Varadraj Prabhu Gurupur, Ph.D.

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EDUCATION

Ph.D. in Computer Engineering, University of Alabama at Birmingham, Birmingham, AL 35294	May 2010
Master of Science, Computer and Information Sciences, University of Alabama at Birmingham, Birmingham, AL 35294	December 2005
Bachelor of Engineering, Computer Science & Engineering, Mangalore University, Mangalore, India	February 2002

TECHNICAL WORK EXPERIENCE

- Information Systems Specialist II, Neurology Chair Office, University of Alabama at Birmingham, October 2010 – July 2011

- Program Coordinator II, Neurology Chair Office, Alzheimer's Disease Research Center, University of Alabama at Birmingham, April 2007 – October 2010

- Data Processing Specialist, Department of Pharmacy, University of Alabama at Birmingham Hospital, November 2005 – April 2007

TEACHING EXPERIENCE

- Assistant Professor, Department of Computer Science and Information Systems, Texas A&M University -Commerce, August 2011 – Present

  Courses Covered:

  CSCI 528/428 – Object Oriented Programming
  CSCI 430 – Operating Systems
  CSCI 359 – Systems Analysis and Design
  CSCI 595 – Research, Literature and Techniques
  CSCI 497 – Service Engineering and Semantic Web (new course created)

- Guest Lecturer: Course# EE621, fall 2009, Instructor: Dr. Murat M. Tanik, Department of Electrical and Computer Engineering, University of Alabama at Birmingham

- Guest Lecturer: Course# EE601, spring 2010, Instructor: Dr. Thomas C. Jannett,

Department of Electrical and Computer Engineering, University of Alabama at Birmingham

- Lecturer in the Department of Computer Science & Engineering, Gogte Institute of Technology, India, September 2001 – June 2003

ACADEMIC AWARDS AND HONORS

Notable Awards

- Awarded the SDPS Leadership Award for 2011 at the annual SDPS Conference, June 12 – 16, 2011, Jeju Island, South Korea.

- Awarded for the best presentation under the Ph.D. category at the ACM Mid-Southeast Conference 2008, Gatlinburg, Tennessee, November, 20-21, 2008.

- Awarded the Outstanding Graduate Student in Electrical and Computer Engineering at the University of Alabama at Birmingham for the academic year 2009 – 2010.

- Awarded the UAB Service Award for excellence in service at the University of Alabama at Birmingham.

Other Awards and Honors

- Nominated for the Outstanding Graduate Engineering Student Award at the University of Alabama at Birmingham for the academic year 2009 – 2010.

- Nominated for the University of Alabama at Birmingham President's Diversity Award 2010 under the category of Professional Student involved in diverse activities at UAB.

- Award winning Internet Banking System (final year undergraduate project), Manipal Institute of Technology, India, Graduating Year: 2001.

Grants Awarded

- STEM Analysis and Learning Tool (SALT) - Faculty Enhancement Grant, 2012-2013, $10,666, Graduate School, Texas A&M University-Commerce.

- Research Infrastructure Development Grant, 2011-2013, $15,000, CoSEA Dean's Office, Texas A&M University – Commerce.

SERVICES

- *Reviewer* for *ACM Computing Reviews*, ISSN 1530-6586.
- *Reviewer,* Telemedicine and e-Health, ISSN 1530-5627.
- *Chair,* Faculty Search Committee, Department of Computer Science and Information Systems, Texas A&M University-Commerce.
- *Chair,* Registration Committee, SDPS 2012 Conference, June 10-14, 2012, Berlin, Germany.

- *Conference Manager,* SDPS 2012 Conference, June 10-14, 2012, Berlin, Germany.
- *Chair,* Registration Committee, SDPS 2011 Conference, June 12-16, 2011, Jeju Island, South Korea.
- *Reviewer,* Hawii International Conference on System Sciences, January 7-10, 2013, Manoa, Hawaii.
- *Member,* Technical Program Committee (Reviewer) for IEEE Southeast Conference 2011, March 17-20, 2011, Nashville, TN.
- *Member,* Program Support Committee, 15th SDPS Conference, June 6-11, 2010, Dallas, TX.
- *Member,* Technical Program Committee (Reviewer) for IEEE Southeast Conference 2010, March 18-21, 2010, Charlotte, NC.
- *Session Chair*, IEEE Southeast Conference 2009, March 5-8, 2009, Atlanta, GA.
- *Member,* Technical Program Committee (Reviewer) for IEEE Southeast Conference 2009, March 5-8, 2009, Atlanta, GA.
- *Session Chair*, Twelfth Conference SDPS Transdisciplinary Conference on Integrated Systems, Design and Process Science, November 1-5, 2009, Montgomery, AL.

STUDENT MENTORING

Master's Thesis

- *Advisor***,** Pramukh R. Karla, Texas A&M University – Commerce
- *Committee Member,* Nahed Alnahash, Texas A&M University - Commerce

Doctoral Dissertation

- *Committee Member*, Jerry A. Higgs, The University of Alabama at Birmingham

PRESENTATIONS

- "An Approach to Develop Healthcare Information Systems Using Concept Maps," Berlin, Germany, June 10 -14, 2012.

- "Bridging the Semantic Gap in Building Biomedical Information Systems Using Concept Maps," ACM Mid-Southeast Conference 2010, Gatlinburg, Tennessee, November, 11-12, 2010.

- "Building Applications Representing Processes as Concepts," 15th SDPS Conference, Dallas, TX, June 6 – 11, 2010.

- "Representing Processes as Concepts: Towards Reducing Semantic Gap," Twelfth SDPS Transdisciplinary Conference-Workshop on Integrated Systems, Design and Process Science, Montgomery, AL, November, 1-5, 2009.

- "Building Semantic Models Using Concept Maps for Medical Research," Twelfth SDPS Transdisciplinary Conference-Workshop on Integrated Systems, Design and Process Science, Montgomery, AL, November, 1-5, 2009.

- "Abstract Software Design Framework: An Artificial Intelligence-Based System for Software Systems," Twentieth Midwest Artificial Intelligence and Cognitive Science Conference

(MAICS 2009), Fort Wayne, Indiana, April 18-19, 2009.

- "Abstract Software Design Framework: A Semantic Service Composition Approach," IEEE Southeast Conference, Atlanta, Georgia, March 6-8, 2009.

- "A Transdisciplinary Approach towards Clinical Research Evaluation," ACM Mid-Southeast Conference 2008, Gatlinburg, Tennessee, November, 20-21, 2008.

- "The ADRC Online Web-Based Dataset: A New Dementia Research Resource at UAB," Alzheimer's disease Research Center Lecture Series, UAB, Birmingham, AL, September 9, 2008.

- "A Knowledge Based Engineering Paradigm for Software Component Integration," ACM Mid-Southeast Conference 2006, Gatlinburg, Tennessee, November, 16-17, 2006.

- "Software Cultivation using Semantic Web Technology, Web Agents, and Knowledge Based Engineering," ACM Mid-Southeast Conference 2005, Gatlinburg, Tennessee, November, 10-11, 2005.

- "Intelligent Design Framework for Optical Backplane Engineering," IEEE Southeast Conference 2005, Fort Lauderdale, Florida, April, 8-10, 2005.

PUBLICATIONS

Dissertation

- **"A Framework for Semantic Service Composition: Process-as-a-Concept,"** Department of Electrical and Computer Engineering, University of Alabama at Birmingham, Spring 2010. Adviser: Dr. Murat M. Tanik.

Refereed Journal Papers

- **Varadraj P. Gurupur**, Sang C. Suh, Richard R. Selvaggi, Pramukh R. Karla, Jayalekshmi S. Nair, and Shilpa Ajit, An Approach for Building a Personal Health Information System Using Conceptual Domain Knowledge, *Journal of Medical Systems*, 2012, Vol. 36, Issue 6, pp. 3685 – 3693.

- **Varadraj P. Gurupur**, and Murat M. Tanik, A System for Building Clinical Research Applications using Semantic Web-Based Approach, *Journal of Medical Systems,* 2012,Vol. 36, Issue 1, pp. 53- 59.

- Urcun J. Tanik, Gary Grimes, Charles J. Sherman, and **Varadraj P. Gurupur,** An Intelligent Design Framework Proposal Leveraging Axiomatic Design and the Semantic Web, *Journal of Integrated Design and Process Science,* Volume 9 Nov 1 / 2005, pp. 41-53.

- **Varadraj P. Gurupur**, Jennifer L. Schroeder, Pramukh R. Karla, G. Pankaj Jain, STEM Analysis and Learning Tool (SALT): A Concept Map-Based Approach to Identify Student Interests in STEM Education, *IEEE Transactions on Education*, Under Review.

- **Varadraj P. Gurupur**, Richard R. Selvaggi, Pramukh R. Karla, Dementia and Delirium Analysis Research Tool: A Concept Map-Based Approach for Helping Dementia Patients and Care Givers, *IEEE Transactions on Information Technology in Biomedicine*, Under Review.

Edited Book

- Biomedical Engineering, Healthcare Systems, Technology and Techniques, Editors: Sang C. Suh, and **Varadraj P. Gurupur**, Murat M. Tanik, *Springer*, 2011, ISBN-13: 978-1461401155.

Book Chapters

- "Enhancing Medical Research Efficiency Using Concept Maps," **Varadraj P. Gurupur**, Amit S. Kamdi, Tolga Tuncer, Murat M. Tanik, and Murat N. Tanju, Editor: Hamid R. Arabnia , Advances in Experimental Medicine and Biology, *Springer,* 2011, Volume 696, Part 7, 581-588, DOI: 10.1007/978-1-4419-7046-6_59 (15% acceptance rate), PMID: 20703749.

- "The Role of Social Computing in Health Services Support," Jerry A. Higgs, **Varadraj P. Gurupur**, and Murat M. Tanik, Editors: Sang C. Suh, Murat M. Tanik, and Varadraj P. Gurupur, Biomedical Engineering, Healthcare Systems, Technology and Techniques, *Springer*, 2011, ISBN-13: 978-1461401155.

Refereed Conference Papers

- Sang C. Suh, **Varadraj P. Gurupur**, Nigel Koay, Radmila Juric, Pramukh R. Karla, "Developing a Preventive Healthcare Tool for Alzheimer's Disease Using Semantic Web Technologies," *Proceedings of SDPS 2012 Conference*, June 10 -14, 2012, Berlin, Germany.

- Pramukh R. Karla, **Varadraj P. Gurupur**, Sang C. Suh, "An Approach to Develop Healthcare Information Systems Using Concept Maps," *Proceedings of SDPS 2012 Conference*, June 10 -14, 2012, Berlin, Germany.

- Pramukh R. Karla, Sang C. Suh, **Varadraj P. Gurupur**, "Encrypting Ontological Meta-Model Using Elliptic Curve Cryptography with Identity Based Encryption," *Proceedings of the 2012 8th International Conference on Computing Technology and Information Management*, *pp. 146-149*,Seoul, Korea, April 24-26, 2012, ISBN: 978-89-88678-67-1.

- Pramukh Karla**,** Shelly I. Saffer**,** **Varadraj P. Gurupur,** Sang C. Suh, " Identification of Class of Services in the Internet and a Proposed Approach to Traffic Prioritization at Layer 3," *Proceedings of the IEEE Southeast Conference 2012*, Orlando, FL, March 15-18, 2012.

- **Varadraj P. Gurupur**, Lee G. Moradi, and U. John Tanik, "Information Architecture of a Clinical Decision Support System for NASA Life Support Project Advancing STEM," *Proceedings of SDPS 2011 Conference*, Jeju Island, Korea, June 12 – 16, 2011.

- David E. Robbins, **Varadraj P. Gurupur**, and U. John Tanik, "Information Architecture of a Clinical Decision Support System," *Proceedings of the IEEE Southeast Conference 2011, pp. 374 -378,* Nashville, TN, March 17-20, 2011.

- Jerry A. Higgs, **Varadraj P. Gurupur**, and Murat M. Tanik, "A Transformative Software Development Framework: Reflecting the Paradigm shift in Social Computing," *Proceedings of the IEEE Southeast Conference 2011, pp. 339-344,* Nashville, TN, March 17-20, 2011.

- **Varadraj P. Gurupur**, Murat N. Tanju, Tolga Tuncer, Cristiane C. Gattaz, and Murat M. Tanik, "Building Semantic Models Using Concept Maps for Medical Research," *Proceedings of the Twelfth SDPS Transdisciplinary Conference-Workshop on Integrated Systems, 2009, pp. 244- 249*, Montgomery, AL, November 1-5, 2009.

- **Varadraj P. Gurupur**, and Rajani S. Sadasivam, "Representing Processes as Concepts: Towards Reducing Semantic Gap," *Proceedings of the Twelfth SDPS Transdisciplinary Conference-Workshop on Integrated Systems, Design and Process Science, pp. 173- 180,* Montgomery, AL, November 1-5, 2009.

- **Varadraj Gurupur**, U. John Tanik, and Murat M. Tanik, "Abstract Software Design Framework: An Artificial Intelligence-Based System for Software Systems," *Proceedings of the Twentieth Midwest Artificial Intelligence and Cognitive Science Conference (MAICS 2009), pp. 20 – 25*, Fort Wayne, IN, April 18-19, 2009.

- **Varadraj Gurupur**, and Murat M. Tanik, "Abstract Software Design Framework: A Semantic Service Composition Approach," *Proceedings of the IEEE Southeast Conference 2009, pp. 295-300,* Atlanta, GA, March 5-8, 2009.

- **Varadraj Gurupur**, and Urcun J. Tanik, "A Framework for Software Design Automation and Integration Utilizing the Semantic Web," *Proceedings of IDPT Conference in Taiwan, pp. 450-457*, Taichung, Taiwan, June 1-6, 2008.

- Damodar Prabhu, **Varadraj Gurupur** and Urcun J. Tanik, "Leveraging Web Services for Software Cultivation using Artificial Intelligence Design Framework," *Proceedings of IDPT 2006 , pp. 483-489*, San Diego, CA, June 25-30, 2006.

- Urcun J. Tanik, Gary J. Grimes, Charles J. Sherman, and **Varadraj Gurupur**, "An Intelligent Design Framework Proposal Leveraging Axiomatic Design and the Semantic Web," *Proceedings of IDPT Conference in China, pp. 41-53*, Beijing, China, June 12-16, 2005.

- Nida Chammas, Radmila Juric, Nigel Koay**, Varadraj Gurupur,** and Sang C. Suh**, "**Towards a Software Tool for Preventing Raising Awareness of Diabetic Foot in Diabetic Patients," Hawaii International Conference on System Sciences, Manoa, HI, January 7-10, 2013, *Accepted.*

- G. Pankaj Jain, **Varadraj P. Gurupur**, and Eileen D. Faulkenberry, Artificial Intelligence Based Student Learning Evaluation Tool, IEEE Educon 2013, Berlin, Germany, March 13-15, 2013, *Accepted.*

Posters

- Pramukh Karla, Vikhyath Marapadaga, and **Varadraj Gurupur,** "Location Proofing using Identity Based Encryption and the Google Cloud on Mobile Applications," *Proceedings of ACM Southeast conference 2012, pp. 333 – 334,* Tuscaloosa, AL, March 29-31, 2012.

- **Varadraj Gurupur** and Urcun J. Tanik, "Software Cultivation using Artificial Intelligence Design Framework," *Proceedings of ACM Southeast conference 2006, pp. 786-787*, Melbourne, FL, March 10-12, 2006.

Published Abstracts

- **Varadraj Gurupur**, Bridging the Semantic Gap in Building Biomedical Information Systems Using Concept Maps, ACM Mid-Southeast Conference 2010, Gatlinburg, Tennessee, November, 11-12, 2010.

- **Varadraj Gurupur**, A Transdisciplinary Approach towards Clinical Research Evaluation, ACM Mid-Southeast Conference 2008, Gatlinburg, Tennessee, November, 20-21, 2008.

- **Varadraj Gurupur**, A Knowledge Based Engineering Paradigm for Software Component Integration, ACM Mid-Southeast Conference 2006, Gatlinburg, Tennessee, November, 16-17, 2006.

- **Varadraj Gurupur**, Software Cultivation using Semantic Web Technology, Web Agents, and Knowledge Based Engineering, ACM Mid-Southeast Conference 2005, Gatlinburg, Tennessee, November, 10-11, 2005.

Published Reviews with *ACM Computing Reviews*

- Achieving interoperability among healthcare standards: building semantic mappings at models level, Khan W., Khattak A., Lee S., Hussain M., Amin B., Latif K. ICUIMC 2012 (Proceedings of the 6th International Conference on Ubiquitous Information Management and Communication, Kuala Lumpur, Malaysia, Feb 20-22, 2012) 1-9. 2012. Type: Proceedings, *ACM Computing Reviews*, December 14, 2012, Published Online.

- Ontology-based application integration, Paulheim H., Springer Publishing Company, Incorporated, New York, NY, 2011, *ACM Computing Reviews*, May 24, 2012, Published Online.

- TURF: toward a unified framework of EHR usability, Zhang J., Walji M. Journal of Biomedical Informatics 44 (6): 1056-1067, 2011. Type: Article, *ACM Computing Reviews*, March 21, 2012, Published Online.

- Software development and professional practice: Dooley J., Apress, Berkeley, CA, 2011, Book, *ACM Computing Reviews*, March 15, 2012, Published Online.

- The Java EE 6 tutorial : basic concepts (4th ed.)Jendrock E., Evans I., Gollapudi D., Haase K., Srivathsa C., Prentice Hall Press, Upper Saddle River, NJ, 2010. 600 pp. Type: Book, *ACM Computing Reviews*, January 25, 2012, Published Online.

- Emergent Web Intelligence: Advanced Semantic Technologies, Badr Y., Chbeir R., Abraham A., Hassanien A., Springer Publishing Company, Incorporated, New York, NY, 2010. 544 pp. Type: Book, *ACM Computing Reviews*, January 20, 2011, Published Online.

- Semantic Web information management : a model-based perspective Virgilio R., Giunchiglia F., Tanca L., Springer Publishing Company, Incorporated, New York, NY, 2009. 549 pp. Type: Book, *ACM Computing Reviews*, July 29, 2010, Published Online.

- The impact of cognitive machines on complex decisions and organizational change Nobre F., Tobias A., Walker D. AI & Society 24 (4): 365-381, 2009. Type: Article, *ACM Computing Reviews*, June 23, 2010, Published Online.

- A distributed, service-based framework for knowledge applications with multimedia Dupplaw D., Dasmahapatra S., Hu B., Lewis P., Shadbolt N. ACM Transactions on Information Systems 27 (4): 1-29, 2009. Type: Article, *ACM Computing Reviews*, May 21 2010, Published Online.

- Essential Facebook development: build successful applications for the Facebook platform, Maver J., Popp C., Addison-Wesley Professional, Upper Saddle River, NJ, 2010. 480 pp. Type: Book, *ACM Computing Reviews*, March 25 2010, Published Online.

- Artificial life models in software (2nd ed.), Komosinski M., Adamatzky A., Springer Publishing Company, Incorporated, 2009. 442 pp. Type: Book, *ACM Computing Reviews*, February 26, 2010, Published Online.

- Beginning iPhone development: Exploring the iPhone SDK Mark D., LaMarche J., Apress, Berkeley, CA, 2009. 536 pp. Type: Book, *ACM Computing Reviews*, January 25 2009, Published Online.

- Advances in Web semantics I: ontologies, Web services and applied semantic Web, Dillon T. (ed), Chang E. (ed), Meersman R. (ed), Sycara K. (ed) Springer-Verlag, Berlin, Heidelberg, 2009. Type: Divisible Book, *ACM Computing Reviews*, November 10 2009, Published Online.

- Pervasive healthcare computing: EMR/EHR, wireless and health monitoring Varshney U., Springer Publishing Company, Incorporated, 2009. 288 pp. Type: Book, *ACM Computing Reviews*, October 8 2009, Published Online.

- Implementing automated software testing: how to save time and lower costs while raising quality, Dustin E., Garrett T., Gauf B., Addison-Wesley Professional, 2009. 368 pp. Type: Book, *ACM Computing Reviews*, September 8 2009, Published Online.

- Disability, age, and informational privacy attitudes in quality of life technology applications: results from a national Web survey, Beach S., Schulz R., Downs J.,

Matthews J., Barron B., Seelman K. ACM Transactions on Accessible Computing (TACCESS) 2: (1): 1-21, 2009. Type: Article, *ACM Computing Reviews*, September 3 2009, Published Online.

- Learning in communities: interdisciplinary perspectives on human centered information technology, Carroll J. (ed), Springer Publishing Company, Incorporated, 2009. 264 pp. Type: Book, *ACM Computing Reviews*, September 2 2009, Published Online.

- Using social data as context for making recommendations: an ontology based approach Noor S., Martinez K. Context, information and ontologies (Proceedings of the 1st Workshop on Context, Information and Ontologies, Heraklion, Greece, June 1, 2009) 1-8. 2009. Type: Proceedings, *ACM Computing Reviews*, July 27 2009, Published Online.

- Pairwise ANFIS approach to determining the disorder degree of obstructive sleep apnea syndrome, Polat K., Yosunkaya S., Güne S. Journal of Medical Systems 32: (5): 379-387, 2008. Type: Article, *ACM Computing Reviews*, July 15 2009, Published Online.

OTHER ACTIVITIES

- *Faculty Adviser,* ACM Students' Chapter, Texas A&M University-Commerce, 2011-Present.
- *Member,* Scholarship Committee, Department of Computer Science and Information Systems, Texas A&M University-Commerce.
- *Member,* Graduate Faculty Committee, Department of Computer Science and Information Systems, Texas A&M University-Commerce.
- *President*, Society for Entrepreneurship in Business and Engineering (Student's Chapter), 2007-2009.
- *Member,* Institute of Electrical and Electronics Engineers (IEEE) national chapter, 2008-present.
- *Member,* Program Support Committee, Society for Design Process Science (SDPS) 2010 conference.
- *Member*, SDPS, 2008-present.
- *Member,* SDPS transition committee, 2008-present.
- Nominated as an executive member of Indian Society for Technical Education (ISTE) Students' Chapter for the year 2000 – 2001.
- *Participant*, Workshop, "How to Achieve Transdisciplinarity in Software Engineering Education," November 3, 2009, AUM, Montgomery, AL.
- *Participant,* Workshop, "Design and Process Methodologies for Complex Social Systems," November 3, 2009, AUM, Montgomery, AL.
- *Participant,* Workshop, "On Integration: Software as a Product of Transdiscipline," November 4, 2009, AUM, Montgomery, AL.
- *Participant,* Workshop, "The Significance of Informatics in the 21st Century," November 4, 2009, AUM, Montgomery, AL.