

## Kolloquium Angewandte Informatik

### Knowledge Graph Embedding

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Recently graph embeddings have been taken up by the community as a tool to solve various tasks in machine learning and the general AI community. In this talk I will give a gentle introduction to the topic and also give some pointers to currently ongoing research.

We start from looking at why graph embeddings are needed in the first place and how they could be used. We will then focus on graphs containing a large variety of information, typically called knowledge graphs, often represented in RDF. These graphs are hard to embed (compared to e.g., uniform simple networks) because they contain multiple edge and vertex types, relation directionality, literals, etc. What we will cover are a few basic techniques on how these embeddings can be computed. We plan to look into at least one example of translational based methods, one from matrix decomposition, and methods based on co-occurrence and statistical information.

Finally, we will discuss about a couple of open problems and some of the topics currently worked on.

**Termin: Freitag, 15. März 2019, 14:00 Uhr**

Ort: Kaiserstr. 89, 76133 Karlsruhe  
Kollegiengebäude am Kronenplatz (Geb. 05.20), 3. OG, Raum 3A-11.2  
(Hinweise für Besucher: [www.aifb.kit.edu/web/Kontakt](http://www.aifb.kit.edu/web/Kontakt))

Veranstalter: Institut AIFB, Forschungsgruppe Information Service Engineering

Zu diesem Vortrag lädt das Institut für Angewandte Informatik und Formale Beschreibungsverfahren alle Interessierten herzlich ein.

A. Oberweis, H. Sack (Org.), A. Sunyaev, Y. Sure-Vetter, M. Volkamer, J. M. Zöllner