

Kolloquium „Statistische Methoden in der empirischen Forschung“

Wann: 18. November 2025, 17:00 – 18:30 Uhr

Wo: [Campus Charité Mitte, Raum 02.002, Virchowweg 10, 10117 Berlin](#)

Online-Übertragung: der Link wird auf der [Website](#) zur Verfügung gestellt

Vortragssprache: Englisch

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How Can AI Help Investigate Insect Biodiversity Decline?

Insect populations are declining globally, making systematic monitoring essential for conservation. Traditional monitoring methods rely on traps that kill the insects, with subsequent manual identification by experts.

In the first part of the presentation, we will discuss the challenges of automated insect monitoring based on traps that do not harm the insects and we introduce the KInsecta project, in which a multi-sensor system for AI-based classification using multimodal data is being developed. In the second part, we will present methods for explaining the model predictions (XAI) and, in particular, for quantifying the uncertainty of such explanations.

Literatur

M. Tschaikner, D. Brandt, H. Schmidt, F. Bießmann, T. Chiaburu, I. Schrimpf, T. Schrimpf, A. Stadel, F. Haußer, and I. Beckers, *Multisensor Data Fusion for Automatized Insect Monitoring (KInsecta)*, in Vol. 12727 (SPIE, 2023), p. 1272702.

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T. Chiaburu, F. Haußer, and F. Bießmann, *Confident Teacher, Confident Student? A Novel User Study Design for Investigating the Didactic Potential of Explanations and their Impact on Uncertainty*, arXiv Preprint arXiv:2409.17157 (2024).

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