Using Context and NLP for Adaptation in Open Learning Environments

(E-)Learning in Open Learning Environments
- Learning today happens self-regulated and online
- Pros: individual and fair learning processes
- Cons: competency requirements, less personal support
- Observation: high dropout in online courses
- Possible solution: Learning Analytics & Adaptive Applications

Heterogeneity, Privacy, Generality, Design
- Collecting and combining data from heterogeneous learning applications
- Accurate recognition of learning activities using a smartphone while minimizing battery consumption and privacy intrusion
- Analysis of textual learning discussions with robust, efficient and generalizing techniques
- Design of helpful interventions for adaptive learning applications

Data Collection, Activity Detection, Discussion Modelling
- Implementation of an architecture for collecting learning data from different applications with respect to privacy
- Learning activity classification for triggering interventions
- Modelling digital natural language learning discussions
- Design and evaluation of interventions for optimizing learning behavior and discussion quality