KAITLIN J. FARRELL

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Athens, GA, USA

Odum School of Ecology
University of Georgia

PROFESSIONAL APPOINTMENTS

2025 – present Academic Coordinator, Odum School of Ecology (OSE), University of Georgia (UGA)

2023 – present Lecturer- Data Literacy, OSE, UGA

2022 – present Director of Domestic Field Study, Office of Instruction, UGA

2019 – 2023 Academic Professional- Instructional Laboratory Coordinator, OSE, UGA

2017 – 2019 Postdoctoral Associate, Dept. of Biological Sciences, Virginia Tech, Blacksburg, VA.

EDUCATION

2017 Ph.D. Ecology, University of Georgia, Athens, GA, USA
Interdisciplinary Certificate in University Teaching

2012 M.S. Biology, Appalachian State University, Boone, NC, USA

2009 B.S. Environmental Biology, McGill University, Montreal, QC, Canada
Dean's Honour List (top 10% of graduating class), Faculty of Agricultural & Environmental Sciences

TEACHING & COURSE COORDINATION

Instructor of Record (UGA)

On-campus/classroom instruction

ECOL 2550- Introduction to Ecological Data Science, 3 cr., Fall 2024, Fall 2025, Spring 2026

ECOL 3500- Ecology, 3 cr., Fall 2024, Spring 2025 (2 sections), Fall 2025

ECOL 3510- Ecology Research Laboratory, 3 cr., Summer 2021

ECOL 3550- Ecological Data Literacy, 3 cr., Fall 2023, Spring 2024

ECOL 3960- Applied Ecological Data Science, 3 cr., Spring 2026

ECOL 4130L- Ecological Methodology, 3 cr., Spring 2024

ECOL 4950- Senior Seminar, 1 cr., Spring & Fall 2020 – 2023

GRSC 7770- Graduate Teaching Seminar (GRSC 7770, 1-3 cr.), Fall 2019 – 2021, 2023

ECOL 8990- Problems in Ecology, 1 cr., Spring 2024

Field course instruction through UGA Interdisciplinary Field Program (IFP)

ECOL 1000H- Ecological Basis of Environmental Issues (Honors), 3 cr., Summer 2016, 2018-2019, 2022, 2024-2025

ECOL 1000L- Ecological Basis of Environmental Issues Lab, 1 cr., Summer 2016, 2018-2019, 2022, 2024-2025

ECOL 4160/4160L- Ecology of North America, 4 cr., Summer 2016, 2018-2019, 2022, 2024-2025

Course coordination

ECOL 1000L- Ecological Basis of Environmental Issues Lab, 1 cr., Fall/Spring/Summer 2019-2023

ECOL 3500L- Ecology Lab, 1 cr., Fall/Spring/Summer 2019-2023

ECOL 3505H- Honors Ecology Lab, 1 cr., Fall 2019-2021

New Courses Developed

2024 *Ecology* (ECOL 3500, 3 cr.), fall
Developed and taught a new section of general ecology with emphasis on data interpretation, critical thinking, and synthesis of ideas across topics.

2023 *Ecological Data Literacy* (ECOL 3550, 3 cr.), fall
Course fully re-designed around applied practice using ecological datasets and R programming language. Revised course (ECOL 2550- Introduction to Ecological Data Science) approved in CAPA in Fall 2024 to fulfill UGA Core Curriculum Quantitative Reasoning requirement.

2021 *Ecology Research Laboratory* (ECOL 3510, 3 cr.), summer thru-term
Developed & taught as a Course-based Undergraduate Research Experience (CURE); as of Spring 2023, taught as ECOL 4310L (Ecological Methodology) in a full-semester format. Restructured into ECOL 3960 (Applied Ecological Data Science) as of Spring 2026.

2019 *Graduate Teaching Seminar* (GRSC 7770, 1-3 cr.), fall
Developed a section of GRSC 7770 that fulfills UGA requirements while focusing on training specifically relevant to ecology lecture & lab TAs.

Course & Curriculum Development

2017 – present Field program curriculum lead, UGA IFP (ECOL 1000H & 1000L, 4160-4160L)
2019 – 2023 Large-enrollment lab curricula (ECOL 1000L, 3500/3505L), including online/ asynchronous (Summer/Fall 2020) and hybrid/hyflex (Spring 2021) formats, UGA
2017 – 2019 Macrosystems EDDIE (Environmental Data-Driven Inquiry & Exploration) module development with C.C. Carey, Virginia Tech
2015 – 2016 Freshwater Ecosystems lab manual and teaching assistant manual development, UGA
2014 Ichthyology lab manual development, UGA

Supervision of Graduate and Undergraduate Student Teaching

2026 Anderson Smith, Undergraduate Peer Learning Assistant (PLA), ECOL 2550 (Spring)

2025 Anecia Gentles, Graduate Teaching Assistant (GTA), ECOL3500 (Spring)
Shishir Rao, GTA, ECOL3500 (Spring, Fall)
Virginia Griswold & Lauren Head, IFP GTAs, ECOL 1000H/L, ECOL 4160/L (Summer)
Anderson Smith, Undergraduate PLA, ECOL 2550 (Fall)
8 Undergraduate PLAs, ECOL 3500 (5 Spring, 3 Fall)

2024 Shishir Rao, Graduate Teaching Assistant (TA), ECOL3500 (Fall)
Andrew Blinn, IFP Graduate TA, ECOL 1000H-100L, ECOL 4160-4160L (Summer)
Anderson Smith, Undergraduate PLA, ECOL 2550 (Fall)
4 Undergraduate PLAs, ECOL 3500 (Fall)

2023 8 Graduate TAs, ECOL 1000L (Spring/Summer)
7 Graduate TAs, ECOL 3500L (Spring/Summer)

2022 Carolyn Cummins & Nate Tomczyk, IFP GTAs, ECOL 1000H/L, ECOL 4160/L (Summer)
16 Graduate TAs, ECOL 1000L (Spring/Summer/Fall)
12 Graduate TAs, ECOL 3500L (Spring/Summer/Fall)

2021 19 Graduate TAs, ECOL 1000L (Spring/Summer/Fall)
15 Graduate TAs, ECOL 3500L (Spring/Summer/Fall)

2020 19 Graduate TAs, ECOL 1000L (Spring/Summer/Fall)
15 Graduate TAs, ECOL 3500L (Spring/Summer/Fall)

2019 9 Graduate TAs, ECOL 1000L (Fall)
6 Graduate TAs, ECOL 3500L (Fall)

Formal Student Mentorship

2023 – 2024 Emme McCumiskey (UGA '26) via UGA Mentor Program
2020 – 2024 Teaching mentor for UGA Interdisciplinary Certificate in University Teaching (Carolyn Cummins: 2021 – 2024; Reni Kaul 2020 – 2021)
2017 – 2019 Arianna Krinos (Virginia Tech '19)
2014 Olivia Mast (Atlanta Girls' School '15)
2013 Sophia Bonjour (2013 NSF REU; Southern Illinois University '14)

INSTRUCTION-RELATED WORKSHOP & TRAINING DEVELOPMENT (past 5 years)

- Domestic Field Study Fellows Program, June 2023 and February – November 2025, UGA
  Developed and led professional development course for prospective program directors for UGA study away programs within the United States
- "Teaching Data Science" Instructor Workshop, March 2024, University of Puget Sound
  Designed and taught a short course on behalf of the Biological and Environmental Data Education (BEDE) Network that focused on integrating data science into undergraduate life science courses

PEER-REVIEWED PUBLICATIONS (^{U} = mentored undergraduate student)

2021 **Farrell, K.J.**, K.C. Weathers, S.H. Sparks, J.A. Brentrup, C.C. Carey, M.C. Dietze, J.R. Foster, K.L. Grayson, J.H. Matthes, & M.D. SanClements. Training macrosystems scientists requires both interpersonal and technical skills. *Frontiers in Ecology and the Environment* 19: 39-46. DOI: 10.1002/fee.2287

Creed, R.P., J. Skelton, **K.J. Farrell**, & B.L. Brown. Strong effects of a mutualism on freshwater community structure. *Ecology* 102: e03225. DOI: 10.1002/ecy.3225

Emery, N.C., E. Crispo, S.R. Supp, **K.J. Farrell**, A.J. Kerkhoff, E.K. Bledsoe, K.L. O'Donnell, A.C. McCall, & M.E. Aeillo-Lammens. Data science in undergraduate life science education: a need for instructor skills training. *BioScience* 71: 1274-1287. DOI: 10.1093/biosci/biab107

Hounshell, A.G., **K.J. Farrell**, & C.C. Carey. Macrosystems EDDIE teaching modules increase students' ability to define, interpret, and apply concepts in macrosystems ecology. *Education Sciences* 11: 382. DOI: 10.3390/educsci11080382

Kincaid, D.W., W.S. Beck, J.E. Brandt, M.M. Brisbin, **K.J. Farrell**, K.L. Hondula, E.I. Larson, & A.J. Shogren. Wikipedia can help resolve information inequality in the aquatic sciences. *Limnology and Oceanography Letters* 6: 18-23. DOI: 10.1002/lol2.10168

2020 **Farrell, K.J.**, N.K. Ward, A.I. Krinos^{U}, P.C. Hanson, V. Daneshmand, R.J. Figueiredo, & C.C. Carey. Ecosystem-scale nutrient cycling responses to increasing air temperatures vary with lake trophic state. *Ecological Modelling* 430: 109134. DOI: 10.1016/j.ecolmodel.2020.109134

Carey, C.C., **K.J. Farrell**, A.G. Hounshell, & K. O'Connell. Macrosystems EDDIE teaching modules significantly increase ecology students' proficiency and confidence working with

ecosystem models and use of systems thinking. *Ecology and Evolution* 10: 12515-12527. DOI: 10.1002/ece3.6757

Henson, V.R., K.M. Cobourn, K.C. Weathers, C.C. Carey, **K.J. Farrell**, J.L. Klug, M.G. Sorice, N.K. Ward, & W. Weng. A practical guide for managing interdisciplinary teams: Lessons learned from coupled natural and human systems research. *Social Sciences* 9, 119. DOI: 10.3390/socsci9070119

Weng, W, K. Boyle, **K.J. Farrell**, C. Carey, K. Cobourn, H. Dugan, P. Hanson, N. Ward, & K. Weathers. Coupling natural and human models in the context of a lake ecosystem: Lake Mendota, Wisconsin, USA. *Ecological Economics* 169: 106556. DOI: 10.1016/j.ecolecon.2019.106556

2019 **Farrell, K.J.**, A.N. Cramer, K.L. Hondula, S.K. Thompson, & J.A. Zwart. Support of early-career researchers supports the future of ASLO. *Limnology & Oceanography: Bulletin* 28: 34. DOI: 10.1002/lob.10295

Carey, C.C., N.K. Ward, **K.J. Farrell**, M.E. Lofton, A.I. Krinos[U], R.P. McClure, K.C. Subratie, R.J. Figueiredo, J.P. Doubek, P.C. Hanson, P. Papadopoulos, & P. Arzberger. Enhancing collaboration between ecologists and computer scientists: lessons learned and recommendations for a path forward. *Ecosphere* 10: e02753. DOI: 10.1002/ecs2.2753

2018 **Farrell, K.J.**, & C.C Carey. Power, pitfalls, and potential for integrating computational literacy into undergraduate ecology courses. *Ecology and Evolution* 8: 7744-7751. DOI: 10.1002/ece3.4363

Farrell, K.J., A.D. Rosemond, J.S. Kominoski, S.M. Bonjour[U], J. Rüegg, L.E. Koenig, C.L. Baker, M.T. Trentman, & T.K. Harms. Variation in detrital resource stoichiometry signals differential carbon to nutrient limitation for stream consumers across biomes. *Ecosystems* 21: 1676-1691. DOI: 10.1007%2Fs10021-018-0247-z

Cobourn, K.M., C.C. Carey, K. Boyle, C. Duffy, H.A. Dugan, **K.J. Farrell**, L. Fitchett, P.C. Hanson, J.A. Hart, V.R. Henson, A.L. Hetherington, A.R. Kemanian, L.G. Rudstam, L. Shu, P.A. Soranno, M. Sorice, J. Stachelek, N.K. Ward, K.C. Weathers, W. Weng, & Y. Zhang. From concept to practice to policy: modeling coupled natural and human systems in lake catchments. *Ecosphere* 9: e02209. DOI: 10.1002/ecs2.2209

Engel, F., **K.J. Farrell**, I.M. McCullough, F. Scordo, B.A. Denfeld, H.A. Dugan, E. de Eyto, P.C. Hanson, R.P. McClure, P. Nõges, T. Nõges, E. Ryder, K.C. Weathers, & G.A. Weyhenmeyer. A lake classification concept for a more precise estimate of the dissolved inorganic carbon export from terrestrial ecosystems to inland waters. *The Science of Nature* 105: 25. DOI: 10.1007/s00114-018-1547-z

McCullough, I.M., H.A. Dugan, **K.J. Farrell**, A.M. Morales-Williams, Z. Ouyang, D. Roberts, F. Scordo, S.L. Bartlett, S.M. Burke, J.P. Doubek, F.E. Krivak-Tetley, N.K. Skaff, J.C. Summers, K.C. Weathers, & P.C. Hanson. Dynamic modeling of organic carbon fates in lake ecosystems. *Ecological Modelling* 386: 71-82. DOI: 10.1016/j.ecolmodel.2018.08. 009

Song, C., W.K. Dodds, J. Rüegg, A. Argerich, C.L. Baker, W.B. Bowden, M.M. Douglas, **K.J. Farrell**, M.B. Flinn, E.A. Garcia, A.M. Helton, T.K. Harms, S. Jia, J.B. Jones, L.E. Koenig, J.S. Kominoski, W.H. McDowell, D. McMaster, S.P. Parker, A.D. Rosemond, C.M. Ruffing, K.R. Sheehan, M.T. Trentman, M.R. Whiles, W.M. Wollheim, & F. Ballantyne IV. Continental-scale decrease in net primary productivity in streams due to climate warming. *Nature Geoscience* 11: 415-420. DOI: 10.1038/s41561-018-0125-5

2017 Dugan, H.A., S.L. Bartlett, S.M. Burke, J.P. Doubek, F.E. Krivak-Tetley, N.K. Skaff, J.C. Summers, **K.J. Farrell**, I.M. McCullough, A.M. Morales-Williams, D. Roberts, F. Scordo, Z. Ouyang, P.C. Hanson, & K.C. Weathers. Salting our freshwater lakes. *Proceedings of the National Academy of Sciences* 114: 4453-4458. DOI: 10.1073/pnas.1620211114

2016 Rüegg, J., W.K. Dodds, M.D. Daniels, K.R. Sheehan, C.L. Baker, W.B. Bowden, **K.J. Farrell**, M.B. Flinn, T.K. Harms, J.B. Jones, & L.E. Koenig. Baseflow physical characteristics differ at multiple spatial scales in stream networks across diverse biomes. *Landscape Ecology* 31: 119-136. DOI: 10.1007/s10980-015-0289-y

2014 **Farrell, K.J.**, R.P. Creed, & B.L. Brown. Reduced densities of ectosymbiotic worms (Annelida: Branchiobdellida) on reproducing female crayfish. *Southeastern Naturalist* 13: 523-529. DOI: 10.1656/058.013.0312

Farrell, K.J., R.P. Creed, & B.L. Brown. Preventing overexploitation in a mutualism: Partner regulation in the crayfish-branchiobdellid symbiosis. *Oecologia* 174: 501-510. DOI: 10.1007/s00442-013-2780-y

2013 Skelton, J., **K.J. Farrell**, R.P. Creed, B.W. Williams, C. Ames, B.S. Helms, J. Stoekel, & B.L. Brown. Servants, scoundrels, and hitchhikers: current understanding of the complex interactions between crayfish and their ectosymbiotic worms (Branchiobdellida). *Freshwater Science* 32: 1345-1357. DOI: 10.1899/12-198.1

2012 Brown, B.L., R.P. Creed, J. Skelton, M.R. Rollins & **K.J. Farrell**. The fine line between mutualism and parasitism: Complex effects in a cleaning symbiosis demonstrated by multiple field experiments. *Oecologia* 170: 199-207. DOI: 10.1007/s00442-012-2280-5

PUBLISHED TEACHING MODULES & CURRICULAR MATERIALS

‡ = "Exemplary" rating, National Assn. of Geoscience Teachers 2022 *On the Cutting Edge* Program

2024 O'Donnell, K.L., M. Aiello-Lammens, E. Bledsoe, F.J. Bowlick, L. Broughton, O. Calderon, E. Crispo, N. Emery, **K. Farrell**, M. Ngiramahoro, N. Patel, S. Paudel, L. Richardson, B.E. Soares, S. Supp, & E. Weigel. BEDE Network Data Science Skills Curriculum Map. Biological and Environmental Data Education (BEDE) Network, QUBES Educational Resources, QUBES Educational Resources.. DOI: 10.25334/MSFG-6X39

2020 ‡Carey, C.C., **K.J. Farrell**, & A.G. Hounshell. Macrosystems EDDIE Module 4: Macro-Scale Feedbacks. *Environmental Data Initiative*. DOI: 10.6073/pasta/c2cabba0b755d852dabe74d181e2dc28

2019 ‡**Farrell, K.J.**, & C.C. Carey. Macrosystems EDDIE Module 3: Teleconnections. *Environmental Data Initiative*. DOI: 10.6073/pasta/89ffc527545f581290a7c19c5cbb7163

‡Carey, C.C., & **K.J. Farrell**. Macrosystems EDDIE Module 2: Cross-Scale Interactions. *Environmental Data Initiative*. DOI: 10.6073/pasta/28f233002e2e1b6c8d412992e378358f

2018 ‡Carey C.C., S. Aditya, K. Subratie, R.J. Figueiredo, & **K.J. Farrell**. Macrosystems EDDIE Module 1: Climate Change Effects on Lake Temperatures. *Environmental Data Initiative*. DOI: 10.6073/pasta/f7c4c245f495d859dcaa4ff6794d1fac

PUBLISHED DATA PRODUCTS

2019 Carey C.C., A.B. Gerling, J.P. Doubek, K.D. Hamre, R.P. McClure, M.E. Lofton, & **K.J. Farrell**. Secchi depth data and discrete depth profiles of photosynthetically active radiation, temperature, dissolved oxygen, and pH for Beaverdam Reservoir, Carvins Cove Reservoir, Falling

Creek Reservoir, Gatewood Reservoir, and Spring Hollow Reservoir in southwestern Virginia, USA 2013-2018. *Environmental Data Initiative*. DOI: 10.6073/pasta/e840c6c921afb43c326111b525de62b2

Carey C.C., M.E. Lofton, A.B. Gerling, R.P. McClure, J.P. Doubek, B.R. Niederlehner, & **K.J. Farrell**. Water chemistry time series for Beaverdam Reservoir, Carvins Cove Reservoir, Falling Creek Reservoir, Gatewood Reservoir, and Spring Hollow Reservoir in southwestern Virginia, USA 2013-2018. *Environmental Data Initiative*. DOI: 10.6073/pasta/08a8d297003c8e8593f888980f52bbcf

AWARDS, FELLOWSHIPS, & GRANTS (selected)

Awards

2025 Outstanding Teaching Award, UGA
2022 Nominee, UGA Creative Teaching Award
2021 Dean's Award, Odum School of Ecology, UGA
2021 Outstanding Faculty Instructor of the Year, OSE, UGA
2017 1st Place Doctoral Research, OSE Graduate Student Symposium
2016 Outstanding Teaching Assistant Award, UGA
2016 Distinguished Graduate Student Teaching Award, OSE, UGA
2015 Frank Golley Memorial Scholarship, OSE, UGA

Fellowships

2015 – 2017 Global Lakes Ecological Observatory Network (GLEON) Graduate Fellowship Program
2012 – 2014 Scholar of Excellence Fellowship, UGA

Grants

2023 – present Parents' Leadership Council, UGA
2021 – 2026 Senior Personnel & Steering Committee Member, "RCN-UBE: Biological and Environmental Data Education Network: Preparing Instructors to Integrate Data Science into Undergraduate Biology and Environmental Science Curricula" (NSF award 2120609)

CONTRIBUTED PRESENTATIONS (past 5 years; presenter underlined; [G] = mentored graduate student)

2023 Emery, N., E. Crispo, S. Supp, **K. Farrell**, A. Kerkhoff, E. Bledsoe, K. O'Donnell, A. McCall, & M. Aiello-Lammens. From courses to curricula: integrating data science skills into life science education. *Ecological Society of America*. Portland, OR, 8 Aug 2023. Poster presentation.

2022 Cummins, C.S.[G], A.T. Rugenski, & **K.J. Farrell**. Effects of instructional technique on student perception and comprehension of scientific literature. *UGA Center for Teaching and Learning Spring Teaching Symposium*. Athens, GA, 5 April 2022. Poster presentation.

2021 Carey, C.C., **K.J. Farrell**, A.G. Hounshell, & T.N. Moore. Macrosystems EDDIE modules increase students' quantitative skills and understanding of macrosystems ecology. *Ecological Society of America*. Virtual conference, August 2021. Poster presentation.

PROFESSIONAL SERVICE & ACTIVITIES (past 5 years)

University Service (University of Georgia)

2025 UGA Active Learning Summit- "Transforming Education Through Experiential, Service, and Active Learning" Panel, Athens, GA, February 2025 (*Panel Organizer & Moderator*)
2025 Fiscal Affairs Manager Search Committee, Office of Instruction (*Member*)
2024 – present Experiential Learning Scholarship Review Committee (*Member*)
2023 – present Experiential Learning Council, UGA (*Member*)

2023 – present Domestic Field Study Advisory Council, Office of Instruction, UGA (*Chair*)
2021 – 2022 Lecturer Search Committee, Mathematics Department, UGA (*External member*)
2019 – 2023 Science Learning Center Management Committee, UGA (*Member*)

Unit-Level Service (Odum School of Ecology)
2025 – present OSE Strategic Planning Sub-Committee for Instruction (Member)
2025 – present OSE Executive Committee (*Ex-officio member*)
2025 – present Academic Programs Committee (*Ex-officio member*)
2025 – present Undergraduate Programs Committee (*Ex-officio member*)
2024 – 2025 Lecturer Search Committee (*Chair*)
2024 – 2025 Facilities Committee (*Member*)
2024 – 2025 Peer Teaching Evaluation Core Committee (*Member*)
2023 – present Faculty advisor, Odum School Undergraduate Mentor Program
2023 – present Faculty judge, OSE Graduate Student Symposium
2023 Academic Professional Associate Search Committee (*Chair*)
2023 Limited-Term Lecturer Search Committee (*Member*)
2019 – 2024 Undergraduate Program Committee (*Ex-officio member 2019-2023*)
2019 – 2023 Academic Programs Committee (*Ex-officio member*)
2019 – 2022 Diversity Committee, OSE, UGA (*Member*)

Teaching-Focused Workshops & Professional Development (selected; past 5 years)
2026 "UGA's Generative AI Landscape + NotebookLM", UGA CTL (January 2026)
2025 Active Learning PLA Faculty Community, UGA CTL (Spring & Fall 2025)
"Well-Being by Design" faculty participant, UGA CTL (Fall 2025)
"MomentumU: USG Guide to GenAI Literacy", University System of Georgia (July 2025)
2024 "The Reflective Collective", UGA Center for Teaching & Learning (CTL; Fall 2024)
Active Learning PLA Faculty Community, UGA CTL (Fall 2024)
"MomentumU Online Course Design Studio", University System of Georgia (July 2024)
Active Learning Summit, UGA (February 2024)
OSE Peer Teaching Evaluation training series (3 sessions; Feb. – Apr. 2024)
"Writing & Using Teaching Self-Reflection", UGA CTL (Jan. 2024)
"Making Sense of Student Experience Surveys", UGA CTL (Jan. 2024)
2023 Active Learning Summit, UGA (February 2023)
2021 "R Studio for everyone - How to teach and use RStudio Cloud in the Classroom" webinar, Project EDDIE (January 2021)

Teaching Product Peer Review
2020 – 2023 Project EDDIE (Environmental Data-Driven Inquiry & Exploration) Earth & Ecosystems modules (18 reviewed), Project EDDIE Statistical Vignettes (6 reviewed)
2020, 2022 General Education assessment, Critical Thinking (2020) and Quantitative Reasoning (2022), UGA Office of Instruction

CURRENT PROFESSIONAL MEMBERSHIPS & AFFILIATIONS

- Biological and Environmental Data Education (BEDE) Network *(Steering Committee Member)*; 2019 – present
- Society for Experiential Education *(Member)*; 2023 – present