



Conference on Applied Statistics in Agriculture and Natural Resources

May 11-15, 2025

Gainesville, Florida, USA

Sunday, May 11, 2025	
4:00pm-6:00pm	Registration Open and Poster & Sponsor Display Set Up <i>[Hotel Indigo Gainesville - Prefunction Space]</i>

Monday, May 12, 2025	
7:30am-5:00pm	Registration Open and Poster & Sponsor Display Set Up <i>[Hotel Indigo Gainesville - Prefunction Space]</i>
8:30am-5:00pm	Optional Workshop - Multi-Omics Integration for Applied Prediction, Concepts, Foundations, and Strategies Workshop Instructor: Diego Jarquin, University of Florida, United States
10:00am-10:30am	Morning Break and Networking (Workshop Attendees Only) <i>[Hotel Indigo Gainesville - Prefunction Space]</i>
12:00pm-1:00pm	Group Luncheon (Workshop Attendees Only) <i>[Hotel Indigo Gainesville - Celebration Ballroom & Prefunction Space]</i>
2:30pm-3:00pm	Afternoon Break and Networking (Workshop Attendees Only) <i>[Hotel Indigo Gainesville - Prefunction Space]</i>

Tuesday, May 13, 2025	
7:30am-4:30pm	Registration Open <i>[Hotel Indigo Gainesville - Prefunction Space]</i>
7:30am-8:30am	Morning Refreshments <i>[Hotel Indigo Gainesville - Celebration Ballroom & Prefunction Space]</i>
8:30am-10:00am	Welcome Remarks & Keynote Speaker <i>[Hotel Indigo Gainesville - Celebration Ballroom]</i>
8:30am	Welcome Remarks Edzard van Santen - 2025 Conference Chair, University of Florida , United States
8:40am	Welcome to the University of Florida Dr. Katie Migliaccio - Dean of the College of Agriculture and Life Sciences, University of Florida , United States
8:50am	Multi-Omics Integration for Applied Prediction, Concepts, Foundations, and Strategies Keynote Speaker - Diego Jarquin, University of Florida , United States
10:00am-10:30am	Morning Break and Networking <i>[Hotel Indigo Gainesville - Prefunction Space]</i>
10:30am-12:00pm	Session 1: Data Quality and Data Generation <i>[Hotel Indigo Gainesville - Celebration Ballroom]</i>
10:30am	Moderator: Simon Riley, University of Florida
10:30am	The Importance of Data Quality Julian Garcia-Abadillo* , <i>Universidad Politécnica de Madrid and University of Florida</i> , Spain
11:00am	Generating High-Quality Simulated Data Using Process-Based Crop Models for AI Applications Rishabh Gupta, University of Florida , United States
11:30am	Quantifying the Sensitivity of Land Use Land Cover Metrics Through Simulation Techniques Brennan Bean, Utah State University , United States
11:50am	Discussion & 3-minute Poster Introductions
12:00pm-1:00pm	Group Luncheon <i>[Hotel Indigo Gainesville - Celebration Ballroom & Prefunction Space]</i>
1:00pm-2:30pm	Session 2: General Session <i>[Hotel Indigo Gainesville - Celebration Ballroom]</i>
1:00pm	Moderator: Edzard van Santen, University of Florida
1:00pm	Random Regression Finlay-Wilkinson Models for Yield and Stability Prediction in Cereals Lucia Gutierrez, University of Wisconsin-Madison , United States
1:20pm	Conditional Simulation of Gaussian Fields Somak Dutta, Iowa State University , United States
1:40pm	Measuring Spatial Consistency in Simulated Crop Yield with Tensor-Product Splines and Interclass Correlation Payton Miloser* , <i>Iowa State University</i> , United States
2:00pm	Using Segmented Regression to Estimate Decay of Curve in Seismic Data Rebekah Scott* , <i>Iowa State University</i> , United States
2:20pm	Discussion & 3-minute Poster Introductions
2:30pm-3:00pm	Afternoon Break and Networking <i>[Hotel Indigo Gainesville - Prefunction Space]</i>
3:00pm-4:30pm	Session 3: General Session <i>[Hotel Indigo Gainesville - Celebration Ballroom]</i>
3:00pm	Moderator: Edzard van Santen, University of Florida
3:00pm	Improving Wheat Genomic Prediction Through Random Regression and Optimized Sowing Dates Pablo Gonzalez Barrios, Universidad de la República , Uruguay
3:20pm	Estimating Genetic Gain – Correctly, Poorly, or Badly? Philip Dixon, Iowa State University , United States
3:40pm	Assessing the Efficiency and Heritability of Blocked Tree Breeding Trials Hans-Peter Piepho, Universität Hohenheim , Germany
4:00pm	Combining Genomic Prediction and Machine Learning Approaches to Improve Genotype Recommendations Vitor Sagae* , <i>University of Florida</i> , United States
4:20pm	Discussion & 3-minute Poster Introductions
4:30pm-5:30pm	Poster Session <i>[Hotel Indigo Gainesville - Prefunction Space]</i>
6:00pm-8:00pm	Networking Reception & Line Dancing Event <i>[Location TBD]</i>

Wednesday, May 14, 2025	
8:30am-4:50pm	Registration Open <i>[Hotel Indigo Gainesville - Prefunction Space]</i>
8:30am-12:00pm	Session 4 (Special Session): Best Practices for GLMM Implementation: Hard-Won Lessons and Ongoing Struggles <i>[Hotel Indigo Gainesville - Celebration Ballroom]</i>
	Moderator: Hans-Peter Piepho, Universität Hohenheim
8:30am	Best Practices for GLMM Implementation: Setting the Stage Nora Bello , USDA-ARS, United States - and- Walter Stroup , University of Nebraska-Lincoln, United States
8:50am	Allowing Negative Variance Component Estimates in REML: Inferential Consequences for Fixed Effects and Type I Error Control Reka Howard , University of Nebraska-Lincoln, United States
9:10am	Correlated Binomial Data: A Confluence of Analytic Challenges Nora Bello , USDA-ARS, United States
9:30am	Mixed Models-Based Precision and Power Analyses for Design Comparisons Using PROC GLIMMIX and glmmTMB Daniel Palmer , USDA-ARS, United States
9:50am-10:30am	GLMM Implementation Poster Viewing and AM Break <i>[Hotel Indigo Gainesville - Prefunction Space]</i>
10:30am	Multinomial Logistic GLMMs: A Patchy Landscape of Software Implementations Quentin Read , USDA-ARS, United States
10:50am	Using Randomized Quantile Residuals to Assess Model Fit of Generalized Linear Mixed Models Julia Piaskowski , University of Idaho, United States
11:10am	Wrap-Up & Open Floor Discussion Nora Bello , USDA-ARS, United States - and- Walter Stroup , University of Nebraska-Lincoln, United States
11:30am	Panel Discussion
12:00pm-1:00pm	Group Luncheon <i>[Hotel Indigo Gainesville - Celebration Ballroom & Prefunction Space]</i>
1:00pm-2:30pm	Session 5: AI and Statistical Consulting <i>[Hotel Indigo Gainesville - Celebration Ballroom]</i>
	Moderator: Julia Piaskowski, University of Idaho
1:00pm	Launching and Sustaining Statistical and Data Science Consulting: Planning and Assessing for Success Mara Rojas Blake & Emily Griffith , North Carolina State University, United States
1:30pm	How Are Large Language Models Changing the Analytics Industry? James Long , Palomar Speciality Insurance, United States
2:00pm	Discussion
2:30pm-3:00pm	Afternoon Break and Networking <i>[Hotel Indigo Gainesville - Prefunction Space]</i>
3:00pm-4:50pm	Session 6: General Session <i>[Hotel Indigo Gainesville - Celebration Ballroom]</i>
	Moderator: Phil Dixon, Iowa State University
3:00pm	Sample Size for Estimating Disease Prevalence in Free-Ranging Wildlife Populations: A Bayesian Modeling Approach James Booth , Cornell University, United States
3:20pm	Bayesian Hierarchical Modeling of Fusarium Head Blight Epidemics Using Zero-Inflated Data and Environmental Covariates Wanderson Bucker Moraes , Corteva Agriscience and The Ohio State University, United States
3:40pm	Generalized Foldover Designs: A Class of Designs for Irregular Fractional Factorial Experiments with Bias Protection Properties Vinny Paris* , Iowa State University, United States
4:00pm	EoA Models: Is Partially Combining Data from Multiple Sites Useful for Estimating Bat Mortality Rates in Wind Farms? Natalia Berberian* , Universidad de la República, Uruguay
4:20pm	ANOVA P-Values and Confidence Sets via Monte Carlo Simulation Benjamin Jacobs* , Iowa State University, United States
4:40pm	Discussion

Thursday, May 15, 2025	
7:30am-11:30am	Registration Open <i>[Hotel Indigo Gainesville - Prefunction Space]</i>
7:30am-8:30am	Breakfast Buffet <i>[Hotel Indigo Gainesville - Celebration Ballroom & Prefunction Space]</i>
8:30am-10:00am	Session 7: General Session <i>[Hotel Indigo Gainesville - Celebration Ballroom]</i>
	Moderator: Reka Howard, University of Nebraska-Lincoln
8:30am	Using Historical Control Data to Assess Study Quality for Medaka Extended One Generation Reproduction Test (MEOGRT) Yushan Gu , <i>Corteva Agriscience</i> , United States
8:50am	Quantifying Irrigation Influence on Crop Likelihood in the Central and Eastern U.S. Lokendra Rathore , <i>Emory University</i> , United States
9:10am	Determinants of Smallholder Rice Farmers' Willingness-To-Pay for Private Extension Services in Liberia: The Case of Gibi District Togba Sumo , <i>University of Nairobi</i> , Kenya
9:30pm	Using Generative Artificial Intelligence to Convert Legacy Statistical Code Linda Young , <i>USDA-NASS</i> , United States
9:50pm	Discussion
10:00am-10:15am	Stretch Break and Poster & Sponsor Display Breakdown <i>[Hotel Indigo Gainesville - Prefunction Space]</i>
10:15am-10:55am	Session 8: General Session <i>[Hotel Indigo Gainesville - Celebration Ballroom]</i>
	Moderator: Josefina Lacasa, Kansas State University
10:15am	Artificial Intelligence for Nature-Related Financial Disclosures Xiao Xu , <i>University of New South Wales</i> , Australia
10:35am	Canonical Discriminant Analysis – A Multivariate Technique You Didn't Think You Needed Edzard van Santen , <i>University of Florida</i> , United States
10:55am	Student Competition Awards and Closing Remarks
11:30am	Conference Concludes