Eyuphan Bulut

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EDUCATION

2007 - Now **Ph.D. Rensselaer Polytechnic Institute,** Troy, NY (expected to graduate in 2010)
Department of Computer Science
Thesis: Opportunistic Routing Algorithms in Delay Tolerant Networks
Research Interests: Wireless Ad hoc and Sensor Networks: Routing, Coverage and Connectivity Issues, Cost-Quality Tradeoff, Target Tracking.
Advisor: Prof. Boleslaw K. Szymanski
GPA: 4.00/4.00

2005 - 2007 **M.S. Bilkent University,** Ankara, Turkey
Department of Computer Engineering
Thesis: Connectivity and Coverage Preserving Sleep Scheduling Mechanism with Predictive Coverage and Multiple Mode Selections in Wireless Sensor Networks
Advisor: Asst. Prof. Ibrahim Korpeoglu
GPA: 3.93/4.00

2001 - 2005 **B.S. Bilkent University,** Ankara, Turkey
Department of Computer Engineering, Full scholarship awarded by the University
GPA: 3.60/ 4.00

ACADEMIC AND INDUSTRIAL EXPERIENCE

2007 – Now Member of Center for Pervasive Computing and Networking at RPI
Teaching Assistant: Data Structures and Algorithms, Operating Systems
Research Assistant

2005 – 2007 Member of Networks and Systems Research Group at Bilkent University
Teaching Assistant: Object-oriented Software Engineering, Operating Systems, Introduction to Computing for Social Sciences

Summer 04 Member of Peer-to-Peer Systems Research Group at Bilkent University
Developed Gnutella-like P2P Network simulator via CSIM Engine

Summer 03 Summer internship in Simetri Software Inc., Ankara, Turkey
Worked on Microsoft Visual Studio .NET applications

ACADEMIC RESEARCH AND PUBLICATIONS

Journals
- ❖ Z.Wang, E.Bulut, B.Szymanski "**Distributed Energy Efficient Target Tracking with Binary Sensor Networks**", accepted to appear in ACM Transactions on Sensor Networks, 2009.
- ❖ E.Bulut, Z.Wang, B.Szymanski "**Cost Effective Multi-Period Spraying for Routing in Delay Tolerant Networks**", submitted to IEEE/ACM Transactions on Networking (under second review)
- ❖ E.Bulut, I.Korpeoglu "**Sleep Scheduling with Expected Common Coverage in Wireless Sensor Networks**", submitted to Springer Wireless Networks (under second review).

Conference Papers
- ❖ E.Bulut, Z.Wang, B.Szymanski "**Cost Efficient Erasure Coding based Routing in Delay Tolerant Networks**", to appear in ICC 2010.
- ❖ E.Bulut, Z.Wang, B.Szymanski "**The Effect of Neighbor Graph Connectivity on Coverage Redundancy in Wireless Sensor Networks**", to appear in ICC 2010.
- ❖ E.Bulut, Z.Wang, B.Szymanski "**Impact of Social Networks in Delay Tolerant Routing**", to appear in Proceedings of Globecom 2009.

- Z.Wang, E.Bulut, B.Szymanski "**Distributed Target Tracking with Directional Binary Sensor Networks**", to appear in Proceedings of Globecom 2009.
- Z.Wang, E.Bulut, B.Szymanski "**Energy Efficient Collision Aware Multipath Routing for Wireless Sensor Networks**", In Proceedings of ICC 2009.
- E.Bulut, J.Zheng, Z.Wang, B.Szymanski "**Balancing the Cost-Quality Tradeoff in Cooperative Ad hoc and Sensor Networks**", In Proceedings of IEEE MILCOM, San Diego Convention Center, CA, November 2008.
- E.Bulut, Z.Wang, B.Szymanski "**Minimizing Average Spraying Cost for Routing in Delay Tolerant Networks**", Second Annual Conference of International Technology Alliance (ITA), ACITA, Imperial College London, September 2008.
- E.Bulut, Z.Wang, B.Szymanski "**Time Dependent Message Spraying for Routing in Intermittently Connected Networks**", In Proceedings of Globecom, New Orleans, November 2008.
- Z.Wang, E.Bulut, B.Szymanski "**Distributed Target Tracking with Imperfect Binary Sensor Networks**", In Proceedings of Globecom, New Orleans, November 2008.
- E.Bulut, W. Zijian, B. Szymanski, "**Cost-Quality Tradeoff in Cooperative Sensor Networking**", ICC2008 COCONET Workshop, 2008.
- Z.Wang, E.Bulut, B.Szymanski, "**A Distributed Cooperative Target Tracking with Binary Sensor Networks**", ICC2008 CoopNet Workshop, 2008.
- E.Bulut, I.Korpeoglu, "**DSSP: A Dynamic Sleep Scheduling Protocol for Prolonging the Lifetime of Wireless Sensor Networks**" Third IEEE International Workshop on Heterogeneous Wireless Networks, in conjunction with AINA, 2007.
- E.Bulut, T.Capin, "**Key Frame Extraction from Motion Capture Data by Curve Saliency**", CASA 2007 – Computer Animation and Social Agents, 2007.

Submitted Conference Papers
- E.Bulut, S.C.Geyik, B.Szymanski "**Conditional Shortest Path Routing in Delay Tolerant Networks**", submitted to WoWMoM 2010.
- E.Bulut, S.C.Geyik, B.Szymanski "**Conditionality Improves Routing Performance in Delay Tolerant Networks**", submitted to SECON 2010.

Reviewed Papers for: ACM Transactions on Sensor Networks, IEEE Transactions on Parallel and Distributed Systems, ACITA 2008, ACITA 2009, ICC 2010.

PROJECTS
2007 – Now   **International Technology Alliance (ITA) Project:**
Project 9: Complexity Management of Sensor Data Infrastructure
Developing new algorithms for Information processing and retrieval paradigms in sensor networks

2006 – 2007   **TUBITAK Project:**
Supporting Real-time Traffic in Wireless Ad Hoc and Sensor Networks
TUBITAK: The Scientific and Technological Research Council of Turkey

2005 – 2006   **NewCom, EU Research Project:**
Development of a Bluetooth Network Simulator to be used in comparison of Bluetooth and Zigbee technologies, wrote a report on design of a **Bluetooth Simulator**

2004 – 2005   **Senior Project:**
Wireless Multi-hop Ad Hoc Network Middleware and Applications for Pocket PCs using .NET Platform

QUALIFICATIONS
Programming Languages: Java, C, C++, C#, SQL, Assembly (Mips), HTML, Javascript, MATLAB
Operating Systems: Unix/Linux, Microsoft Windows Family OS
Awards: Full Scholarship by RPI and Bilkent University
Gold medal in Mediterranean University Mathematical Olympics
Bronze medal in Nationwide Mathematical Olympics, Turkey