

Aruna Balasubramanian

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Education

Ph.D, Department of Computer Science, University of Massachusetts, Amherst 2005 – Present
M.S, Computer Science, (SUNY) University at Buffalo 2002 – 2004
MSc(Tech), Information Systems, Birla Institute of Technology and Sciences, Pilani, India 1997 – 2002

Research Interest

My research interests are broadly in *networking, distributed systems and security*. My current focus is in building robust protocols for a diverse range of wireless edge networks; from well connected mesh networks to intermittently connected and delay tolerant networks.

Experience

Research Intern Summer 2009
Mentor: Victor Bahl **Microsoft Research, Redmond**
Energy efficient mobile computing by leveraging infrastructure

Research Intern Summer 2007 and 2008
Mentor: Ratul Mahajan **Microsoft Research, Redmond**
Internet connectivity from moving vehicles over a mesh network.

Research Assistant 2005 – Present
Advisors: Brian Levine and Arun Venkataramani **University of Massachusetts, Amherst**
Robust protocols for diverse wireless edge networks

Research Assistant 2002 – 2004
Advisor: Ramalingam Sridhar **University at Buffalo, NY**
Cryptographic algorithms for key generation in 802.11 networks

Select Publications

1. A. Balasubramanian, B. N. Levine and A. Venkataramani, *Replication routing in DTNs: A resource allocation approach*, To appear in IEEE/ACM Transactions on Networking (ToN), 2010. (To appear)
2. N. Balasubramanian, A. Balasubramanian, A. Venkataramani, *Energy Consumption in Mobile Phones: A Measurement study and Implications for Network Applications*, ACM/USENIX IMC, November 2009 (To appear)
3. A. Balasubramanian, B. N. Levine and A. Venkataramani, *Enabling Interactive Applications in Hybrid Networks*, ACM Mobicom, September 2008.
4. A. Balasubramanian, R. Mahajan, B. N. Levine, A. Venkataramani and J. Zahorjan, *Interactive Internet Connectivity for Vehicles*, ACM Sigcomm, August 2008.
5. A. Balasubramanian, B. N. Levine and A. Venkataramani, *DTN Routing as a Resource Allocation Problem*, ACM Sigcomm, August 2007.
6. A. Balasubramanian, S. Mishra and R. Sridhar, *Analysis of a Hybrid Key Management Solution*

for Ad hoc Systems, IEEE WCNC, New Orleans, USA, March 2005 (Part of Masters Thesis)

Awards and Honors

1. Awarded Microsoft Research Fellowship: 2008 - 2010.
2. Invited participant to the Dagstuhl seminar on Delay and Disruption-Tolerant Networking.
3. Passed the PhD candidacy exam at UMass with distinction.
4. Member of the Honor society of Phi Kappa Phi.
5. Awarded the Grace Hopper Travel Scholarship, HotPlanet Travel fellowship and N2Women fellowship.

Services

1. Program committee member of CHANTS 2009, held in conjunction with Mobicom 2009.
2. Co-chair of the PhD forum, held in conjunction with MobiSys 2009.
3. Reviewer for IEEE Transactions on Networking, IEEE Transactions on Mobile Computing, JSAC Special Issue on DTNs, ACM Mobile Computing and Communications Review (MC2R).
4. Coordinator of the CS Women's group for women in computer science at UMass 2006 – 2007.

References

Prof. Brian Levine
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Dr. Ratul Mahajan
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