Paul R. Glaum

Analyzing data trends and the systems that make them

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Google Scholar Research Gate GitHub

Summary: PhD ecologist and environmental data scientist. 10+ years producing novel and high impact environmental research with data-driven results across agricultural, socio-economic, conservation, and ecological fields. Expertise in project design, project management, multiple programming environments, mathematical and statistical analysis, and interpreting complex scientific results for general audiences while working both in independent and team-based roles.

Professional Experience

Environmental Science & Policy Department, University of California–Davis
POSTDOCTORAL SCHOLAR (2020 – present)
- Designed network based analysis of ecological communities. Vetted model output with large intercontinental datasets and machine learning methods.
- Developed novel extension of machine learning techniques into mathematical modeling data.

Method Development | Data Scrubbing | Time Series

Department of Ecology and Evolutionary Biology, University of Michigan
POSTDOCTORAL RES. FELLOW (2018 – 2020)
- Worked with inter-disciplinary team to develop economic & ecological network modeling platforms studying fisheries. Led statistical analysis.
- Collaborative analysis of historical database studying pollinator communities using museum specimen records and long-term weather data.

Network Analysis | Parallel Computing | Bio-economics

Department of Ecology and Evolutionary Biology, University of Michigan
GRADUATE STUDENT RESEARCHER (2012-2018)
- Longitudinal pollinator field research integrating land cover and socio-economic GIS data
- Answered long-standing chemical ecology question

Spatial Statistics | PDE & ODE Models | Model Fitting

Teaching Positions
- GRADUATE INSTRUCTOR (2012-2017) University of Michigan: 5 years teaching classroom and laboratory biology, managing course logistics.
- ESL TEACHER (2007-2010) Japan: 3-year English teaching residency w/ grade and middle school students.

Mentoring & Management

- Managed projects with small (1-2) to medium (5-6) teams of young researchers including students from under-represented groups. Secured and managed funding for researcher salaries/stipends. Supervised data gathering, scheduling, model building, publication process, etc.

Skills

- **Analysis:** Cluster computing, numerical analysis, network analysis, statistical techniques (e.g., regression, machine learning), querying large databases.
- **Programming:** R, Matlab, Mathematica, UNIX, SQL, pbs/slurm scripting, command line, Python, Java, C++.
- **Communication:** Data presentation (written & public speaking); scientific writing, editing & review.
- **Grant Writing:** Over $200K in grants & fellowships.

Select Publications & Presentations

- First and last author publications in various peer-reviewed journal groups: e.g., Nature (1, 2), American Assoc. for the Advancement of Science (1), and the UK Royal Society (1, 2). Google Scholar
- Popular Science Writing: Wild Bees and the Pollinator Pantheon. Thought and Awe Blog. Link
- Public Speaking: Numerous presentations including 5-time presenter at international conferences, 2 national conferences, and 10+ invited talks at community orgs in Detroit metro area presenting scientific info to diverse audiences.

Select Media Appearances

The Scientist Magazine, NPR, Sierra Club, Detroit Metro Times, PBS News Hour, PLOS Blogs, PNAS News Feature *More available upon request

Educational Background

PhD University of Michigan (2018)
- Ecology and Evolutionary Biology

M.Sc. University of Michigan (2014)
- Ecology and Evolutionary Biology

B.S. University of Wisconsin-Madison (2007)
- Mathematics & Japanese

Service/Outreach

- Scientific journal reviewer & guest editor
- Conference organization
- 2 time elected grad-student rep in department
- Educational events for Ann Arbor and Detroit K-12 students. Examples given as links.