
SRIRAM KRISHNAN

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PROFESSIONAL PREPARATION

- Ph.D. in Computer Science, Indiana University, 2004
- M.S. in Computer Science, Indiana University, 2001
- B.E. in Computer Engineering, University of Mumbai, India, 1999

RESEARCH EXPERIENCE

- Co-Principal Investigator, "Performance Evaluation of On-Demand Provisioning of Data Intensive Applications", funded by NSF (2009-present)
- Informatics Lead, Moores Cancer Center Bioinformatics/Biostatistics Shared Resource, UC San Diego (2010 – present)
- Technical Project Manager, NEES Cyberinfrastructure Center, UC San Diego (2008-2010)
- Senior Distributed Systems Researcher, SDSC, UC San Diego (2004-present)
- Research Assistant, Department of Computer Science, Indiana University (2000-2004)
- Research Aide, Distributed Systems Lab, Argonne National Lab, IL (Summer 2002)

ACADEMIC EXPERIENCE

- Adjunct Lecturer, Osaka University, Japan (Summer 2008)
- Associate Instructor, Department of Computer Science, Indiana University (1999-2000)

INDUSTRY EXPERIENCE

- Research Co-op, IBM's T.J. Watson Research Center, NY (Summer 2003)

SELECTED PUBLICATIONS

- **Evaluation of MapReduce for Gridding LIDAR Data.** *S. Krishnan, C. Baru, and C. Crosby.* Accepted for publication to CloudCom 2010, the 2nd IEEE International Conference on Cloud Computing Technology and Science, 2010.
- **Design and Evaluation of Opal2: A Toolkit for Scientific Software as a Service.** *S. Krishnan, L. Clementi, J. Ren, P. Papadopoulos, and W. Li.* Proceedings of the 2009 IEEE Congress on Services - I (SERVICES-1 2009), July 2009.
- **SOAs for Scientific Applications: Experiences and Challenges.** *Sriram Krishnan and Karan Bhatia.* In the Journal of Future Generation Computer Systems, vol. 25, no. 4, pp 466-473, April 2009.
- **On Building Parallel and Grid Applications: Component Technology and Distributed Services.** *Dennis Gannon, Sriram Krishnan, Liang Fang, Gopi Kandaswamy, Yogesh Simmhan, and Aleksander Slominski.* In the Journal on Cluster Computing, vol. 8, no. 4, pp. 271-277, 2005.
- **An End-to-end Web Services-based Infrastructure for Biomedical Applications.** *Sriram Krishnan, Kim Baldridge, Jerry Greenberg, Brent Stearn, and Karan Bhatia.* In proceedings of Grid 2005, 6th IEEE/ACM International Workshop on Grid Computing, Nov 2005.
- **Adaptive Resource Sharing in a Web Services Environment.** *Vijay K. Naik, Swami Sivasubramanian, and Sriram Krishnan.* In proceedings of Middleware 2004, ACM/IFIP/USENIX 5th International Middleware Conference, Oct 2004.

- **Harmony: A Desktop Grid for Delivering Enterprise Computations.** *Vijay K. Naik, Swaminathan Sivasubramanian, David Bantz, and Sriram Krishnan.* In proceedings of Grid 2003, the 4th IEEE/ACM International Workshop on Grid Computing, Phoenix, AZ, USA, Nov 2003.

OTHER TECHNICAL PUBLICATIONS

- 4 book chapters, and around 25 peer-reviewed journal, conference and workshop publications

SYNERGISTIC ACTIVITIES

- Refereed technical papers for several conferences and workshops, served on several program committees, and as a panelist for the NSF and NSERC.
- Presented several tutorials on the topic of Web services and component-based software for scientific applications on the Grid and the Cloud.
- Lead architect and developer of Service Oriented Architectures (SOA) for scientific applications that are part of the National Biomedical Computational Resource (NBCR) and the NSF-funded OpenTopography Facility. Available software includes Opal, an open source generic toolkit for wrapping legacy scientific applications into Web services, and several other Web services for accessing computational chemistry, genomics and biology codes.
- Contributor to the GEMSTONE project, which provides a desktop-based rich client for dynamically accessing remote scientific applications. GEMSTONE has been used as a client for ligand-protein studies useful in the field of pharmaceutical design, and in a classroom setting for educating students about various molecular science applications.
- Lead architect and developer of XCAT3, a Java-based implementation of a CCA framework compatible with current Grid standards. Software available for public use, and being used by scientists in various locations including NCSA, NASA, and Indiana University.

THESIS ADVISORS

Dennis Gannon (IU), Randall Bramley (IU), Andrew Lumsdaine (IU), Beth Plale (IU).