



Kno.e.sis Center
Wright State University
3640 Colonel Glenn Highway, Dayton, OH 45435 USA

Kno.e.sis research focuses on realizing a knowledge society with semantic computing as a key enabler. We are a leading research center in the areas of Semantic Web and semantics-enabled services, sensor and social computing. Our research has resulted in techniques and technologies for data integration, analysis, and process management. Our work leads to prototypes and their evaluation with the participation of academic and commercial partners, technology development and licensing followed by real-world deployment, and commercialization.








- World class in new multidisciplinary research areas associated with the Next Generation of the Web and Distributed Computing: Semantic Web, Services Science, Semantic Sensor Web (including multi-level sensing and situational awareness with machine and human-in-the-loop sensing), Semantics-empowered Social Computing
- Significant collaborations in Biomedicine, Health Informatics, Defense & Intelligence; building on strengths in traditional computer science areas such as databases (including data mining), AI (including KR, machine learning and NLP), distributed computing (SOA and cloud computing), mobile and sensor Web, and bioinformatics
- Collaborations with and/or innovation awards by Google, IBM Research, HP Labs, Microsoft Research; Well funded by competitive grants from NIH, NSF, AFRL, etc.
- Offers some of the best and most progressive courses in computer science
- Motto: “**Learning how to learn**”, preparing world class graduates who have successfully competed with those from the best universities, with well rounded preparation involving publications with significant impact, leadership, networking, communication and teamwork

CURRENT PROJECTS

- Semantic Web: Semantic Discovery, Spatio-Temporal-Thematic Query Processing, Provenance Management Framework: Provenance Algebra and Materialized View-based Storage, Semantic Visualization,
- Semantic Web Services: SAWSDL, SA-REST, hRESTs, Mediatibility, APIhut, Dynamic Configuration and Adaptation of Web Processes
- NLP and semantics-enhanced NLP: Exploiting Syntactic, Semantic and Lexical Regularities in Statistical Language Modeling, Syntactic, Semantic and Lexical Language Models for Machine Translation, Text Mining and Knowledge Discovery over Biomedical Literature, Semi-supervised Discriminative Structured Prediction
- Knowledge extraction from community-generated content
- Semantics for Social Computing and Sensor Web: Social Media Content Analysis, Sensor Aided Vigilance, Semantic Sensor Web
- Scalable Computing: Interoperability, Privacy and Security of Clouds
- Applications: Tcruzi Semantic Problem Solving Environment, Human Performance and Cognition Ontology

Wright State University announced an interdisciplinary Center of Excellence on Knowledge Enabled Human Centered Computing (director: Prof. Sheth) with 15 faculty members of which Kno.e.sis is a key component.

FACULTY

| | |
|--|--|
|  | <p>KEKE CHEN</p> <ul style="list-style-type: none"> • Data Intensive Analysis and Computing Lab |
|  | <p>GUOZHU DONG</p> <ul style="list-style-type: none"> • Data Mining Lab |
|  | <p>PASCAL HITZLER</p> <ul style="list-style-type: none"> • Semantic Web Lab • Knowledge Engineering Lab |
|  | <p>TK PRASAD</p> <ul style="list-style-type: none"> • Metadata & Languages Lab • Semantic Science Lab |
|  | <p>MICHAEL RAYMER</p> <ul style="list-style-type: none"> • Bioinformatics Lab |
|  | <p>AMIT SHETH (Founder/Director)</p> <ul style="list-style-type: none"> • Semantic Science Lab • Semantic Web Lab • Service Research Lab |
|  | <p>SHAOJUN WANG</p> <ul style="list-style-type: none"> • Statistical Machine Learning Lab |

POST-DOCS/RESEARCH SCIENTISTS

Ramakanth Kavuluru, Priti Parikh

GRADUATE RESEARCH ASSISTANTS

Pramod Anantharam, Paul Anderson, Delroy Cameron, Qian Han, Amanda Hanes, Cory Henson, Alan Herner, Ashutosh Jadhav, Prateek Jain, Pavan Kapanipathi, Ben Kelly, Chen Lu, Pablo Mendes, Meena Nagarajan, Vinh Nguyen, Harshal Patni, Hemant Purohit, Ajith Ranabahu, Ting Sa, Satya Sahoo, Ming Tan, Fengguang Tian, Christopher Thomas, Wenbo Wang, Mutharaju Vijayaraghava and Wenli Zhou.

RECENT INDUSTRY GIFTS/AWARDS

- IBM UIMA Innovation Award (2007): “UIMA-based Infrastructure for Summarizing Casual, Unstructured Text”
- Microsoft Research Challenge Award (2008): “Chatter, Intent, Good Karma, and Contextual Advertisements in Social Networks”
- HP Research (2008): research in unstructured text extraction
- Google Research Award (2008): "Syntactic, Semantic and Lexical Language Models for Machine Translation"
- HP Innovation Award (2009): “Model Generation and Model Extension for Information and Knowledge Management”



Wright State University is a member of W3C (represented by Prof. Sheth as an advisory committee member). Kno.e.sis members lead or participate in a number of activities such as Semantic Web for Health Care & Life Sciences (esp. BioRDF), Semantic Sensor Networking, Social Web, Provenance, RDB2RDF and SPARQL.



KNO.E.SIS

www.knoesis.org