceedings of the Royal Society B* . doi: 10.1098/rspb.2017.2613
65. C Carlson, Burgio, K, Dallas, T, Bond, AL. **2018**. Spatial extinction date estimation: a novel method for reconstructing spatiotemporal patterns of extinction and identifying potential zones of rediscovery. *in review* . doi:
66. T Dallas, Krkosek, M, Drake, J. **2018**. Experimental evidence of pathogen invasion threshold. *Royal Society Open Science* . doi: 10.1098/rsos.171975
67. T Dallas, Poisot, T. **2017**. Compositional turnover in host and parasite communities does not change network structure. *Ecography* . doi: 10.1111/ecog.03514
68. T Dallas, Decker, R, Hastings, A. **2017**. Species are not most abundant in the center of their geographic range or climatic niche. *Ecology Letters* . doi: 10.1111/ele.12860
69. C. Carlson, Muellerklein, O, Phillips, AJ, Burgio, KR, Castaldo, G, Cizauskas, CA, Cumming, GS, Dallas, T, Dona, J, Harris, N, Jovani, R, Miao, Z, Proctor, H, Yoon, HS, Getz, W. **2017**. The Parasite Extinction Assessment and Red List – an open-source, online biodiversity database for neglected symbionts. . doi: 10.1101/192351
70. C Carlson, Burgio, K, Dallas, T, Getz, W. **2017**. The mathematics of extinction across scales – from populations to the biosphere. *Mathematics of Planet Earth – Quantitative Approaches to Issues of Current Interest* . doi: 10.7287/peerj.preprints.3367v1

71. C Carlson, Burgio, KR, Dougherty, ER, Phillips, AJ, Bueno, VM, Clements, CF, Castaldo, G, Dallas, T, Cizauskas, CA, Cumming, GS, Doña, J, Harris, NC, Jovani, R, Mironov, S, Muellerklein, OC, Proctor, HC, Getz, WM. **2017.** Parasite biodiversity faces extinction and redistribution in a changing climate. *Science Advances* . doi: 10.1126/sciadv.1602422
72. T Dallas, Huang, S, Nunn, CL, Park, AW, Drake, JM. **2017.** Estimating parasite host range. *Proceedings of the Royal Society B* . doi: 10.1098/rspb.2017.1250
73. T Dallas, Park, AW, Drake, JM. **2017.** Predicting cryptic links in host-parasite networks. *PLoS Computational Biology* . doi: 10.1371/journal.pcbi.1005557
74. T Dallas, Park, AW, Drake, JM. **2017.** Predictability of helminth parasite host range using information on geography, host traits and parasite community structure. *Parasitology* . doi: 10.1017/S0031182016001608
75. M Evans, Dallas, T, Han, B, Murdock, CC, Drake, JM. **2016.** Data-driven identification of potential Zika virus vectors. *eLife* . doi:
76. T Dallas, Kramer, A, Zokan, M, Drake, JM. **2016.** Ordination obscures the influence of environment on plankton metacommunity structure. *Limnology and Oceanography Letters* . doi: 10.1002/lol2.10028
77. T Dallas, Drake, JM. **2016.** Fluctuating temperatures alter environmental pathogen transmission in a Daphnia-pathogen system. *Ecology and Evolution* . doi: 10.1002/ece3.2539
78. P. Stephens, Altizer, S, Smith, K, Aguirre, A, Brown, J, Budischak, S, Byers, J, Dallas, T, Davies, J, Drake, J, Ezenwa, V, Farrell, M, Gittleman, J, Han, B, Huang, S, Hutchinson, R, Johnson, P, Nunn, C, Onstad, D, Park, A, Vazquez-Prokopec, G, Schmidt, J, Poulin, R. **2016.** The Macroecology of Infectious Diseases: A New Perspective on Global-scale Drivers of Pathogen Distributions and Impacts. *Ecology Letters* . doi: 10.1111/ele.12644
79. T Dallas. **2016.** helminthR: An R interface to the London Natural History Museum's Host-Parasite Database. *Ecography* . doi: 10.1111/ecog.02131
80. T Dallas, Hall, R, Drake, JM. **2016.** Competition-mediated feedbacks in experimental multi-species epizootics. *Ecology* . doi: 10.1890/15-0305.1
81. T Dallas, Holtackers, M, Drake, JM. **2016.** Costs of resistance and infection by a generalist pathogen. *Ecology and Evolution* . doi: 10.1002/ece3.1889
82. AW Park, Cleveland, C, Dallas, T, Corn, J. **2015.** Vector species richness increases hemorrhagic disease prevalence through functional diversity modulating the duration of seasonal transmission. *Parasitology* . doi: 10.1017/S0031182015000578
83. T Dallas, Cornelius, E. **2015.** Co-extinction in a host-parasite network: identifying key hosts for network stability. *Nature Scientific Reports* . doi: 10.1038/srep13185
84. SJ Presley, Dallas, T, Klingbeil, BT, Willig, MR. **2015.** Phylogenetic signals in host-parasite associations for Neotropical bats and Nearctic desert rodents. *Biological Journal of the Linnean Society* . doi: 10.1111/bij.12601
85. T Dallas, Drake, JM. **2014.** Relative Importance of Environmental, Geographic, and Spatial Variables on Zooplankton Metacommunities. *Ecosphere* . doi: 10.1890/ES14-00071.1
86. T Dallas. **2014.** metacom: an R package for the analysis of metacommunity structure. *Ecography* . doi: 10.1111/j.1600-0587.2013.00695.x
87. T Dallas, Presley, SJ. **2014.** Relative importance of host environment, transmission potential, and host phylogeny to the structure of parasite metacommunities. *Oikos* . doi: 10.1111/oik.00707
88. HJ Kim, Cavannaugh, JE, Dallas, T, Fore, S. **2014.** Model selection criteria for count data with overdispersion and its application to the host-parasite relationship. *Environmental and Ecological Statistics* . doi: 10.1007/s10651-013-0257-0
89. T Dallas, Drake, JM. **2013.** Nitrate enrichment alters a Daphnia-microparasite interaction through multiple pathways. *Ecology and Evolution* . doi: 10.1002/ece3.925

90. T Dallas, Fore, S. **2013.** Chemical attraction of *Dermacentor variabilis* ticks parasitic to *Peromyscus leucopus* based on host body mass and sex. *Experimental and Applied Acarology* . doi: 10.1007/s10493-013-9690-x
91. T Dallas, Fore, S, Kim, HJ. **2013.** Modeling the influence of *Peromyscus leucopus* body mass, sex and habitat on immature *Dermacentor variabilis* burdens. *Journal of Vector Ecology* . doi: 10.1111/j.1948-7134.2012.00236.x

Book chapters

- 2025 **Biotic Interactions across Gradients and Scales: Towards a Synthesis on the Organization of the Web of Life**
 Multitrophic Interactions Involving Parasitism and Pathogens (Tad Dallas and Kevin Lafferty)
- 2024 **Handbook of Visual, Experimental and Computational Mathematics**
 Preparing for the Next Pandemic: Learning Lessons from the Recent Past (Bret Elderd, Tad Dallas, Grant Foster, Robert Richards)

Software

- metacom **Analysis of metacommunity structure (CRAN)**
<http://cran.r-project.org/web/packages/metacom/>
- insectDisease **Access to the Ecological Database of the World's Insect Pathogens (CRAN)**
<https://github.com/viralemergence/insectDisease>
- helminthR **Portal to London Natural History Museum host-helminth database (GitHub)**
<https://github.com/ropensci/helminthR>
- Hmsc **Hierarchical modeling of species communities (CRAN)**
<https://cran.r-project.org/web/packages/Hmsc/index.html>
- spatExtinct **Spatially interpolated extinction date estimation (GitHub)**
<http://github.com/cjcarlson/spatExtinct>

Presentations

- September, 2024 **CEID vector-borne disease working group (University of Georgia)**
- September, 2024 **Guest lecture in Infectious Disease Modeling (EPID 394) (Arnold School of Public Health)**
Hosted by Melissa Nolan.
- September, 2022 **Invited seminar (Duke University)**
Hosted by Jean-Philippe Gibert.
- October, 2023 **Invited seminar (U of Georgia)**
Hosted by John Drake.
- October, 2023 **Octoberbest teaching symposium (U of SC)**
- October, 2021 **Invited seminar (U of SC)**
Hosted by Tammi Richardson.
- October, 2018 **Invited seminar (McGill University)**
Hosted by Rowan Barrett.
- November, 2023 **Invited seminar (University of South Florida)**
Hosted by Andrew Kramer.
- November, 2022 **Departmental seminar (U of SC)**
- November, 2018 **Invited seminar (Osnabrück University)**
Hosted by Frank Hilker.
- November, 2018 **Invited seminar (University of Arkansas)**
Hosted by John David Wilson.
- May, 2021 **Science and Spirits (invited seminar) (LSU)**
- May, 2012 **98th annual American Society for Microbiology (Georgia)**

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| March, 2024 | Invited seminar speaker (CU Boulder) Hosted by Laura Dee. |
| March, 2024 | Ecological Society of Japan meeting (Japan) |
| June, 2024 | American Society of Limnology and Oceanography (Wisconsin) |
| June, 2022 | Ecology and Evolution of Infectious Disease (virtual) |
| July, 2022 | British Ecological Society; Macroecology group (UK) |
| July, 2019 | Invited seminar (International University of Rijeka) Hosted by Danijel Krismanic. |
| July, 2017 | Society for Mathematical Biology (Utah) |
| July, 2014 | Ecology and Evolution of Infectious Disease (Colorado) |
| February, 2025 | Invited Keynote (University of Georgia) Hosted by Graduate student symposium. |
| February, 2024 | Big Data Health Science Conference (U of SC) |
| December, 2021 | Invited seminar (Truman State University) |
| December, 2018 | Invited seminar (Louisiana State University) Hosted by Bret Elderd. |
| August, 2025 | Invited seminar speaker (Georgia Tech) Hosted by Ben Freeman. |
| August, 2024 | Ecological Society of America meeting (California) |
| August, 2022 | Ecological Society of America meeting (Montreal) |
| August, 2018 | Invited seminar (University of California - Los Angeles) Hosted by Jamie Lloyd-Smith. |
| August, 2015 | Ecological Society of America meeting () |
| August, 2014 | Ecological Society of America meeting (California) |
| April, 2022 | Invited seminar (U of SC) Hosted by "Mathematical Foundations of Data Science" group. |
| April , 2016 | Dissertation defense (Georgia) Hosted by John Drake. |

Teaching

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| 2025 | Biological data science (biol 599) | 18 students |
| 2025 | Parasitology (biol 531/epid 661/enhs 661) | 17 students |
| 2024 | Ecology and Evolution (biol 301) | 24 students |
| 2024 | Parasitology (biol 531/epid 661/enhs 661) | 12 students |
| 2023 | Ecoinformatics (biol 599) | 8 students |
| 2023 | Website development (graduate seminar) | 20 students |
| 2023 | Theoretical ecology (biol 599/765) | 15 students |
| 2022 | Reproducible research in R (biol 599) | 12 students |
| 2020 | Vector-borne disease (graduate seminar) | 10 students |
| 2020 | Reproducible research in R (biol 4800) | 15 students |

2019, 2021 Principles of ecology (biol 4253) 35; 80 students

Funding

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| 2025-2027 | popClimVar: Climatic variability and fluctuating populations Environmental Data Science Innovation and Impact Lab (ESIIL) | \$62,800 |
| 2024-2027 | NSF CISE “Towards a wormier world: Augmenting and georeferencing the largest host-helminth database” National Science Foundation | \$792,000 |
| 2024-2026 | NSF DEB “Linking environmental variability and species-environment relationships to understand fluctuating populations” National Science Foundation | \$199,000 |
| 2023-2027 | Infectious Disease Translational Research Institute U of SC center grant | \$2,000,000 |
| 2023-2024 | NIH R25 Big Data Health Science training grant NIH-R25 (AI164581-02) | \$30,000 |
| 2023-2024 | SEC Faculty Travel Grant | \$1,200 |
| 2023-2024 | Belle W. Baruch Foundation Visiting Scholar Grants | \$4,990 |
| 2023-2024 | McCausland Innovation Fund | \$15,683 |
| 2022-2023 | Establishing a pigmented yeast microcosm system to understand ecological communities \$15,000 U of SC Aspire (track 1) | |
| 2021-2025 | Actively engaging students in hardware and software development LSU Foundation and LSU College of Science | \$44,000 |
| 2020-2025 | NSF-Macrosystems MSA: Understanding spatial patterns of abundance and occupancy in terms of taxa, traits, and space NSF Macrosystems and NEON-enabled science | \$274,542 |
| 2020-2022 | NSF RAPID: Epidemic control strategies for COVID-19 in age-structured populations: A multi-model approach NSF RAPID | \$200,000 |
| 2020-2022 | NSF BII-Design: Exploring the ecology and evolution of the global virome with big data and machine learning NSF Bio Institute - Design | \$166,189 |

Academic service

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| 2025 | Big Data Health Science Conference Poster judge |
| 2025 | National Science Foundation Panel reviewer |
| 2025 | CEES Sponsored Summer Internship Program Mentor |
| 2024 | Response Diversity Working Group invited participant |
| 2024 | NSF Panel reviewer |
| 2024 | Society for Open, Reliable, & Transparent Ecology & Evolutionary Biology Invited panel member |
| 2024 | National Institutes of Health Panel reviewer |

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| 2024 | National Science Foundation | |
| | Ad hoc reviewer | |
| 2023- | Proceedings of the Royal Society B | |
| | Editor | |
| 2023- | MIDAS collaboration network | |
| | Member | |
| 2023 | European Biodiversity Partnership (BIODIVMON) | |
| | Ad hoc reviewer | |
| 2023 | Environmental Data Science Innovation & Inclusion Lab | |
| | Summit and workshop | |
| 2023 | InvaPact: Biological Invasions Working Group | |
| | invited participant | |
| 2020- | Ecology Letters | |
| | Editor and data editor | |
| 2019-2023 | Ecosphere | |
| | Editor- disease track | |
| 2019-2020 | LIFEPLAN: A planetary inventory of life | |
| | Sampling site (Baton Rouge, LA) | |
| 2019- | GitHub Education | |
| | Campus Advisor | |
| 2019- | The Carpentries | |
| | Instructor | |

Community engagement

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| 2021-2022 | Futures Fund | |
| | Coding instructor | |
| 2021-2021 | LSU Science and Spirits podcast | |
| | Research talk plus associated interview/podcast | |

Mentoring

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|-----------|-----------------------------|--|
| 2025- | Briar Ownby-Connolly | Doctoral Dissertation Committee (U of SC, SEOE) |
| 2025- | Evan See | Honor's thesis advisor (U of SC) |
| 2024- | Genevieve Triplett | Masters thesis committee (U of SC) |
| 2023-2024 | Sophia Vrh | Honor's thesis 2nd reader (U of SC) |
| 2023- | Gabriel Dansereau | Doctoral Dissertation Committee (Université de Montréal) |
| 2023- | Laurent Duverglas | Doctoral Dissertation Committee (U of SC) |
| 2023- | Anthony Pignatelli | Doctoral Dissertation Committee (U of SC) |
| 2022-2024 | Caitlyn Mettetal | Masters thesis committee (U of SC) |
| 2022-2024 | Nayan Mallick | Doctoral Dissertation Committee (U of SC, SEOE) |
| 2022-2023 | Kayla Bramlett | Masters thesis committee (U of SC, Arnold School of Public Health) |
| 2022- | Alexander Barth | Doctoral Dissertation Committee (U of SC) |
| 2021-2024 | Victoria Chebotaeva | Doctoral Dissertation Committee (U of SC, Math) |
| 2021- | Birch Lazo-Murphy | Doctoral Dissertation Committee (U of SC, SEOE) |
| 2021- | Wissam Jawad | Doctoral Dissertation Committee (LSU) |
| 2021- | Lauren Holian | Doctoral Dissertation Committee (U of SC) |
| 2020- | Grant Foster | Doctoral Dissertation Committee (U of SC) |

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| 2019-2025 | Cleber Ten Caten | Doctoral Dissertation Committee (U of SC) |
| 2019- | Jason Janeaux | Doctoral Dissertation Committee (LSU) |

Undergraduate research

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|-----------|---------------------------|--------------------|
| 2025- | Maven Rose Busby | () |
| 2025- | Riley O'Hare | () |
| 2025- | Madeline Ronningen | () |
| 2025- | Cheyenne Chen | () |
| 2025- | Addy Rose McClure | () |
| 2025- | Jaden Conner | () |
| 2025- | Joshua Nolan | () |
| 2025- | Haley Hair | (Biology) |
| 2025- | Evan See | (Biology) |
| 2025- | Jackson Carpenter | (Biology) |
| 2025- | Dani Schmidt | (Biology) |
| 2025 | Jordan Maybank | (Biology) |
| 2024-2025 | Anthony Maione | (Biology) |
| 2024- | Nicholas Christov | (Biology) |
| 2024- | Aiden Seibers | (Biology) |
| 2023-2025 | Cayden Scruggs | (Computer science) |
| 2023-2024 | Sarah Pence | (Public health) |
| 2022-2025 | Hilde Tollfesen | (Biology) |
| 2022-2025 | Nabeeha Baig | (Public health) |
| 2022-2024 | Aaron Kucinski | (Biology) |
| 2022-2023 | Sayi Sathish Kumar | (Biology) |
| 2022-2023 | Bailey Kane | (Biology) |
| 2020-2024 | Anandita Verma | (Biology) |
| 2020-2022 | Daniel Vilchez | (Data Science) |
| 2020-2021 | Tivon Eugene | (Biology) |
| 2020 | Jaylon Braxton | (Biology) |

Undergraduate and graduate researcher funding

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|-----------|--|--------|
| 2024-2025 | Magellan research grant (Anthony Maione) | \$2500 |
| 2024-2025 | Magellan research grant (Hilde Tolfeson) | \$2500 |
| 2023-2025 | Magellan Guarantee Grant (Cayden Scruggs) | \$4000 |
| 2023-2025 | Magellan Guarantee Grant (Nabeeha Baig) | \$4000 |
| 2023-2023 | Theme semester grant (Sayi Sathish Kumar) | \$500 |