Distributional Semantic Models
Theory and empirical results

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Bordeaux, July 27-31 2009

Course schedule

Mon, 27 July

Foundations of DSMs (AL)

- DSMs in a nutshell
- exploring the DSM parameter space: a taxonomy

Tue, 28 July

Matrix algebra and vector spaces (SE)

- foundations of matrix algebra and geometrical analysis
- implementation: R as an interactive DSM laboratory

Wed, 29 July

DSMs in computational linguistics and cognitive science (AL)

- what can we do with DSM vectors?
- do DSMs capture interesting aspects of word meaning?

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Thu, 30 July

Manipulating and understanding DSM spaces (SE)

- more advanced matrix algebra and implementation
- managing high-dimensional DSMs (SVD, random indexing)
- mathematical properties of special DSMs

Fri, 31 July

Challenges for DSMs (AL & SE)

- looking for a unified model
- why theoretical linguists don't look at DSMs?
- connection to formal semantics: compositionality, inference, reference, etc.

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Course materials

Course web page

`http://wordspace.collocations.de/doku.php/course:start`

- class slides
- suggested readings (mostly downloadable)
- datasets and homeworks
- web interfaces to query DSMs
- interesting links