

ASA Section on Statistics and the Environment

ASA Section on Statistics and the Environment Newsletter Summer Edition 2025

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MESSAGE FROM THE ENVR CHAIR

Dear ENVR Section Members,

I hope you're enjoying a wonderful summer! I'm excited to share some updates about the fantastic work being done by members of the ASA Section on Statistics and the Environment (ENVR), along with details about upcoming events.

First, congratulations to the newly elected ENVR board members! I sincerely appreciate their dedication to serving this community we all cherish. As Chair of ENVR, I've been deeply impressed by the commitment and enthusiasm shown by so many. In addition to the ENVR Executive Committee listed below, our Section is actively engaged in mentoring, career development, and advancing the next generation of statistical tools for environmental science. Below are just a few examples of the generous and often unrecognized service taking place:

- The Student Paper Competition Committee (**Emily Kang** [chair], **Eric Gilleland**, **Soutir Bandyopadhyay**) spend many hours evaluating the work of our impressive new generation of environmental statisticians, recognizing the top papers among many qualified students.
- The ASA Fellows Committee (**Mevin Hooten** [chair]) and the Committee on Distinguished Achievement Awards (**Steve Sain** [chair], **Alex Schmidt**, **Huiyan Sang**) work hard to ensure that high-impact members of the community are nominated and recognized for their individual contributions.

In addition, planning for the 2026 ENVR Workshop has just begun, and we'll be sharing more exciting updates soon. Tentatively, the 2026 ENVR Workshop is scheduled to take place in Houston, TX, in October 2026 — and you won't want to miss it!

Don't forget—we have some exciting events coming up at JSM, including the ENVR mixer (see below for details), the ENVR student paper competition session (August 3, 4:00–5:50PM), the ENVR mentoring roundtable (August 5, 12:00–1:00PM), and many other ENVR sponsored sessions!

I look forward to seeing you at JSM in August!

Mikyoung Jun, 2025 ENVR Chair

ENVR AWARDS AND NEW FELLOWS

New ASA Fellow

Abhirup Datta, Johns Hopkins University

Stefano Castruccio, University of Notre Dame

Yan Ma, University of Pittsburgh

Ying Sun, King Abdullah University of Science and Technology

New IMS Fellow

Nicholas J. Horton, Amherst College

Qi Long, University of Pennsylvania

Bhramar Mukherjee, Yale School of Public Health

ENVR Distinguished Achievement Award

David Warton, University of New South Wales

Citation: Motivated by ecological applications, Warton has made significant statistical advances in the analysis of point processes and high-dimensional counts. As an effective communicator of statistical advances, he has been influential in modernizing analysis practices in ecology, especially in multivariate analysis of ecological communities, species distribution modeling, and allometry.

Kathryn Irvine, US Geological Survey

Citation: For significant statistical contributions to developing and supporting large-scale environmental monitoring programs, commitment to translational work, passion for building effective collaborations with scientists and managers, exceptional mentorship of graduate students and early-career environmental statisticians, and her on-going leadership and service with environmental statistician communities at local and national levels.

Brian Reich, North Carolina State University

Citation: For outstanding methodological contributions in diverse areas of environmental statistics including spatial statistics and extreme value analysis; for deep and prolific collaborations with researchers in climate science and environmental health; for exemplary service to the environmental statistics community, and for generous mentoring of early career environmental statisticians.

Bruno Sanso, University of California, Santa Cruz

Citation: For his groundbreaking and wide-ranging contributions to spatio-temporal statistics, statistical methods for climate models and observations, and his service to and overall influence on the field of environmental sciences.

ENVR Early Investigator Award

Lyndsay Shand, Sandia National Laboratories

Citation: For outstanding contributions to statistics for climate research with high impact on national security, for building multidisciplinary and multi-institutional teams in this area. For exceptional mentoring of staff, postdocs, and students in environmental statistics. For creating collaborations between climate and data sciences for national laboratories and the larger environmental statistics community, and for providing excellent professional service to ASA/ENVR.

ENVR Student Paper Competition

Winners:

Shuren He, "GS-BART: Bayesian Additive Regression Trees with Graph-split Decision Rules for Generalized Spatial Nonparametric Regressions," Texas A&M University

Kevin Collins, "Bayesian Model-based Decomposition Reveals Spatially Varying Temporal Shifts in Streamflow Profiles across North Temperate US Rivers," North Carolina State University

Honorable Mentions:

Elliot Maceda, "A Variational Neural Bayes Framework for Inference on Intractable Posterior Distributions," North Carolina State University

Xuanjie Shao, "Deep Compositional Spatial Models for Nonstationary Extremal Dependence," King Abdullah University of Science and Technology

Sweta Rai, "Modeling Spatial Extremes using Non-Gaussian Spatial Autoregressive Models via Convolutional Neural Networks," Colorado School of Mines

All awards will be recognized during the JSM ENVR mixer, as detailed in the information provided in the next section.

NEWLY ELECTIVE ENVR BOARD MEMBERS

Chair-Elect 2026: **Mark Risser**, Lawrence Berkeley National Laboratory

Program Chair-Elect 2026: **Whitney Huang**, Clemson University

Treasurer 2026: (Rotates to Secretary in 2027): **Michael Dumelle**, USEPA

Publication Chair-Elect 2026: **Josh North**, Lawrence Berkeley National Laboratory

ENVR MIXER AND BUSINESS MEETING

Plan ahead to attend the ENVR Mixer at JSM in Nashville. We will recognize award winners, discuss upcoming events, discuss the state of ENVR, and enjoy catching up with one another.

Date: Monday, August 4, 2025

Time: 5:00PM - 7:00PM

Location: Omni Nashville Hotel, H - Music Row 5

JSM 2025 MESSAGE FROM THE PROGRAM CHAIR

Dear all,

We have an exciting ENVR program at JSM 2025. Schedule of the ENVR sessions and events are given below. Looking forward to seeing you in Nashville.

Best,
Abhi

Sunday, August 3, 2025

- 2:00PM - 3:50PM: New Perspectives on Spatial Confounding, Invited Paper Session, CC-202A
- 4:00PM - 5:50PM: ENVR Student Paper Competition, Topic-Contributed Paper Session, CC-106A
- 4:00PM - 5:50PM: Methods for Dynamic and Spatio-temporal Data, Contributed Papers, CC-106B
- 4:00PM - 5:50PM: Statistical Applications in Agriculture and Ecology, Contributed Papers, CC-106C

Monday, August 4, 2025

- 8:30AM - 10:20AM: Bayesian Hierarchical Models for Environmental Data, Contributed Papers, CC-103B
- 10:30AM - 12:20PM: Advancement in Statistical and Machine Learning Methods for Environmental Data, Contributed Papers, CC-211
- 10:30AM - 12:20PM: Machines as Observers in Ecological Monitoring, Topic-Contributed Paper Session, CC-210
- 2:00PM - 3:50PM: Environmental Statistics & Data Science: Where do we go from here?, Invited Panel Session, CC-207B
- 5:00PM - 7:00PM: Section on Statistics and the Environment Reception, H-Music Row 5

Tuesday, August 5, 2025

- 8:30AM - 10:20AM: Modern Statistical Methods for Remote Sensing of the Environment, Invited Paper Session, CC-207C
- 10:30AM - 12:20PM: Contributed Poster Presentations: Section on Statistics and the Environment, Contributed Posters, CC-Hall B
- 10:30AM - 12:20PM: Recursive Bayesian Methods in Ecology and Environmental Science, Topic-Contributed Paper Session, CC-202B
- 10:30AM - 12:20PM: Statistical Applications for Climate and Environmental Data, Contributed Papers, CC-202C
- 12:00PM - 1:00PM: ENVR Mentoring Roundtable, CC-105A

Wednesday, August 6, 2025

- 10:30AM - 12:20PM: Spatial Statistics at a Crossroads: Emerging Research and Challenges, Invited Paper Session, CC-104E
- 2:00PM - 3:50PM: Moving Towards Dynamic/Causal Process Models for Spatio-Temporal Extremes, Topic-Contributed Paper Session, CC-212

Thursday, August 7, 2025

- 8:30AM - 10:20AM: Statistical Methods for Detection & Attribution of Climate Change, Invited Paper Session, CC-104B
- 10:30AM - 12:20PM: Statistical Applications for Climate and Environmental Data II, Contributed Papers, CC-105B

Sessions sponsored by ASA Advisory Committee on Climate Change Policy

Tuesday, August 5, 2025

- 2:00PM - 3:50PM: Communication in Statistics and Data Science, Invited Panel Session, CC-211

Wednesday, August 6, 2025

- 2:00PM - 3:50PM: Collaborative Strategies for Predicting and Measuring Uncertainty Associated with Weather and Climate Extremes, Topic-Contributed Paper Session, CC-210