

Dr. Daniel Mietchen

**Title:** Knowledge Graphs in Ecology: Linking Data, Concepts, and Systems

**Abstract:**

Ecology often deals with complex, interconnected systems and increasingly with large, diverse datasets. Knowledge graphs offer a practical approach to organizing and linking such information- connecting ecological principles with species, environments, interactions and processes in a way that supports integration and reasoning. In this lecture, we introduce the concept of knowledge graphs- without assuming a technical background- and explore their growing relevance in ecology, particularly in areas like invasion biology, biotic interactions and ecosystem modelling. We will then look at some examples of how knowledge graphs are being used to structure ecological data and make it more discoverable and interoperable. Alongside this, we will also sketch out how graph-based approaches relate to other elements of the broader AI landscape. Throughout the lecture, attendees are invited to share their own ideas on the matter or to pose questions.