

Meenakshi Nagarajan
Kno.e.sis Center, College of Engineering and Computer Science,
Wright State University
3640 Colonel Glenn Hwy.
Dayton, OH 45435
<http://knoesis.wright.edu/students/meena/>

SUMMARY

- Ph.D Candidate, **KNO.E.SIS Center**, Dept. of Computer Science and Engineering, Wright State University, Dayton, OH, USA, 2005 - Present
- Research Intern, Social Streams, Microsoft Research, 2009
- Research Intern, Information School, UC Berkeley, 2008
- Research Intern, IBM-Almaden, 2007
- Research Intern, Hewlett Packard Labs, 2006
- Masters, Dept of Computer Science, University of Georgia, 2003 - 2005
- Master of Management Studies (1998 - 2002) (First Class), Birla Institute of Technology and Science, Pilani India

RESEARCH INTERESTS

The focus of my research in the analysis of *large-scale informal user-generated content from social media* draws from the fields of statistical Natural Language Processing (NLP), Social Web and the Semantic Web to tackle a diverse set of information extraction problems and power Social Intelligence applications. My approach to informal text analysis is to supplement traditional approaches to NLP with contextual information from the social medium and external resources like domain Ontologies, Taxonomies and Dictionaries.

My research has focused on answering three broad questions in the analysis of user-generated content from Social Media:

- **Characterizing *what* people are talking about** What are the named entities and topics that people are making references to? How are cultures interpreting any situation in local contexts and supporting them in their variable observations on a social medium?
- **Characterizing *how* they express themselves** What do word usages tell us about an active population or about individual allegiances or non-conformity to group practices?
- **Characterizing *why* they scribe** What are the diverse intentions that produce the diverse content on social media? Can we understand why we share by looking at what we predominantly do with the medium? What emotions are people conveying about a person, event or incident?

PUBLICATIONS

W3C Submissions

- R. Akkiraju, J. Farrell, J. Miller, **M. Nagarajan**, M. Schmidt, A. Sheth, K. Verma, "Web Service Semantics - **WSDL-S**" - **W3C Member Submission (Outcome of my Master's thesis)**

Conference Publications

- Daniel Gruhl, Meenakshi Nagarajan, Jan Pieper, Christine Robson, Amit Sheth, *Context and Domain Knowledge Enhanced Entity Spotting in Informal Text*, The 8th International Semantic Web Conference, 2009, to appear
- Meenakshi Nagarajan, Kamal Baid, Amit P. Sheth, and Shaojun Wang, *Monetizing User Activity on Social Networks - Challenges and Experiences*, 2009 IEEE/WIC/ACM International Conference on Web Intelligence, Sep 15-18 2009, Milan, Italy, to appear
- Meenakshi Nagarajan, Karthik Gomadam, Amit Sheth, Ajith Ranabahu, Raghava Mutharaju and Ashutosh Jadhav, *Spatio-Temporal-Thematic Analysis of Citizen-Sensor Data - Challenges and Experiences*, Tenth International Conference on Web Information Systems Engineering, Oct 5-7, 2009, Poland, to appear

- Meenakshi Nagarajan, Marti A. Hearst. *An Examination of Language Use in Online Dating Personals*, 3rd Int'l AAAI Conference on Weblogs and Social Media, ICWSM 2009.
- Alfredo Alba, Varun Bhagwan, Julia Grace, Daniel Gruhl, Kevin Haas, Meenakshi Nagarajan, Jan Pieper, Christine Robson, Nachiketa Sahoo. *Applications of Voting Theory to Information Mashups*, Second IEEE International Conference on Semantic Computing, ICSC 2008, 10-17
- Karthik Gomadam, Ajith Ranabahu, Meenakshi Nagarajan, Amit P. Sheth, Kunal Verma. *A Faceted Classification Based Approach to Search and Rank Web APIs*, IEEE International Conference on Web Services, ICWS 2008, 177-184
- **Meenakshi Nagarajan**, Amit P. Sheth, Marcos Aguilera, Kimberly Keeton, Arif Merchant, and Mustafa Uysal, "Altering Document Term Vectors for Classification - Ontologies as Expectations of Co-occurrence", Conference poster at the 16th World Wide Web Conference (WWW 2007), Banff, Alberta, Canada, May 8-12, 2007
- B. Aleman-Meza, **M. Nagarajan**, C. Ramakrishnan, L. Ding, P. Kolari, A. Sheth, I. B. Arpinar, A. Joshi, and T. Finin. "Semantic Analytics on Social Networks: Experiences in Addressing the Problem of Conflict of Interest Detection", 15th International **World Wide Web Conference** (WWW 2006), Edinburgh, Scotland, May 23 - May 26, 2006 (**Best Paper Nominee**)
- **M. Nagarajan**, K. Verma, A. Sheth, J. Miller, J. Lathem. "Semantic Interoperability in Web services - Challenges and Experiences" 2006 **IEEE International Conference on Web Services** (ICWS 2006), Acceptance Rate: 18%

Journal Publications

- B. Aleman-Meza, **M. Nagarajan**, L. Ding, A. Sheth, I. B. Arpinar, A. Joshi, and T. Finin. " Scalable Semantic Analytics on Social Networks for Addressing the Problem of Conflict of Interest Detection", To appear in **ACM Transactions on the Web**, 2 (1), Feb 2008
- **M. Nagarajan**, K. Verma, A. Sheth, J. Miller, "Ontology Driven Data Mediation in Web Services", **Journal of Web Services Research** Vol. 4(4), 2007

Workshop Publications

- W.S. York, A. Sheth, K. Kochut, J. Miller, C. Thomas, K. Gomadam, **M. Nagarajan**, X. Yi "Semantic Integration of Glycomics Data and Information," Human Disease Glycomics/Proteome Initiative 1st Workshop 2004: Functional Glycomics in Disease, Osaka, Japan.
- Amit Sheth, William York, Christopher Thomas, **Meenakshi Nagarajan**, John A. Miller, Krys Kochut, Satya Saho, Xiaochuan Yi, "Semantic Web technology in support of Bioinformatics for Glycan Expression,"W3C Workshop on Semantic Web for Life Sciences, 27-28 October 2004, Cambridge, Massachusetts USA.
- R. Akkiraju, J. Farrell, J. Miller, **M. Nagarajan**, M. Schmidt, A. Sheth, K. Verma, "Web Service Semantics - WSDL-S (Position Paper for the W3C Workshop on Frameworks for Semantics in Web Services). Also at **W3C**

Book Chapters, Articles, Tutorials

- Amit Sheth, Meenakshi Nagarajan. *Semantics-Empowered Social Computing* IEEE Internet Computing 13(1): 76-80, 2009
- Meenakshi Nagarajan, Cartic Ramakrishnan, Amit Sheth, "Text Analytics for Semantic Computing - the good, the bad and the ugly", Second IEEE International Conference on Semantic Computing Santa Clara, CA, USA, 2008.
- **Meenakshi Nagarajan**, Semantic Annotation in Web Services - Semantic Web Processes and Their Applications. J. Cardoso, A. Sheth, Editors. Springer, 2006 (in print)

Technical Reports

- R. Akkiraju, J. Farrell, J. Miller, **M. Nagarajan**, M. Schmidt, A. Sheth, K. Verma, "Web Service Semantics - WSDL-S, " A joint UGA-IBM Technical Note, version 1.0, April 18,

2005 Also available at IBM alphaWorks web site as [Web Service Semantics - WSDL-S Technical Note](#)

Posters

- **Meenakshi Nagarajan**, Austin B. Yongye, Robert J. Woods, [GLYCAM/WEB Tool for Glycosciences](#), Presented at the [First Annual Georgia Glycoscience Symposium](#)

WORK EXPERIENCE/ RESEARCH

KNO.E.SIS Center - Wright State University

Member and Graduate Research Assistant (Jan 2007 - Present)

(Previously) Large Scale Distributed Information Systems Lab, LSDIS - University Of Georgia

Member and Graduate Research Assistant (Aug 2003 - Dec 2006)

Microsoft Research - Redmond, WA

Summer Research Internship (June 2009 - Sep 2009)

- Cultural Entity Extraction from Weblogs.

Information School, Univ. of California, Berkeley - Berkeley, California

Summer Research Internship (March 2008 - May 2008)

- Studying Language Use in Social Media

IBM Almaden Research Center - San Jose, California

Summer Research Internship (June 2007 - Aug 2007)

- Topical popularities within Social Communities - Combining linguistic and statistical techniques to mine casual text for popularity assessment in social communities.

Hewlett Packard Research Labs - Palo Alto, California

Summer Research Internship (May 2006 - Aug 2006)

- Semantic Document Classification - Using external domain knowledge to affect document classification.
- Submitted patent application: Document Classification using Semantic Relationships

Glycam Group, Complex Carbohydrate Research Center, University of Georgia, Athens

Graduate Research Assistant (Aug 2003 - Aug 2004)

- [GLYCAM-Web](#) Web Tools for Glycosciences - Modeling of 3D structures of complex carbohydrates and glycoproteins made accessible to a broad base of users who lack the specialized skills of a computational chemist. Tools hosted on [group page](#)

Photon Infotech Private Ltd, Chennai India

Intern, Microsoft .NET Developer (Aug 2001 - Dec 2001)

Shared responsibilities in studying business process and requirements for developing a Client-Server .NET Application for the English Foundation, USA.

Carborundum Universal Ltd, Chennai India

Intern, Java Developer (May 1999 - July 1999)

Lead Role in designing, developing and deploying a database application (Oracle 8i) to monitor a Customer Complaint Analysis Service.

Centre for Software Development (IBM Visual Age for Java), BITS Pilani India

Team Member, Java Developer (Aug 1999 - July 2001)

Designer and Developer of modules for the Technology Transfer Portal of BITS Pilani using Java, JSP and Oracle 8i.

SKILLS

Operating Systems: Unix/Linux, Windows XP/NT/2000/98
Programming Languages: Java, C, PL/SQL, Basic
Web: OWL, DAML, RDF, XML, XSLT, XPATH, XQUERY, JSP, ASP, HTML, DHTML, JavaScript, VBScript
Databases: Oracle 8i, MySQL, MS Access, Semi-structured Databases
Web Services: DAML-S/OWL-S, WSDL, WSDL-S, BPEL, AXIS
Application Servers: Tomcat

PROFESSIONAL ACTIVITIES AND ACHIEVEMENTS

Invited Keynote talk at the Social Data on the Web Workshop, collocated with the International Semantic Web Conference (ISWC) 2009.

IBM UIMA Innovation Award 2007: Primary contributor (proposal based on my work) to the winning proposal "UIMA-based Infrastructure for Summarizing Casual, Unstructured Text"

Microsoft's Beyond Search - Semantic Computing and Internet Economics Award 2008: Primary contributor (proposal based on my work) to the winning proposal "Chatter, Intent and Good Karma for Targeted Advertising in Social Networks"

International Semantic Web Conference, 2009, Student Fellowship Award

Program Committee Member

Ontology Matching Workshop, ISWC 2007, CIKM 2007, ICSC 2008, WSDM 2009, AST 2009, SDoW 2009

External Reviewer

ICDE 2005, ICWS 2005, TODS 2005, WISE 2005, ODBASE 2005, ESWC 2006, IJSWIS 2006, ODBASE 2006, OM 2006, CIA 2007, IICAI 2007, OM 2007, CIKM 2007, WWW 2007, AAAI 2007, WSDM 2009, AST 2009, SDoW 2009