

# Curriculum Vitae

## Hadas Kress-Gazit

### Home Address

4800 PINE STREET  
APARTMENT A301  
PHILADELPHIA, PA 19143  
USA

### Work Address

3330 WALNUT STREET  
GRASP LABORATORY, LEVINE HALL 402  
UNIVERSITY OF PENNSYLVANIA  
PHILADELPHIA, PA 19104

Web: <http://www.grasp.upenn.edu/~hadaskg/>  
Email: [hadaskg@grasp.upenn.edu](mailto:hadaskg@grasp.upenn.edu)

### RESEARCH INTERESTS

Robotics, Motion Planning, Task Planning, Model Checking, Verification, Hybrid Systems, Language for Robotics, Human Robot Interaction.

### EDUCATION

**University of Pennsylvania** (August 2008), Philadelphia, PA, USA  
*Ph.D. in Electrical Engineering*, Department of Electrical and Systems Engineering  
Advisor: Prof. George J. Pappas

**University of Pennsylvania** (May 2005), Philadelphia, PA, USA  
*Master of Science in Engineering*, Department of Electrical and Systems Engineering  
Advisor: Prof. George J. Pappas

**Technion** (Feb 2002), Haifa, Israel  
*B.Sc Cum Laude*, Department of Electrical Engineering

### PROFESSIONAL EXPERIENCE

**Post-Doctoral Researcher** (Aug. 2008 - present)  
GRASP Lab, University of Pennsylvania, Philadelphia, PA, USA.

**Research Assistant** (Sept. 2003 - present)  
GRASP Lab, University of Pennsylvania, Philadelphia, PA, USA. Developed methods to create robot controllers that are guaranteed to satisfy high level tasks under the ARO ACCLIMATE and MURI SUBTLE grants.

**Engineer** (Sep. 2001 - Aug. 2003)  
Missile division, RAFAEL, Israel. Designed navigation algorithms using MATLAB based tools and simulations. Wrote specifications for real-time software and integrated the navigation segment into a complete system.

**Engineer** (Oct. 1999 - Sep. 2001)  
Chip Design group of IBM's Haifa Design Center, Israel. Developed models for design validation. Integrated verification environments, wrote and ran tests using VHDL, Formal Verification, Perl and internal IBM tools.

## MILITARY SERVICE

**Communication Instructors Training Program, Israeli Defense Force (IDF)** (Oct. 1994 - Feb. 1995)

Graduated first in class

**Instructor at the Communication Corps of the IDF** (Mar. 1995 - Jul. 1996)

Awarded merit for excellence

## TEACHING EXPERIENCE

**Teaching Assistant** (Spring 2007)

University of Pennsylvania, Philadelphia, PA, USA

ESE 301: *Engineering Probability*

**Teaching Assistant** (Spring 2006)

University of Pennsylvania, Philadelphia, PA, USA

ESE 113: *Introduction to Electrical and Systems Engineering - Systems*

**Teaching Assistant** (Fall 2005)

University of Pennsylvania, Philadelphia, PA, USA

ESE 111/112: *Introduction to Electrical and Systems Engineering - Devices*

**Grader** (Fall 2001)

Technion, Haifa, Israel

*Introduction to Robotics*

**Instructor** (1996 - 1999)

Machon Shachar, Haifa, Israel

Teaching courses preparing for the psychometric exam necessary for applying to universities in Israel (similar to the GRE exam).

## AWARDS & MEMBERSHIPS

**Charles Hallac and Sarah Keil Wolf Award** - Best dissertation by a female Electrical and Systems Engineering Ph.D. Candidate.

**Finalist - Best Paper** (2007 IEEE/RSJ International Conference on Intelligent Robots and Systems )

**Finalist - Best Student Paper** (2007 International Conference on Robotics and Automation )

**Graduate Research Fellowship** (Sept. 2003 - present)

Dept. of Electrical and Systems Engineering

University of Pennsylvania, Philadelphia, PA, USA

**IEEE Student Member**

Member of the Robotics and Automation Society (RAS) and Women in Engineering

## PUBLICATIONS

### Journal Publications

H. Kress-Gazit, G. E. Fainekos and G. J. Pappas, Translating Structured English to Robot Controllers. Invited paper, Advanced Robotics Special Issue on Selected Papers from IROS 2007, Vol. 22, No. 12. (2008), pp. 1343-1359.

H. Kress-Gazit, G. E. Fainekos and G. J. Pappas, Finding Nemo: Sensor-Based Temporal Logic Motion Planning. IEEE Transactions on Robotics (Submitted), July 2007

H. Kress-Gazit, D. C. Conner, H. Choset, A. Rizzi and G. J. Pappas, Courteous cars: Decentralized multiagent traffic coordination. Special Issue of the IEEE Robotics and Automation Magazine on Multi-Agent Robotics, March 2008.

G. E. Fainekos, A. Girard, H. Kress-Gazit and G. J. Pappas, Temporal Logic Motion Planning for Dynamic Mobile Robots. Automatica (To appear), Elsevier, January 2007

### Conference Publications

H. Kress-Gazit, N. Ayanian, G. J. Pappas and V. Kumar, Recycling Controllers, IEEE Conference on Automation Science and Engineering, Washington DC, August 2008.

H. Kress-Gazit and G. J. Pappas, Automatically Synthesizing a Planning and Control Subsystem for the DARPA Urban Challenge, IEEE Conference on Automation Science and Engineering, Washington DC, August 2008.

D. C. Conner, H. Kress-Gazit, H. Choset, A. Rizzi and G. J. Pappas, Valet Parking Without a Valet. In the Proceedings of the 2007 IEEE/RSJ International Conference on Intelligent Robots and Systems, San Diego, October 2007. **Finalist, Best Paper Award**

H. Kress-Gazit, G. E. Fainekos and G. J. Pappas, From Structured English to Robot Motion. In the Proceedings of the 2007 IEEE/RSJ International Conference on Intelligent Robots and Systems, San Diego, October 2007

H. Kress-Gazit, G. E. Fainekos and G. J. Pappas, Wheres Waldo? Sensor-Based Temporal Logic Motion Planning. In the Proceedings of the 2007 International Conference on Robotics and Automation, Rome, Italy, April 2007. **Finalist, Best Student Paper Award**

G. E. Fainekos, H. Kress-Gazit and G. J. Pappas, Hybrid Controllers for Path Planning: A Temporal Logic Approach. In the Proceedings of the 44th IEEE Conference on Decision and Control, Seville, December 2005

G. E. Fainekos, H. Kress-Gazit and G. J. Pappas, Temporal Logic Motion Planning for Mobile Robots. In the Proceedings of the International Conference on Robotics and Automation, Barcelona, April 2005

### Technical Reports

G. E. Fainekos, A. Girard, H. Kress-Gazit and G. J. Pappas, Temporal Logic Motion Planning for Dynamic Mobile Robots. Technical Report MS-CIS-07-02, Department of CIS, University of Pennsylvania, January 2007

## **SERVICE**

Program committee - Model Checking and Artificial Intelligence workshop (MoChArt), 2008

Reviewer - IEEE Transactions on Robotics

Reviewer - IEEE Conference on Decision and Control, 2008

Reviewer - IEEE Conference on Automation Science and Engineering, 2008

Reviewer - IEEE International Conference on Robotics and Automation, 2008

Reviewer - IEEE/RSJ International Conference on Intelligent Robots and Systems, 2007

## **INVITED PRESENTATIONS**

CFR Talk, Robotics Institute, Carnegie Mellon University, USA, September 2007

CS Colloquium, Technion, Israel, November 2007

CS Colloquium, Hebrew University, Israel, November 2007

CS Colloquium, Ben Gurion University, Israel, November 2007

CS Colloquium, Bar Ilan University, Israel, November 2007