

# NUZHET ATAY

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## RESEARCH PROFILE

Ph.D. candidate with research interests and contributions in the areas of motion planning and task allocation algorithms for mobile robots, hardware design for robotics applications and utilization of wireless sensor networks for improved data collection.

## EDUCATION

**Ph.D. in Computer Science (Adviser: Burchan Bayazit, Ph.D.)**

August 2008

Washington University in St. Louis, MO

**B.S. in Computer Engineering**

June 2003

**B.S. in Electrical and Electronics Engineering (Double Major)**

Middle East Technical University, Ankara, Turkey

## AWARDS

- Best Paper Award, 2006 International Conference on Distributed Computing in Sensor Systems (DCOSS'06), June 2006
- First Place Award, Eleventh Annual Graduate Student Research Symposium, Washington University, April 2006
- 42nd DAC/ISSCC Student Design Contest, Conceptual Category, 3rd Place, June 2005
- Middle East Technical University High Honor Student (GPA: 3.61) and exceptional success scholarship, 1999-2003
- 77<sup>th</sup> in the University Entrance Exam (OYS) in Turkey in 1998 (among 1.5 million students)

## REFEREED PUBLICATIONS

[1] **Nuzhet Atay**, Burchan Bayazit, "Emergent Task Allocation for Mobile Robots", 2007 Robotics: Science and Systems Conference (RSS'07), June 27-30, 2007.

[2] Gazihan Alankus, **Nuzhet Atay**, Chenyang Lu, Burchan Bayazit, "Adaptive Embedded Roadmaps for Sensor Networks", 2007 IEEE International Conference on Robotics and Automation (ICRA'07), pages 3645-3652, April 10-14 2007.

[3] Sangeeta Bhattacharya, **Nuzhet Atay**, Gazihan Alankus, Chenyang Lu, O. Burchan Bayazit, Gruia-Catalin Roman, "Roadmap Query for Sensor Network Assisted Navigation in Dynamic Environments", 2006 International Conference on Distributed Computing in Sensor Systems (DCOSS'06). Gibbons, P. B., Abdelzaher, T., Aspnes, J., and Rao, R., (editors), Lecture Notes in Computer Science 4026, Springer, San Francisco, USA, pp. 17-36, June 2006.

### Best Paper Award

[4] **Nuzhet Atay**, Burchan Bayazit, "A Motion Planning Processor on Reconfigurable Hardware", 2006 IEEE International Conference on Robotics and Automation (ICRA'06), pages 125-132, May 15-19 2006.

[5] **Nuzhet Atay**, John W. Lockwood, Burchan Bayazit, "A Collision Detection Chip on Reconfigurable Hardware", 13<sup>th</sup> Pacific Conference on Computer Graphics and Applications 2005, short paper, Oct. 12-14, 2005.

[6] Gazihan Alankus, **Nuzhet Atay**, Chenyang Lu, O. Burchan Bayazit, "Spatiotemporal Query Strategies for Navigation in Dynamic Sensor Network Environments", 2005 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS'05), pages 3718 - 3725, August 2005.

## OTHER PUBLICATIONS AND POSTERS

[1] **Nuzhet Atay**, Burchan Bayazit, "Mobile Wireless Sensor Network Connectivity Repair with K-Redundancy", Technical Report WUCSE-2007-48, Dept. of Computer Science and Engineering, Washington University in St. Louis, September 2007.

[2] **Nuzhet Atay**, "Collision Detection System using an FPGA Implemented on the FPX Platform", Poster session in University Booth in Design and Automation Conference (DAC'05), June 2005.

[3] **Nuzhet Atay**, "Collision Detection System using an FPGA Implemented on the FPX Platform", Poster session in IEEE International Solid-State Circuits Conference (ISSCC'05), February 2005.

**TEACHING EXPERIENCE****Instructor**

Fall 2007-Spring 2008

**Washington University School of Engineering**

St. Louis, MO

- Designed and developed “CSE100B: Introduction to Computing Tools: MATLAB Skills”
- Prepared lesson plans for students from freshman to senior level
- Instructed 2-hour sessions twice a week

**Mentor**

Summer 2007

**Washington University School of Engineering**

St. Louis, MO

- Mentored high-school students who are part of Students and Teachers as Research Scientists (STARS) program
- Facilitated their participation in advanced research

**PROFESSIONAL EXPERIENCE****Software Engineer**

Dec 2003-Aug 2004

**Software Testing Department, Aselsan Inc.**

Ankara, Turkey

- Designed software development and testing procedures and protocols to ensure software quality and consistency

**Software Engineer**

May 2003-Dec 2003

**Software Development Department, Havelsan Inc.**

Ankara, Turkey

- Developed software for the communications system of an airplane

**Software Developer**

June 2002-May 2003

**Global Positioning Systems Department, Yon Corp.**

Ankara, Turkey

- Developed software for locating global coordinates on local maps

**ACTIVITIES****Doctoral Student Seminar Chair**

Fall 2007-present

**Department of Computer Science and Engineering, Washington University in St. Louis**

- Prepared weekly talk schedules for graduate students, their advisors and faculty reviewers
- Coordinated catering services and managed presentation sessions

**IEEE and ACM Member**

2003-present

**IEEE International Conference on Robotics and Automation (ICRA) Reviewer**

2007-present

**REFERENCES**

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| <p><b>Burchan Bayazit, Ph.D.</b><br/>Professor of Computer Science<br/>Washington University<br/>Campus Box 1045<br/>St. Louis, Missouri 63130<br/>314- 935-5876<br/>bayazit@cse.wustl.edu</p> | <p><b>Gruia-Catalin Roman, Ph.D.</b><br/>Harold and Adelaide G. Welge<br/>Professor of Computer Science<br/>Washington University<br/>Campus Box 1045<br/>St. Louis, Missouri 63130<br/>314- 935-6190<br/>roman@wustl.edu</p> | <p><b>Chenyang Lu, Ph.D.</b><br/>Professor of Computer Science<br/>Washington University<br/>Campus Box 1045<br/>St. Louis, Missouri 63130<br/>314- 935-4855<br/>lu@cse.wustl.edu</p> | <p><b>Jonathan S. Turner, Ph.D.</b><br/>Barbara J. and Jerome Cox, Jr.<br/>Professor of Computer Science<br/>and Department Chair<br/>Washington University<br/>Campus Box 1045<br/>St. Louis, Missouri 63130<br/>(314) 935-6132<br/>jon.turner@wustl.edu</p> |
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