

Laura M. Hiatt

CONTACT INFORMATION

Computer Science Department
Carnegie Mellon University
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RESEARCH INTERESTS

Planning and scheduling, uncertainty in AI, multi-agent systems, autonomous robotic agents

EDUCATION

Carnegie Mellon University, Pittsburgh, Pennsylvania, USA

Ph.D. Graduate Student, Computer Science

- Thesis title: *Probabilistic Plan Management*
- Expected graduation date: November 2009
- Advisor: Professor Reid Simmons

M.S., Computer Science, May 2007

- Advisor: Professor Reid Simmons

Stanford University, Palo Alto, California, USA

B.S., Symbolic Systems, June 2004

- Concentration: Artificial Intelligence
- Symbolic Systems is an interdisciplinary major incorporating Computer Science, Psychology, Philosophy and Linguistics
- Graduated with Distinction
- GPA: 4.02/4.0

HONORS AND AWARDS

US National Science Foundation Graduate Research Fellow, 2005-2008
Phi Beta Kappa Honor Fraternity, inducted 2003
Stanford President's Award for Academic Excellence in the Freshman Year, 2001

PROFESSIONAL EXPERIENCE

Carnegie Mellon University, Pittsburgh, Pennsylvania, USA

Teaching Assistant

Fall 2005 and Spring 2007

Supervisors: Professor Reid Simmons and Professor William Scherlis

Assisted an undergraduate course in Fundamental Data Structures and Algorithms, and a graduate course in Planning, Execution and Learning. Responsibilities included lecturing, leading sections and holding office hours.

NASA Ames Research Center, Mountain View, California, USA

Intern, Intelligent Robotics Group

June 2005 – August 2005

Supervisor: Dr. Terry Fong

Involved with a project building a framework for peer-to-peer teamwork between humans and robots, focusing on the interaction aspect of the collaboration. Wrote a task manager which coordinated team activities, and assisted with developing an interaction manager and other robotic agent code.

Naval Research Laboratory, Washington, D.C., USA

Contractor, Intelligent Systems Division

July 2003 – September 2003

Supervisor: Alan Schultz

June 2004 – August 2004

Independently developed a cognitive model of spatial perspective-taking using jACT-R and ACT-R/S. Programmed cognitive model to make inferences about other's spatial beliefs of the world. Built models representing human states and beliefs to be integrated with the robot agent in order to improve robot-human interaction.

PROFESSIONAL
EXPERIENCE
(CONT'D)

Computational Semantics Laboratory, Center for the Study of Language and Information, Stanford University, Stanford, CA, USA

Intern

October 2001 – March 2003

Research Assistant

November 2003 – June 2004

Supervisors: Dr. Stanley Peters, Dr. Lawrence Cavedon and Dr. Oliver Lemon

Member of a project developing a multi-modal dialogue management architecture for an autonomous robot. Extended interface to allow for task-oriented dialogue with teams of robotic agents. Ran user experiments to evaluate dialogue system design. Also helped to integrate a cognitive architecture (Icarus) into the multi-modal dialogue system in order to increase reactivity and learning in system.

SERVICE

Speaking Skills Committee

Student Member, May 2007 - present

- Committee made up of invited graduate students and faculty that critique and evaluate talks given by graduate students
- Speaking before the committee is required for all graduate students

Computer Science Department Open House

Volunteer, September 2008

- Organized student panel
- Gave invited talk on “How to Survive as a Grad Student”

Dec/5, Graduate Student Organization

Volunteer, February 2005 - present

SELECTED
PUBLICATIONS

Laura M. Hiatt, Terry L. Zimmerman, Stephen F. Smith and Reid Simmons. Strengthening Schedules Through Uncertainty Analysis. In *Proceedings of the Twenty-First International Joint Conference on Artificial Intelligence (IJCAI)*, 2009.

Laura M. Hiatt, Terry L. Zimmerman, Stephen F. Smith and Reid Simmons. Probabilistic Plan Management. In *Proceedings of the Fourteenth AAI/SIGART Doctoral Consortium*, 2009.

Laura M. Hiatt, Terry L. Zimmerman, Stephen F. Smith and Reid Simmons. Reasoning about Executional Uncertainty to Strengthen Schedules. In *Proceedings of the Workshop on a Reality Check for Planning and Scheduling Under Uncertainty (held in conjunction with ICAPS '08)*, 2008.

Laura M. Hiatt and Reid Simmons. Probabilistic Plan Management. In *Proceedings of the 3rd Workshop on Planning and Plan Execution for Real-World Systems (held in conjunction with ICAPS '07)*, 2007.

Laura M. Hiatt and Reid Simmons. Pre-positioning Assets to Increase Execution Efficiency. In *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA '07)*, 2007.

Laura M. Hiatt and Reid Simmons. Coordinate Frames in Robotic Teleoperation. In *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS '06)*, 2006.

SELECTED
PUBLICATIONS
(CONT'D)

Brennan Sellner, Frederik W. Heger, Laura M. Hiatt, Reid Simmons and Sanjiv Singh. Coordinated Multi-Agent Teams and Sliding Autonomy for Large-Scale Assembly. In *Proceedings of the IEEE special issue on Multi-Agent Systems*, Vol. 94, No. 7, 2006.

Terrence Fong, Clayton Kunz, Laura M. Hiatt, Magda Bugajska. The Human-Robot Interaction Operating System. In *Proceedings of the 1st Annual Conference on Human-Robot Interaction*, 2006.

J. Gregory Trafton, Alan C. Schultz, Nicholas L. Cassimatis, Laura M. Hiatt, Dennis Perzanowski, Derek P. Brock, Magdalena D. Bugajska, and William Adams. *Cognition and Multi-Agent Interaction: From Cognitive Modeling to Social Stimulation*, chapter Communicating and Collaborating with Robotic Agents. Cambridge University Press, 2005.

Laura M. Hiatt and Lawrence Cavedon. Enabling Spoken Dialogue Interaction about Team Activities. In *Proceedings of the First International Workshop on Multi-Agent Robotic Systems (MARS '05)*, 2005.