

K. Shashi Prabh

prabh@ieee.org ▲ 931 431 100 (M) ▲ 225 028 660 (H)

Rua do Falcão, 368, 3 - Esq, 4300-177 Porto, Portugal

Web (Usually a bit dated): <http://www.cs.virginia.edu/~ksp2q>

Research Interests

Wireless ad-hoc and sensor networks: distributed packet scheduling; MAC protocols; real-time support and QoS provisioning; regular logical topology networks. Modeling and stochastic performance analysis of wireless networks.

Education

University of Virginia, Charlottesville, VA, USA Ph.D., Computer Science, 2007

New York University, New York, NY, USA M.S., Computer Science, 2001

Boston College, Chestnut Hill, MA, USA M.S., Physics, 1998

Indian Institute of Technology Delhi, New Delhi, INDIA M.Sc., Physics, 1995

Banaras Hindu University, Varanasi, INDIA B.Sc., Physics (Honours), 1993

Minors: Mathematics and Statistics

Publications

- ◆ K. Shashi Prabh, Chinamy Deshmukh, Shikhar Sachan. “A Distributed Algorithm for Hexagonal Topology Formation in Wireless Sensor Networks,” *ETFA 2009: Proceedings of the 14th IEEE International Conference on Emerging Technologies and Factory Automation*, 2009.
- ◆ Björn Andersson, K. Shashi Prabh. “Localizing Objects in Large-Scale Cyber-Physical Systems,” *CPS-CA 2008: Invited Paper in the International Workshop on Cyber-Physical Systems Challenges and Applications*, 2008.
- ◆ Eduardo Tovar, Björn Andersson, Nuno Pereira, Mario Alves, K. Shashi Prabh and Filipe Pacheco. “Highly Scalable Aggregate Computations in Cyber-Physical Systems,” *RTN 2008: The 7th International Workshop on Real-Time Networks*, 2008.
- ◆ K. Shashi Prabh, Tarek F. Abdelzaher. “On Scheduling and Real-Time Capacity of Hexagonal Wireless Sensor Networks,” *ECRTS 2007: Proceedings of the 19th Euromicro Conference on Real-Time Systems*, pages 136–145, 2007.
- ◆ K. Shashi Prabh, Tarek F. Abdelzaher. “Energy Conserving Data Cache Placement in Sensor Networks,” *The ACM Transactions on Sensor Networks*, Volume 1, Number 2, pages 178–203, 2005.
- ◆ Tarek F. Abdelzaher, K. Shashi Prabh, Raghu Kiran. “On Real-Time Capacity Limits of Multihop Wireless Sensor Networks,” *RTSS 2004: Proceedings of the 25th IEEE Real-Time Systems Symposium*, pages 359–370, 2004.
- ◆ Sagnik Bhattacharya, Hyung Kim, K. Shashi Prabh, Tarek F. Abdelzaher. “Energy-Conserving Data Placement and Asynchronous Multicast in Wireless Sensor Networks,” *MobiSys 2003: Proceedings of the 1st International Conference on Mobile Systems, Applications and Services*, pages 173–185, 2003.

Funded Projects

CONET: The Cooperating Objects Network of Excellence

Partner: Resource Management and Allocation Cluster

Funded by the European Union under ICT, Framework 7

This research addresses interference assessment and prediction of its time evolution for body area networks. The results will be used to adapt resource allocations and develop energy-efficient communication strategies.

REWIN: Real-Time Wireless Sensor Networks

Principal Investigator

Funded by FCT, Ministry of Science and Technology, Portugal

This research addresses real-time communications on regular topology backbone wireless sensor networks. It will provide scalable packet scheduling mechanisms and rigorously prove their end-to-end delay bounds.

Experience

Polytechnic Institute of Porto, Portugal

Research Scientist 12/2007 – Present

University of Illinois, Urbana-Champaign, IL, USA

Visiting Scholar 02/2007 – 11/2007

University of Virginia, Charlottesville, VA, USA

Research Assistant 05/2002 – 12/2006

University of Virginia, Charlottesville, VA, USA

Teaching Assistant 09/2001 – 12/2001

Boston College, Chestnut Hill, MA, USA

Teaching Assistant 09/1996 – 12/98

Teaching

Polytechnic Institute of Porto and University of Porto, Portugal

Ubiquitous Embedded Systems – Module II (Graduate Level Course), Fall 2009

Boston College, Chestnut Hill, MA, USA

Introductory Physics Laboratory I & II (PH203/204), 1996-98

Professional Society Memberships

IEEE, ACM, SIAM

