

# Geographisches Kolloquium



**Dienstag, 20.05.2025**

**Dr. Márk Somogyvári**

**HU Berlin**

## Meta-modeling: numerical models made accessible

Numerical models are standard tools today to simulate and to understand our biophysical environment. The numerical models used today however are often very complex: they are difficult to use without special expertise and they are often computationally demanding, requiring special hardware or long simulation times to run.

In this seminar, I will present the concept of meta-modeling: an approach that simplifies numerical models to make them more accessible. I show how using emulators or proxy models, can lead to computationally faster, or more user friendly models with the help of novel machine learning tools. I show how these models are developed, and showcase some applications where they can help researchers or non-experts as well.

I show how we applied this methodology for water-related issues in the Berlin-Brandenburg region within the CliWaC project, and how we plan to use it for stakeholder interactions in the Brahmaputra basin within the DEMOTAPE project.

**Erwin-Schrödinger Zentrum**  
**Rudower Chaussee 26**  
**Raum: 0'307**  
**15:00 Uhr c.t. — Eintritt frei**

