

JOSHI CENTER ROOM 380  
RESEARCH LABORATORY



Computer Science and Engineering Department

## Semantic Web Lab

Faculty and Graduate Student Research Laboratory

**Kno.e.sis Center (<http://knoesis.org>)**  
**Knowledge Enabled Services and Information Science**



KNO.E.SIS

Semantic Web is about labeling data to make it more meaningful to humans and easier to process by machines. Kno.e.sis is a world leader in this important new multidisciplinary area of Computer Science (incorporating AI, DB, IR, NLP, and other techniques) leading to Web 3.0. The Semantic Web research group explores a variety of important topics that underpin the Semantic Web vision, combining it with Social/People Web (incl. Web 2.0) and Services computing where appropriate.

**Semantic Analytics:** Discovering meaningful connections between people, places and events through new analytical query operators that exploit the graph-centric nature of RDF data. Developing novel user interfaces for semantic analytics applications.

**Spatio-Temporal-Thematic Processing:** Researching effective utilization of spatial and temporal data on the Semantic Web. Developing efficient techniques for storing, querying and reasoning over spatial, temporal and semantic data.

**Knowledge Extraction from Text:** Applying statistical and Natural Language processing techniques to the analysis of biomedical text to identify and extract complex entities and relationships between entities as well as the analysis of casual text from social software such as blogs, chat and discussions in social networks to glean semantics that support applications using data such as sentiment analysis and targeted advertising.

**Knowledge Extraction from Community-Generated Content:** Investigating how to exploit large sources of community-generated context, such as Wikipedia, to automatically generate domain models.

Our key applications areas and collaborations are in biomedical research, sensor web, and healthcare informatics.