

Resume

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EDUCATION

Ph.D. in Computer Science, Iowa State University, Ames, IA, USA. 2007
Dissertation: Representing and Reasoning with Modular Ontologies. Advisor: Vasant Honavar

M.S. in Electrical Engineering, Hefei University of Technology, Hefei, China. 2001
Thesis: Research on Some Key Issues of Synergetic Neural Network. Advisors: Jun Gao and Mengxian Pan

B.S. in Electrical Engineering, Hefei University of Technology, Hefei, China. 1998

RESEARCH INTERESTS

- Semantic Web, Description Logics, Data Integration, Data Mining

SELECTED AWARDS AND HONORS

- **Robert Stewart Research Excellence Award**, Department of Computer Science, Iowa State University. Apr. 2007. (Awarded to 2 students from 150 graduate students)
- **Student Travel Award**, the 2006 IEEE/WIC/ACM International Conference on Web Intelligence (WI), Hong Kong, China, 2006. (awarded to 5 students worldwide).
- **Best Paper Award**, the First Asian Semantic Web Conference (ASWC), Beijing, China, 2006. (4.1%)

RELATED RESEARCH EXPERIENCES

Postdoctoral Research Associate (Feb. 2008-present), Department of Computer Science, Rensselaer Polytechnic Institute

- On **Semantic Data Integration**. Ongoing work is aimed at developing methods and tools for ontology alignment, ontology reuse and ontology consistent management.
- On **Web Ontology Language**. Participated in the W3C Web Ontology Language (OWL) Working Group.
- On **Semantic Social Web**. Ongoing work is aimed at developing semantic wiki as a testbed of semantic social web, addressing research problems of ontology construction, ontology reuse, semantic logging, privacy and scalable query answering.

Postdoctoral Research Associate (Aug. 2007-Feb. 2008) and Research Assistant (Aug. 2001-Aug. 2007), Department of Computer Science, Iowa State University

- On **Modular Ontology** (2003-2008). US NSF sponsored project (IIS-0639230 SGER). Developed algorithms and application tools for combing and reasoning with multiple ontologies.
- On **Trust and Privacy on Semantic Web** (2006-2008). Developed algorithms for privacy-preserving inference with hiding knowledge on the semantic web.
- On **Collaborative Ontology Building** (2004-2006). USDA NAGRP Bioinformatics Coordination Program sponsored project. Worked on developing theoretical methods and tools for building ontologies that require collaboration among individual experts or research groups in biological domains.
- On **Semantic Data Integration** (2003-2006). US NSF (IIS 0219699) and NIH (GM 066387) sponsored project. Participated in the INDUS (The Intelligent Data Understanding System) project, worked on algorithms and tools for building and querying semantically heterogeneous, distributed data sources.

- On **Data Mining** (2001-2002). Investigated methods of data mining from electric power usage data to develop customer profiles, using a hybrid forecasting model based on neural network and statistical models.

TEACHING EXPERIENCES

Computer Science Department, Iowa State University

- **Seminar Organizer and Lecturer** (Summer 2007, Fall 2007 and Spring 2008): Semantic Web.
- **Student Mentor** (Summer 2006): Mentored junior students in the AI lab.
- **Teaching Assistant** (Fall 2002): *Principles in Artificial Intelligence*, Graduate Course. Gave recitations, graded homeworks and course projects, helped students in lab assignments, and held office hours.

Computer and Information Department, Hefei University of Technology (HFUT)

- **Teaching Assistant** (Spring 1999, 2000, 2001): *Neural Network Theory and Applications*, undergraduate course.
- **Instructor** (Spring 2001): *Data Structure*, graduate course for EDA Laboratory, HFUT.
- **Lecturer** (Fall 2000): *Neural Network*, graduate tutorials.

SELECTED PUBLICATIONS

- **Bao, J.**, Voutsadakis, G., Slutzki, G., & Honavar, V. (2008). On the Decidability of Role Mappings between Modular Ontologies. In the Twenty-Third Conference on Artificial Intelligence (AAAI 2008). (In Press)
- **Bao, J.**, Slutzki, G. and Honavar, V. (2007) Privacy-Preserving Reasoning on the Semantic Web. In *Web Intelligence 2007* (p. 791-797)
- **Bao, J.**, Slutzki, G., & Honavar, V. (2007) A Semantic Importing Approach to Knowledge Reuse from Multiple Ontologies. In the Twenty-Second Conference on Artificial Intelligence (AAAI 2007). (p.1304-1309)
- **Bao, J.**, Caragea, D., and Honavar, V. (2007) Query Translation for Ontology-Extended Data Sources. In *AAAI'07 Workshop on Semantic e-Science (SeS'07)*.
- **Bao, J.**, Caragea, D., & Honavar, V. (2006). On the Semantics of Linking and Importing in Modular Ontologies. In the *International Semantic Web Conference (ISWC)* (p. 72-86).
- **Bao, J.**, Caragea, D., & Honavar, V. (2006). A Tableau-Based Federated Reasoning Algorithm for Modular Ontologies. In *IEEE/WIC/ACM International Conference on Web Intelligence (WI)*. (p. 404-410).
- **Bao, J.**, Caragea, D., & Honavar, V. (2006). Modular Ontologies - A Formal Investigation of Semantics and Expressivity. In the *Asian Semantic Web Conference (ASWC)* (p. 616-631) [Best Paper Award].

GRANTS

- NSF Industry-University Research Center for Information Protection, Iowa State University. "**Privacy-Preserving Reasoning with Hidden Knowledge**". Vasant Honavar (PI) with Jie Bao (Co-PI) and Giora Slutzki (Co-PI), \$25,000. 2008.

SELECTED SOFTWARE WORK

- **INDUS** (2004-2006), a federated, query-centric system for knowledge acquisition from distributed, semantically heterogeneous data. Java-based.
- **COB Editor** (2005), a collaborative, modular ontology editor for building biological ontologies (e.g., Gene Ontology). Java based.

REFERENCES (Available upon request)

(Updated Apr 15, 2008)