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# Tutorial: Perspectives on Semantic Similarity for the Spatial Sciences

## Perspectives on Semantic Similarity for the Spatial Sciences

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Participants in this tutorial will learn different aspects and approaches to establishing, modeling, and measuring similarity as a prerequisite to formally addressing cognitive semantics as well as semantic interoperability. Besides a theoretical grounding of semantic similarity measures in several disciplines from the perspectives of both the cognitive and spatial sciences, participants will get hands-on demonstrations of calculating semantic similarity measures, designing behavioral experiments to address questions of cognitive adequacy of these measures, and analyzing behavioral similarity data. The tutorial is designed to meet the needs of a wide audience interested in spatial information theory and applications.

The tutorial will be held for a full day and comprises three sessions with a coffee and lunch break. The program will be as follows:

### Session 1 (9:00-10:30): Overview & Applications

- Why do we need semantic similarity?
- Psychological foundations
- Models of semantic similarity &ndash; a spatial sciences perspective

Coffee break (10:30-11:00)

### Session 2 (11:00-12:00): Overview & Applications Continued

- Models of semantic similarity &ndash; a spatial sciences perspective
- Geospatial applications

Lunch break (12:00-13:30)

### Session 3 (13:30-15:30): Behavioral similarity assessment

- Behavioral evaluation of qualitative formalisms
- Basics of cluster analysis and multidimensional scaling for the analysis of behavioral similarity data
- Visual analytics and exploratory spatial data analysis and their roles in assessing similarity data

Coffee break (15:30-16:00)

See also detailed workshop program.