BIOGRAPHICAL SKETCH

NAME	POSITION TITLE
Amit P. Sheth http://knoesis.org/amit	LexisNexis Ohio Eminent Scholar; Prof. of Comp Sc & Engg, Prof. of Biomed Sc. Director, Ohio Center of Excellence in Knowledge-enabled Computing (Kno.e.sis)

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Birla Institute of Technology & Science, Pilani, India	B.E.(Hons)	1976-1981	Electrical & Electronics Eng
Ohio State University, Columbus, OH	M.S.	1981-1983	Computer & Info Science
Ohio State University, Columbus, OH	Ph.D.	1983-1985	Computer & Info Science

Professional Positions

2010 –	Director, Ohio Center of Excellence in Knowledge-enabled Computing (Kno.e.sis). (2009-) Professor (Bioinformatics & Biomedical Track), Biomedical Sciences PhD program.
2007 –	LexisNexis Ohio Eminent Scholar; Professor of Computer Sc & Engg, Wright State University, Dayton, OH. Director, Kno.e.sis Center: http://knoesis.org
1994 – 2006	Director, Large Scale Distributed Information Systems (LSDIS) Lab, Athens, GA.
1998 – 2006	Professor, Department of Computer Science, University of Georgia, Athens, GA
1999 – 2006	Founder, Chairman and CEO, Taalee Inc (till 5/2001, then Co-founder/CTO, Semagix, Inc. thru 10/2006). (on part time sabbatical when managing Taalee)
1997 – 1999	Founder and President, Infocosm Inc., S-Corporation, Georgia.
1994 – 1998	Assoc. Professor, Dept. of Computer Science, University of Georgia, Athens, GA.
1995 – present	Adjunct Associate Professor, College of Computing, Georgia Institute of Technology, Atlanta, GA.
4/1993 – 6/1993	Visiting Faculty, Institute of Information Systems, ETH, Zurich, Switzerland.
1989 – 1994	Member of Technical Staff, Bell Communications Research (Bellcore) Inc., NJ.
1987 - 1989	Staff Research Scientist, UNISYS West Coast Research Center, CA.
1985 - 1987	Principal Research Scientist, Computer Sc. Center, Honeywell, Minneapolis, MN.

Overview

Amit Sheth is an educator, researcher, and entrepreneur. He is the LexisNexis Ohio Eminent Scholar, an endowed faculty position funded by LexisNexis and the Ohio Board of Regents at Wright State University. He directs Kno.e.sis - the Ohio Center of Excellence in Knowledge-enabled Computing. The Center and Eminent Scholar's activities are housed on the third floor of the WSU College of Engineering and Computer Science's new $11 million Joshi Research Center, which is the focal point for statewide research in Web 3.0 and inter-disciplinary research involving collaborations between Computer Scientists and researchers in Health Care & Life Sciences, Cognitive Sciences, and other disciplines. Kno.e.sis center has 15 faculty members, and about 50 funded PhD students among a community of approximately 100 researchers. Kno.e.sis likely has the largest US academic research group of Semantic Web (SW) researchers/students. Due to Kno.e.sis' activities, Wright State University was listed top (at 8th place , 4th among Universities, accessed Nov29,2011) in North America based on publication impact in World Wide Web (see http://bit.ly/www-org1).

Currently, Prof. Sheth focuses on Web 3.0 including Semantic Web, and semantics empowered Social Web, Sensor Web/Web of Things, Mobile Computing and Cloud Computing. Equally important to him is working with brilliant collaborators in various domains and application areas - some recent examples include human parasites, cardiology, prescription drug abuse, drug development & discovery, environment sciences and water management, terrorism, political/social movements and disaster/emergency management. As an educator, he measures his impact in terms exemplary success of his past and current advisees. As a researcher, his impact can be measured through citation record as well as in terms of technology development. Quite a few of his developments have resulted in deployed tools and applications as well as commercial services and products.

Prof. Sheth has extensive experience in leading multidisciplinary and multi-institution projects he has been PI/PD/coordinator of research with over $15 million, majority of these have been multi-disciplinary and multi-institutional, and funded primarily by competitive federal grants and contracts from NIH, NSF, DARPA, ARDA, AFRL, etc. His has had recent research collaboration and innovation/challenge gifts from Microsoft Research, IBM Research and HP Labs. He has a habit of jumping into or trying to shape new subareas (see below). As an entrepreneur, he founded and ran Infocosm (initially, a workflow management company: 1996- present) and Taalee (founded in 1999, probably the first Semantic Web company in U.S.), whose technology and people survived after several mergers and acquisitions with Voquette, Semagix, and Fortent, and continue to be part of the offering from Actimize.

Professor Sheth is an IEEE Fellow, received Wright State's Trustee Award (the university's highest award for a faculty), and other faculty and challenge awards, such as IBM and HP, but he particularly cherishes a little award he got from UGA for making an impact on his students` (graduate's) careers (based on students' input). He has done much professional training, and also been part of other outreach services: 40+ keynote speeches and a similar number of invited conference/workshop talks, ~200 Program Committees, and co-organized or co-chaired ~70 conferences & workshops. The latter includes serving as a PC chair for ISWC, WWW SW track, IEEE Metadata, ACM/IEEE Parallel & Distributed Info System (PDIS), and IEEE Multidatabase. He is on the editorial boards of several journals, including IEEE Internet Computing, and is Editor-in-Chief of the International Journal on Semantic Web and Information Systems (IJSWIS), joint Editor-in-Chief of the Distributed and Parallel Database Journal (DAPD; with D. Agrawal), and editor of two Springer book series Semantic Web and Beyond (with R. Jain) and Advances in Database Systems(with A. Elmagarmid).

Awards, Recognitions and key Professional Activities

- **Trustee's award** – Wright State University, 2010**:** "Highest award given by the University … intended to honor those who serve as the most outstanding of role models for all faculty."
- **IEEE Fellow** for contributions to information integration and workflow management, class of 2006.
- Among the top 100 authors in Computer Science (h-index of 74: see http://www.cs.ucla.edu/~palsberg/h-number.html), in WWW (listed among top 5; see http://bit.ly/www-au), in database (among top 20 based on all time) -- all based on a Microsoft Academic Search ranking, accessed Aug 30,2012. Approx 23,000 citations on Google Scholar, 55 papers with 100+ citations each. Two best paper awards at conferences, four additional papers nominated for best paper awards. Second most cited paper in information integration and third most cited paper in distributed databases.
- Presented 45 **keynote addresses**, 40+ invited talks at International Conferences and Workshops, and 200+ invited talks/colloquia/tutorials/panels.
- Commercial impact of research, from (a) five significant commercial products (InfoHarness from Bellcore, METEOR EAppS workflow management system from Infocosm, MediaAnywhere from Taalee, SCORE/Freedom from Semagix, **Active Semantic Electronic Medical Record** system from Athens Heart Center – in active deployment since 01/2006) (b) technology licensing resulting in two companies (managed as COB/CEO/CTO), (c) two patents including the first patent on Semantic Web, and (d) many deployed/operational commercial and scientific applications. Contributions to standards activities and community efforts (initiator and/or member of working group) in Semantic Web Services (WSDL-S and SAWSDL-now a W3C recommendation); co-chairing Semantic Sensor Networking Incubator. Also initiator and co-author of GLYDE, **GLYDE-CT** -- now adopted by the Glycomics scientific community as a standard XML protocol for exchange of glycan structural data. Guided/co-guided development of 10+ open-source data and tools. Details: http://knoesis.org/amit/commercialization , http://knoesis.org/opensource
- **Editor in Chief**, Intl Journal on Semantic Web & Information Systems (ranked among top 5 in WWW: http://bit.ly/www-j). Joint **Editor-in-Chief**, Distributed & Parallel Databases – an International Journal, Springer. Co-editor of a book series on Semantic Web & Beyond, Springer. Member of 5 Journal Editorial Boards, Served on 200+ Program committees and organized (as chair/co-chair) 75+ international conferences and workshops.
- **Advisory Committee Member,** World Wide Web Consortium, since 2002. **Board of Directors**, **Healthcare Open Systems & Trials (HOST) consortium**, 1995—1999.

• **Five innovation/challenge awards** from IBM (Eclipse and UIMA), HP Labs and Microsoft Research. Five Recognition of Service Awards/Certificates of Appreciation from the IEEE TC on Data Engineering and the IEEE Computer Society, 1989, '90, '91, '92, from the ACM, 1993. **ACM Lecturer**, 91-'92/92-'93.

Sample Highly Cited Publications (> 200 citations each; from a total of over 325)

1. Amit Sheth and James Larson, "Federated Databases: Architectures and Issues," ACM Computing Surveys, 22 (3), September 1990, pp. 183-236.
2. Narayanan Krishnakumar, Amit P. Sheth: Managing Hetergeneous Multi-system Tasks to Support Enterprise-Wide Operations. Distributed and Parallel Databases 3(2): 155-186 (1995)
3. Vipul Kashyap, Amit P. Sheth: Semantic and Schematic Similarities Between Database Objects: A Context-Based Approach. VLDB J. 5(4): 276-304 (1996)
4. A. Sheth, 'Changing Focus on Interoperability in Information Systems: From System, Syntax, Structure to Semantics,' in Interoperating Geographic Information Systems, M F. Goodchild et al. (Eds.), Kluwer Academic Publishers, 1999, pp. 5-30.
5. Eduardo Mena, Arantza Illarramendi, Vipul Kashyap, Amit P. Sheth: OBSERVER: An Approach for Query Processing in Global Information Systems Based on Interoperation Across Pre-Existing Ontologies. Distributed and Parallel Databases 8(2): 223-271 (2000).
6. Amit P. Sheth, Vipul Kashyap: So Far (Schematically) yet So Near (Semantically). DS-5 1992: 283-312.
7. Amit P. Sheth, Clemens Bertram, David Avant, Brian Hammond, Krys Kochut, Yashodhan S. Warke: Managing Semantic Content for the Web. IEEE Internet Computing 6(4): 80-87 (2002)
8. Abhijit A. Patil, Swapna A. Oundhakar, Amit P. Sheth, Kunal Verma: Meteor-s web service annotation framework. WWW 2004: 553-562
9. Jorge Cardoso, Amit P. Sheth, John A. Miller, Jonathan Arnold, Krys Kochut: Quality of service for workflows and web service processes. J. Web Sem. 1(3): 281-308 (2004).
10. Amit P. Sheth, Cory A. Henson, Satya Sanket Sahoo: Semantic Sensor Web. IEEE Internet Computing 12(4): 78-83 (2008).

Sample Recent Publications

11. Daniel Gruhl, Meenakshi Nagarajan, Jan Pieper, Christine Robson, Amit P. Sheth: Multimodal social intelligence in a real-time dashboard system. VLDB J. 19(6): 825-848 (2010).
12. David Wild, Ying Ding, Amit Sheth, Lee Harland, Michael Lajiness, 'Systems chemical biology and the Semantic Web: what they mean for the future of drug discovery research, Drug Discov Today. 2011 Dec 29. PMID: 22222943
13. Cory Henson, Krishnaprasad Thirunarayan, Amit Sheth. An Ontological Approach to Focusing Attention and Enhancing Machine Perception on the Web. Applied Ontology, vol. 6(4), pp.345-376, 2011.
14. Satya Sahoo, Vinh Nguyen, Olivier Bodenreider, Priti Parikh, Todd Minning and Amit Sheth. "A Unified Framework for Managing Provenance Information in Translational Research." BMC Bioinformatics 2011, 12:461 doi:10.1186/1471-2105-12-461. PMID: 22126369 [Highly Accessed]
15. Cory A. Henson, Amit P. Sheth, Krishnaprasad Thirunarayan: Semantic Perception: Converting Sensory Observations to Abstractions. IEEE Internet Computing 16(2): 26-34 (2012)
16. Lu Chen, Wenbo Wang, Meenakshi Nagarajan, Shaojun Wang and Amit P. Sheth. Extracting Diverse Sentiment Expressions with Target-dependent Polarity from Twitter. In Proceedings of the 6th International AAAI Conference on Weblogs and Social Media (ICWSM), 2012.
17. Priti Parikh, Todd A. Minning, Vinh Nguyen, Sarasi Lalithsena, Amir H. Asiaee, Satya S. Sahoo, Prashant Doshi, Rick Tarleton, and Amit Sheth. "A Semantic Problem Solving Environment for Integrative Parasite Research: Identification of Intervention Targets for Trypanosoma cruzi." PLoS Negl Trop Dis 6(1): e1458. doi:10.1371/journal.pntd.0001458, 2012. PMID: 22272365

18. Payam Barnaghi, Frieder Ganz, Cory Henson, and Amit Sheth. Computing Perception from Sensor Data. In proceedings of the 2012 IEEE Sensors Conference, Taipei, Taiwan, October 28-31, 2012.
19. C. Henson, K. Thirunarayan, and Amit Sheth, 'An Efficient Bit Vector Approach to Semantics-based Machine Perception in Resource-Constrained Devices,' Proc. 11th International Semantic Web Conference (ISWC 2012), Boston, Massachusetts, USA, November 11-25, 2012.
20. D. Cameron, O. Bodenreider, H. Yalamanchili, T. Danh, S. Vallabhaneni, K. Thirunarayan, A. P. Sheth, T. C. Rindflesch, A Graph-Based Recovery and Decomposition of Swanson's Hypothesis using Semantic Predications, Journal of Biomedical Informatics. 2012.

Active Research Projects

NIH (NHLBI) R01: A. Sheth (Role: PI) [1R01HL087795-01A1] 05/01/2008-03/31/2013
Semantics and Services Enabled Problem Solving Environment (SPSE) for Trypanosoma cruzi
Collaborative R01 led by Wright State Univ. with University of Georgia and Stanford University as partners. The scientific analysis of the parasite *T. cruzi*, the principal causative agent of human Chagas disease. The SPSE allows data analysis and knowledge discovery through the dynamic integration of lab and public data to answer biological questions at multiple levels of granularity. [Also supported by an ARRA supplement.]

AFRL through Ball Aerospace: A. Sheth (Role: PI) 10/15/2010-10/14/2013
LVC Sensors Integration for Data Fusion in Operations and Training
Perform research related to the fusion of mobile, social, and sensor data, with applications to emergency (including medical emergency) response during disasters.

NIH (NIDA): A. Sheth (Role: PI, a multi-PI project) [R21 DA030571-01A1] 07/01/2011-06/30/2013
A Study of Social Web Data on Burprenorphine Abuse Using Semantic Web Technology
Web-based study will generate new information about burprenorphine/naloxone and buprenorphine abuse practices to inform public health interventions and policy. Also, contributing to the advancement of public health and substance abuse research methods by providing automatic coding and information extraction tools to handle rapidly growing Web-based data.

ezDI: A. Sheth (Role: PI) 06/01/2011-03/31/2013
Sponsored research involving Semantic Web technology and ontology supported data mining of Cardiology EMR and transcription data to reduce errors and improve adherence to medical guidelines. Includes development of a comprehensive Cardiology ontology with clinical perspective.

NSF-EAGER: A. Sheth (Role: PI) 09/01/11 – 08/31/13
Expressive Scalable Querying over Integrated Linked Open Data (ESQUiLO): This project develops exploratory techniques to richly interlink components of Linked Open Data (LOD) and then addresses the challenge of querying the LOD cloud, i.e., of obtaining answers to questions which require accessing, retrieving and combining information from different parts of the LOD cloud.

NSF-SOCS: A. Sheth (Role: PI) 09/01/11 – 08/31/14
Collaborative Research: Social Media Enhanced Organizational Sensemaking in Emergency Response: This project seeks to leverage Twitter posts (tweets) as the primary source of citizen inputs and couple relevant content and network information along with microworld simulations involving human role players to measure effectiveness of various organized sensemaking strategies. Evaluations will involve modeling disaster situations and typical organizational structures.