

SUDHEENDRA MURTHY

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EXPERIENCE SUMMARY

Specialist in Architecture & Development on Azure Cloud, C#, Microsoft.NET, ASP.NET, MVC, WCF Services, SQL Server, Amazon EC2, Expert in Algorithm Design, Excellent Analytical & Problem Solving Skills

WORK EXPERIENCE

Senior Software Developer, ResponseLogix, Inc Dec 2008 - Present

- ❖ Architected and developed a scalable distributed deep web crawler and parser framework on Microsoft Azure Cloud. The distributed crawlers are currently running on 900+ remote computers
- ❖ Developed a novel technique for efficient utilization of computing resources of hosted components on Microsoft Azure
- ❖ Developed installer framework to deploy the crawler on remote computers and an efficient auto-updating feature to automatically update the application
- ❖ Developed powerful analytics to optimize the performance of the customer's sales force
- ❖ Automated the report generation process using Amazon EC2 Cloud
- ❖ Extensive experience in full life cycle of Software Design Process

Software Engineer, IBM Global Services, India 1999 – 2000

- ❖ Involved in architecture design in an Object Oriented E-Commerce Project
- ❖ Led a team of 3 people in developing a Workflow Management tool following J2EE and Workflow Management Coalition (WfMC) specifications

EDUCATION

Ph.D. in Computer Science, Arizona State University GPA 3.84, Jan 2009

Dissertation: "Efficient Resource Allocation Techniques for Improved Capacity in Optical and Wireless Networks"

Advisor: Prof. Arunabha Sen

M.S. in Computer Science, Arizona State University GPA 3.85, May 2003

Thesis: "Design and Architecture of a Peer-to-Peer Network based on Multiple Meshes"

Advisor: Prof. Arunabha Sen

B.S. in Computer Science, University of Mysore, India GPA 3.94, Aug 1999

Project: "Object-oriented Design and Implementation of an Email Server"

RESEARCH & TEACHING EXPERIENCE

Student Researcher, University of California, Berkeley Oct – Nov 2007

Collaborated with Prof. Jean Walrand in developing NSF Research Proposals

Research Associate, Arizona State University Jan 2006 – Dec 2008

- ❖ Project Manager, Shared-Vision: Embedded Technology for Military Operations in Urban Terrain.
- ❖ Managed research group of 9 graduate students under Prof. Arunabha Sen in developing advanced cross-layer protocols for efficient video transmission over wireless ad hoc networks
- ❖ Set up a wireless ad hoc network test bed consisting of 17 laptop nodes
- ❖ Implemented multipath routing algorithms with Netfilters on Linux and modifying madwifi kernel driver for efficient transmission of real-time video over the wireless network

Teaching Associate, Arizona State University Spring 2007, 2008

Course: Advanced Computer Networks – Collaborated on curriculum development, provided guidance to students in term project, assignments and delivered lecture on a course section

Research Associate, Hispanic Research Center Aug 2000 – 2006

- ❖ Architect, Designer and Developer of the project 'Automated Online Course Website Builder Tool'
- ❖ Designed and implemented an online distant learning course website for Hispanic Research Center, ASU using JSP, Servlets and MySQL database

RESEARCH PUBLICATIONS

1. *Coverage and Connected Coverage Problems for Sensors Embedded in a Temperature Sensitive Environment*, Nibedita Das, Sudheendra Murthy and Arunabha Sen, In IJSNET Journal 2009
2. *Region-Based Connectivity - A New Paradigm for Design of Fault-tolerant Networks*, Arunabha Sen, Sudheendra Murthy and Sujoyga Banerjee, In proceedings of IEEE HPSR 2009
3. *Dynamic Lightpath Allocation in Translucent WDM Optical Networks*, Subir Badyopadhyay, Sudheendra Murthy and Arunabha Sen, In proceedings of IEEE International Conference on Communications (ICC) 2009
4. *Design of a Delay-based Routing Protocol for Multi-rate Multi-hop Mobile Ad Hoc Networks*, Sudheendra Murthy, Prasad Hegde and Arunabha Sen, In proceedings of IEEE International Conference on Communications (ICC), 2009
5. *A Social Identity Approach to Identify Familiar Strangers in a Social Network*, Nitin Agarwal, Huan Liu, Sudheendra Murthy, Arunabha Sen, and Xufei Wang, In proceedings of International AAAI Conference on Weblogs and Social Media (ICWSM) 2009
6. *Coverage and Connected Coverage Problems for Sensors Embedded in a Temperature Sensitive Environment*, Arunabha Sen, Nibedita Das and Sudheendra Murthy, International Journal of Sensor Networks (IJSNet), 2010
7. *On Sparse Placement of Regeneration Nodes and Regeneration-Aware Dynamic Routing in*

- Translucent Optical Networks*, Sudheendra Murthy, Sujogya Banerjee and Arunabha Sen, Under review at IEEE Transactions on Networking
8. *On Sparse Placement of Regeneration Nodes in Translucent Optical Networks*, Arunabha Sen, Sudheendra Murthy and Subir Bandyopadhyay, In Proceedings of IEEE Globecom 2008
 9. *Towards a Covered and Connected Body Sensor Network for Healthcare Applications*, Nibedita Das, Sudheendra Murthy and Arunabha Sen, In Proceedings of Workshop on Systems and Networking Support for Healthcare and Assisted Living Environments (HealthNet) 2008
 10. *Improved Path Selection Algorithms for Multipath Video Streaming in Wireless Ad-Hoc Networks*, Sudheendra Murthy, Prasad Hegde, Viswesh Parameswaran, Baoxin Li and Arunabha Sen, In Proceedings of Military Communications Conference (MILCOM), Orlando, Florida, 2007
 11. *An Adaptive Slice Group Multiple Description Coding Technique for Real-time Video Transmission over Wireless Networks*, Viswesh Parameswaran, Sudheendra Murthy, Arunabha Sen and Baoxin Li, In Proceedings of Military Communications Conference (MILCOM), Orlando, Florida, 2007
 12. *An Interference-Aware Channel Assignment Scheme for Wireless Mesh Networks*, Arunabha Sen, Sudheendra Murthy, Samrat Ganguly and Sudeept Bhatnagar, In proceedings of IEEE International Communications Conference (ICC), Glasgow, Scotland, 2007
 13. *gStreams: A new technique for fast recovery with capacity efficient protection in WDM mesh networks*, Arunabha Sen, Sudheendra Murthy and Subir Bandyopadhyay, In proceedings of IEEE International Conference on Communications (ICC), Glasgow, Scotland, 2007
 14. *Interference-aware Multicasting in Wireless Mesh Networks*, Sudheendra Murthy, Abhishek Goswami and Arunabha Sen, In proceedings of IFIP Networking, Atlanta, Georgia, 2007
 15. *Coverage Problem for Sensors Embedded in Temperature Sensitive Environments*, Arunabha Sen, Nibedita Das, Ling Zhou, Bao Shen, Sudheendra Murthy and Prajesh Bhattacharya, In proceedings of IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON), San Diego, California, 2007
 16. *A Peer-to-Peer Network Based on Multi-Mesh Architecture*, Sudheendra Murthy and Arunabha Sen, IEEE Global Telecommunications Conference (GLOBECOM), San Francisco, California, 2003

TECHNICAL REPORTS

1. *Interference-aware Multicasting in Wireless Mesh Networks*, Sudheendra Murthy, Abhishek Goswami and Arunabha Sen, Technical Report TR-07-002, Arizona State University
2. *Coverage Problem for Sensors Embedded in Temperature Sensitive Environments*, Arunabha Sen, Nibedita Das, Ling Zhou, Bao Hong Shen and Sudheendra Murthy, Technical Report TR-06-015, Arizona State University

POSTERS

1. *Sensor Coverage and Connectivity Problems for Sensors in Body Area Networks*, Nibedita Maulik, Sudheendra Murthy and Arunabha Sen, BodyNets 2008, Tempe, Arizona
2. *Shared-Vision: Military Operations in Urban Terrain*, Sudheendra Murthy and Arunabha Sen, School of Computing and Informatics Launch and CSE Research Expo 2007 at Arizona State University

GRANTS

- ❖ Instrumental in framing a 3-year Army grant for developing multimedia applications for mobile ad hoc networks in military operations in urban terrains
- ❖ Instrumental in framing a 1-year Defense University Research Instrumentation Program (DURIP) for setting up a mobile ad hoc network test bed

AWARDS

- ❖ Recipient of 2008 CSE Graduate Student Leader Award, selected among 400 graduate students at Arizona State University, 2008
- ❖ 4th Prize in Windows Programming Contest at Arizona State University sponsored by Microsoft, Google and Raytheon, 2008
- ❖ Awarded the 2nd prize for the Mathematical Modeling Contest organized by Phoenix City Council, 2007
- ❖ 1st Prize in Terrarium Microsoft.NET Programming Contest sponsored by Microsoft at Arizona State University, 2006
- ❖ IEEE Conference Travel Grant Awards, 2007, 2008
- ❖ Arizona State University DGS, GPSA Conference Travel Grant Awards, 2003, 2006, 2007
- ❖ Represented Arizona State University in the ACM Regional Programming Contest held in Tucson, Arizona, 2005

ENTREPRENEURIAL EXPERIENCE

- ❖ Technology Development Executive and co-founder of IdeaBlocksLLC and AdJunction
- ❖ Recipient of 2008 Entrepreneur Advantage grant award for the AdJunction business idea
- ❖ Recipient of 2007 Entrepreneur Advantage grant award for the IdeaBlocks business idea
- ❖ Top 5 finalist in Edson Student Entrepreneur Initiative competition in 2007 and 2008
- ❖ Patent Application: Sudheendra Murthy and Arunabha Sen. Acknowledgment suppression in multihop wireless networks

PROFESSIONAL SERVICES

- ❖ Student Panelist at Explore CSE Graduate Programs 2008, an event geared towards attracting undergraduate students to join the graduate program at Arizona State University
- ❖ Organizing and Technical Program Committee Member, ACM Dial-M-PODC Workshop, Portland, 2007 (<http://www.asu.edu/DialM/>)
- ❖ Organized CSE Research Expo 2007, a forum for Compute Science Students at Arizona State University to present their research work and interact with industry partners. The event was attended by over 200 students, 15 faculty members and representatives from 8 companies.

- ❖ Session Chair and Technical Program Committee Member, IEEE International Performance, Computing and Communications Conference (IPCCC), 2006
- ❖ Organizing and Technical Program Committee Member, IEEE workshop on High Performance Switching and Routing (HPSR), 2004
- ❖ Organized Windows Programming contest at Arizona State University, which attracted 38 graduate and undergraduate participants
- ❖ Staff member of Windows Interest Group at Arizona State University
- ❖ Reviewed several journals and conference papers for IEEE Transactions on Mobile Computing, IEEE Transactions on Circuits and Systems for Video Technology, IFIP Networking, IEEE INFOCOM, ICDCIT, IPCCC, HPSR, Dial-M-PODC, ICC