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Education

2007–Present **Research Assistant**, School of Computer Science, Institute for Studies in Theoretical Physics and Mathematics (IPM).

Optimization and Control for Wired and Wireless Data Networks
(under the supervision of Dr. Ahmad Khonsari)

2004–2006 **Master of Science**, Sharif University of Technology.

- Major in Communication Systems, GPA: 17.50/20.

— M.Sc. THESIS

title *Distributed Power Control and Congestion Control in OFDMA Wireless Ad-Hoc Networks*

(under the supervision of Dr. Babak H. Khalaj)

2000–2004 **Bachelor of Science**, Iran University of Science and Technology.

- Major in Electrical Engineering, GPA: 17.53/20.

— B.Sc. THESIS

title *Design and Simulation of a PCI Core and Its Implementation as a Data Acquisition Card*

(under the supervision of Dr. Hadi Shahriar Shahhoseini)

Research Interests

- Nonlinear Programming for Resource Allocation in Data Networks
- Flow Control in Data Networks
- Multimedia Transmission over Wired and Wireless Networks
- Data Management in Wireless Sensor Networks

Academic Background

Mathematics	Convex Optimization, Optimization Algorithms, Reinforcement Learning, Probability Theory, Stochastic Process, Control Theory and Stability, Linear Algebra
Communication	Information Theory, Digital Communications, Broadband Access Networks (xDSL, OFDM)
Networking	Ad-hoc Networks, Advanced Data Networks, Performance Evaluation of Computer Networks
Signal Processing	Digital Signal Processing, Adaptive Filter Theory, Joint Time-Frequency Processing, Wavelet and Multiresolution Analysis

Publications

Journals

1. M. S. Talebi, A. Khonsari, M. H. Hajiesmaili, and S. Jafarpour, "**Asymptotically Optimal Resource Allocation for Scalable Video Coding Applications**," *To be submitted to IEEE Transactions on Parallel and Distributed Systems (TPDS)*.
2. H. Shafiei, A. Khonsari, M. S. Talebi, A. Tavakol, and M. Ould-Khaoua, "**A Key-Distribution Mechanism in Wireless Sensor Networks Using Zig-Zag Product**," *Submitted to International Journal of Ad Hoc and Ubiquitous Computing (IJHAUC)*.
3. M. S. Talebi, A. Khonsari, A. Mohtasham, and A. Abbasi, "**Cost-Aware Monitoring of Network-Wide Aggregates in Wireless Sensor Networks**," *Submitted to Elsevier Computer Networks*.
4. M. S. Talebi, A. Khonsari, M. H. Hajiesmaili, "**Utility-Proportional Bandwidth Sharing for Multimedia Transmission Supporting Scalable Video Coding**," *Elsevier Computer Communications, In Press*.
5. M. S. Talebi, A. Khonsari, F. Jafari, M. H. Yaghmaee, "**Proportionally-Fair Flow Control Mechanism for Best Effort Traffic in Network-on-Chip Architectures**," *To appear in International Journal of Parallel, Emergent and Distributed Systems*.

Conferences

1. M. H. Hajiesmaili, A. Khonsari, and M. S. Talebi, "**Cross-Layer Rate Control and Scheduling for SVC Transmission in Wireless Mesh Networks**," *To be submitted*.
2. M. S. Talebi, A. Khonsari, M. H. Hajiesmaili, "**Optimization Bandwidth Sharing For Multimedia Transmission Supporting Scalable Video Coding**," in *Proc. of Local Computer Networks (LCN)*, 2009.
3. M. S. Talebi, A. Khonsari, M. H. Hajiesmaili, and S. Jafarpour, "**A Suboptimal Network Utility Maximization Approach for Scalable Multimedia Applications**," in *Proc. of Globecom*, 2009.
4. H. Shafiei, A. Khonsari, M. S. Talebi, and M. Ould-Khaoua, "**On The Connectivity of Key-Distribution Strategies in Wireless Sensor Networks**," in *Proc. of Globecom*, 2009.
5. A. Mohtasham, A. Khonsari, and M. S. Talebi, "**Efficient Minimum Cost Reactive Monitoring of Gaussian Random Field in Wireless Sensor Networks**," in *Proc. of HiPC, Student Research Symposium*, 2009.
6. F. Jafari, M. S. Talebi, M. H. Yaghmaee, A. Khonsari, and M. Ould-Khaoua, "**Throughput-Fairness Tradeoff in Best Effort Flow Control for On-Chip Architectures**," in *Proc. of PSEO-UCNS 2009 Workshop, co-located with IPDPS 2009*.
7. M. S. Talebi, A. Khonsari, and R. Jabarvand, "**Cost-Aware Reactive Monitoring in Resource-Constrained Wireless Sensor Networks**," in *Proc. of IEEE Wireless Communications and Networking Conference (WCNC'09)*, 2009.
8. M. S. Talebi, A. Khonsari, and A. Abbasi, "**Distributed Threshold Selection for Aggregate Threshold Monitoring in Sensor Networks**," in *Proc. of IEEE Consumer Communications and Networking Conference (CCNC'09)*, 2009.
9. A. Abbasi, A. Khonsari, and M. S. Talebi, "**Flooding-Assisted Threshold Assignment for Aggregate Monitoring in Sensor Networks**," in *Proc. of International Conference on Distributed Computing and Networking (ICDCN'09)*, 2009.
10. E. Ghadimi, A. Khonsari, M. S. Talebi, and N. Yazdani, "**Loss-Aware Geographic Routing for Unreliable Wireless Sensor Networks**," in *Proc. of IEEE Consumer Communications and Networking Conference (CCNC'09)*, 2009.
11. A. Abbasi, A. Khonsari, and M. S. Talebi, "**Source Location Anonymity for Sensor Networks**," in *Proc. of IEEE Consumer Communications and Networking Conference (CCNC'09)*, 2009.
12. A. Khonsari, M. R. Aghajani, A. Tavakkol, and M. S. Talebi, "**Mathematical Analysis of Buffer Sizing for Network-on-Chips under Multimedia Traffic**," in *Proc. of IEEE International Conference on Computer Design (ICCD'08)*, 2008.

13. M. S. Talebi and A. Khonsari, "**On the Stability of Best Effort Flow Control Mechanisms in On-Chip Architectures**," in *Proc. of IEEE/ACM International Symposium on Modeling, Analysis and Simulation of Computers and Telecommunication Systems (MASCOTS'08)*, 2008.
14. M. S. Talebi, F. Jafari, and A. Khonsari, "**A Novel Flow Control Scheme for Best Effort Traffic in NoC Based on Source Rate Utility Maximization**," in *Proc. of IEEE International Symposium on Modeling, Analysis and Simulation of Computers and Telecommunication Systems (MASCOTS'07)*, 2007.
15. M. S. Talebi, F. Jafari, A. Khonsari, and M. H. Yaghmaee, "**A Novel Congestion Control Scheme for Elastic Flows in Network-on-Chip Based on Sum-Rate Optimization**," in *Proc. of International Conference on Computer Science and its Applications (ICCSA'07)*, 2007.
16. M. Kefayati, M. S. Talebi, B. H. Khalaj, and H. R. Rabiee, "**Secure Consensus Averaging in Sensor Networks Using Random Offsets**," in *Proc. of IEEE International Conference on Telecommunications (ICT'07)*, 2007.
17. M. Kefayati, M. S. Talebi, H. R. Rabiee, and B. H. Khalaj, "**Secure Consensus Averaging for Secure Information Fusion in Sensor Networks**," in *Proc. of International Symposium on Signal Processing and its Applications (ISSPA'07)*, 2007.
18. M. S. Talebi and B. H. Khalaj, "**Distributed Power Allocation For OFDM Wireless Ad-Hoc Networks Based On Average Consensus**," in *Proc. of International Conference on Communication Systems (ICCS'06)*, 2006.
19. A. Khodaian, B. H. Khalaj, and M. S. Talebi, "**Utility Constrained Energy Minimization In Aloha Networks**," in *Proc. of IEEE Consumer Communications and Networking Conference (CCNC'07)*, 2007.
20. M. S. Talebi, M. Kefayati, B. H. Khalaj, and H. R. Rabiee, "**Adaptive Consensus Averaging for Information Fusion over Sensor Networks**," in *Proc. of The Third IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS'06, Short papers session)*, 2006.

Honors

- 2004 **M.Sc. Entrance Exam.**
 - Ranked 25th amongst more than 10000 participants in M.Sc. entrance exam in electrical engineering.
- 2000–2004 **B.Sc. Ranking, Electrical Engineering, Iran University of Science and Technology.**
 - Ranked 2nd amongst more than 150 B.Sc. students in Electrical Engineering

Academic Experience

Research

- 2007–Present **Research Assistant, Network Optimization, Institute for Studies in Theoretical Physics and Mathematics (IPM).**
 - Working as a student researcher focusing on the resource management and performance evaluation of wired and wireless data networks, using convex and non-convex optimization approaches, under the supervision of Dr. Ahmad Khonsari.
 - Serving as an advisor for M.Sc. students for more than 2 years.
- 2004–2007 **Research Assistant, Wireless Networks, Information Systems and Security Lab (ISSL), Sharif University of Technology.**
 - Working on cross-layer design of jointly optimal congestion control and power control for OFDMA wireless ad-hoc networks, under the supervision of Dr. Babak Khalaj.
 - Working on consensus-based information dissemination in WSN, under the supervision of Dr. Babak Khalaj and Dr. Hamid Rabiee.

- 2004 **Research Assistant**, *FPGA*, Application Specific Processor Design Lab, Electronic Research Center, Iran University of Science and Technology.
- Working on the design of a slave PCI core using VHDL, its simulation in Modelsim, and its implementation in a FPGA platform.

Teaching

- 2007–2008 **Teaching Assistant**, *Advanced Computer Networks*, CE Department, Sharif University of Technology.
- Convex optimization, duality model for congestion control, economic aspects of congestion control.
- 2006, 2008 **Teaching Assistant**, *Advanced Computer Networks*, ECE Department, University of Tehran.
- Convex optimization, duality model for congestion control.
- 2006 **Teaching Assistant**, *Electronic Design*, CE Department, Sharif University of Technology.
- 2006 **Teaching Assistant**, *Signals and Systems*, CE Department, Sharif University of Technology.
- 2005 **Teaching Assistant**, *Logic Design Lab*, EE, Sharif University of Technology.
- Introducing elementary VHDL, with emphasis on FPGA design.
- 2004–2005 **Teaching Assistant**, *Electric Circuit I/II*, EE and CE Departments, Sharif University of Technology.

Computer skills

Programming	C/C++, VHDL, HTML, familiar with Python
Scientific	Matlab, OMNeT++, ISE, Modelsim, OrCAD, JM/JSVM Software, CVXMOD, and L ^A T _E X

References

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