tunatoksoz

"Eternal sunshine of the opensource mind"

Personal Statement

MIT Engineer. Master's student working at the Aerospace Controls Lab under the supervision of Jonathan P. How. Autonomous systems enthusiast and a software engineer at the same time. His graduate work is on planning under uncertainty applied to persistent search and tracking problems using Markov Decision Processes. Develops new technologies and simplifies complex problems. His computer scientist experience helps him implement technologies he develops. Open Source Software lover, and is a committer to several well-known projects. Believes in information sharing and actively participates in several mailing groups.

Education

2010–present	**SM, Aeronautics and Astronautics**, *Massachusetts Institute of Technology*, USA.
	Concentration: Autonomous Systems, Multi-vehicle Health Management
	Supervisor: Prof. Jonathan P. How
2005–2010	**BS, Computer Engineering.**, *Bogazici University*, Turkey, Graduated with first rank from school of engineering.

Research Interests

Multi-vehicle health management, planning under uncertainty, autonomous systems, parallel computation, robotics

Experience

Research

2009, 2010	**Research Assistant**, *MIT*, MA. Currently working on Multi-Vehicle Health Management and its applications for persistent-search and track tasks.
2007	**Visiting Research Assistant**, *Purdue University*, IN. Worked on parallelization of a resonant tunneling diodes simulator using MATLAB for Purdue University Clusters. Also worked on GUI implementation for the simulator.

Industry

2008	**Software Engineer**, *IBM*, Istanbul, Turkey. Developed a football player performance monitor for a private TV channel. Also developed a rack management application for internal use.

Publications

J. Redding, T. Toksoz, et. al., *Proceedings of the AIAA Guidance, Navigation, and Control Conference*, *Proceedings of the AIAA Guidance, Navigation, and Control Conference*, August 8-11, 2011.

T. Toksoz, J. Redding, et. al., *Automated Battery Swap and Recharge to Enable Persistent UAV Missions*, *Proceedings of the Infotech@Aerospace 2011*, March 29–31, 2011.

Service

Committer
: **NHibernate**, *Opensource O/RM tool for .net platform. It provides a framework for mapping an object-oriented domain model to a traditional relational database. Responsibilities include implementation of Language Integrated Query provider, general maintenance of the code and implementation of new features and performance improvements.* .

Committer
: **Castle Project**, *Opensource Application Framework for .net platform. Includes an inversion of control container, a web application framework and several other tools. Responsibilities include implementing new features in IoC container, maintaining and improving NHibernate Facility.*.

Contributor
: **Player/Stage/Gazebo**, *Opensource Robotics Platform*.

Awards and Honors

2010
: **Graduated with 1st rank from School of Engineering of Bogazici University**.

2007-2010
: **db4o Most Valuable Professional**, *by db4objects*.

2005
: **Ranked in the top 1000 among 1.6 million examinees in nationwide University Entrance Examinations**.

2002
: **Ranked in the top 100 among 900 thousand examinees in nationwide High School Entrance Examinations**.

Computer skills

Programming Languages
: **C#, C++, Python, C, Java**.

Tools/Frameworks
: **OpenCV, Eclipse, Visual Studio, NHibernate**.

Math Packages
: **Matlab**.

Version Controlling
: **SVN, Git, Mercurial**.

References

Turker Keskinpala, *Program Manager at Microsoft*, turkerkeskinpala@gmail.com.

Christopher Bennage, *Program Manager at Microsoft*, bennage@gmail.com.