GATERSLEBEN LECTURE

IPK LEIBNIZ-INSTITUT

Speaker: **Prof. Dr. Tim Beissinger**
Heritable Agriculture Inc., San Carlos, CA/ USA

Title: ***From G×E to Real-World Impact: Scaling Crop Predictions with AI***

Time: **Tuesday, August 18, 2026, 2 pm**
https://ipk-gatersleben-de.zoom-x.de/j/64783767811?pwd=hndGuIynz0tMsTZ3oKnPjTsgHfQDL8.1
ID: 647 8376 7811
Kenncode: 184928

Place: **IPK Lecture Hall and via Zoom,**
Correnssstr. 3, 06466 Seeland OT Gatersleben

Abstract:
Predicting crop performance outside observed trial environments remains a central challenge in plant science. However, integrating genotypic data with large-scale environmental characterization—spanning weather, soil, and satellite-derived variables—enables accurate prediction across diverse and previously untested conditions. This work extends traditional genotype × environment × management (G×E×M) frameworks by capturing environmental characteristics at high resolution, allowing inference beyond the set of observed trial locations. I will discuss implications for variety placement, entry into new production regions, and reducing reliance on extensive field trials, highlighting how predictive models can directly inform real-world crop deployment decisions.

Education:
The University of Wisconsin at Madison, Madison, Wisconsin USA
Ph.D., Statistical and Quantitative Genetics, 2014
M.S., Statistics, 2011
B.S., Mathematics and Geography, 2009
Current Position:
Chief Technology Officer, Heritable Agriculture, 2024 - Present

- Position Manage an AI-focused team of ML-engineers and computational biologists developing technology for accelerated plant improvement.
- Design, pitch, and present project proposals to industry partners of all sizes.

Recent Positions (sorted by relevance)
Modeling Lead, Google X, 2024 - Present
Managed an AI-focused team of ML-engineers and computational biologists developing technology for accelerated plant improvement.
Managing Director, Center for Integrated Breeding Research, 2020 – 2023 (Center for Integrated Breeding Research (CiBreed), University of G□ottingen, Germany)
Professor and Chair, Plant Breeding Methodology, 2018 – 2023 (Division of Plant Breeding Methodology, University of G□ottingen, Germany)
Research Geneticist & Adjunct Assistant Professor, 2015 – 2018 (Division of Plant Sciences, Division of Biological Sciences, University of Missouri, Columbia)
Postdoctoral Research Associate, 2014 – 2015 (Department of Plant Sciences, University of California, Davis)

Prof. Dr. Nils Stein (organizer and host)