



Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG

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**FROM UNSUPERVISED INDUCTION OF
LINGUISTIC STRUCTURES FROM TEXT
TOWARDS APPLICATIONS IN DEEP
LEARNING**

Conclusion

Vectors + Graphs = ♥

GRAPHS
~~**ARE**~~
NOT
DEAD.

Take home messages

- We can **induce word senses, synsets, semantic classes**, and **semantic frames** in a knowledge-free way using **graph clustering** and **distributional models**.

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- We can make the **induced word senses interpretable** in a knowledge-free way with **hypernyms, images, definitions**.

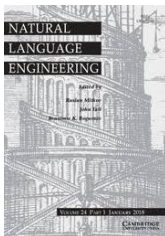
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- We can make the **induced word senses interpretable** in a knowledge-free way with **hypernyms, images, definitions**.
- We can **link induced senses to lexical resources** to
 - improve **performance of WSD**;
 - **enrich lexical resources** with emerging senses.

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- We can **induce word senses, synsets, semantic classes**, and **semantic frames** in a knowledge-free way using **graph clustering** and **distributional models**.
- We can make the **induced word senses interpretable** in a knowledge-free way with **hypernyms, images, definitions**.
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 - improve **performance of WSD**;
 - **enrich lexical resources** with emerging senses.
- We can **represent language graphs** using graph embeddings in **deep neural models**.

- A special issue on **informing neural architectures for NLP with linguistic and background knowledge.**
- ... with **Ivan Vulić** and **Simone Paolo Ponzetto.**



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