James Dwight McLurkin IV

ADDRESS

Paul G. Allen Center for Computer Science & Engineering, CSE 446
185 Stevens Way
Box 352350
Seattle, WA 98195-2350
206-685-4131
jamesm@csail.mit.edu
http://people.csail.mit.edu/jamesm/
U.S. Citizen

EDUCATION

2008   Ph.D., Computer Science, Massachusetts Institute of Technology

2003   S.M., Computer Science, Massachusetts Institute of Technology

1999   M.S., Electrical Engineering, University of California, Berkeley

1995   S.B., Electrical Engineering, Minor in Mechanical Engineering, MIT

POSITIONS HELD

2008-Present   Research Associate, University of Washington CSE, with Prof. Dieter Fox

2001-2008   Research Assistant, MIT CSAIL, with Prof. Leslie Kaelbling

1999-2003   Technical Lead and Project Manager, iRobot

1998   Consultant, Walt Disney Imagineering

1998   Consultant, MicroDisplay Corporation

1995-1997   Research Scientist, MIT Artificial Intelligence Lab, with Prof. Rodney Brooks

1995   Consultant, Sensible Technologies

1994   Intern, General Motors Advanced Technology Group

REFEREED CONFERENCE PUBLICATIONS

[1]   James McLurkin. "Measuring the Accuracy of Distributed Algorithms on Multi-Robot Systems with Dynamic Network Topologies" Proceedings of the The 9th International Symposium on Distributed Autonomous Robotic Systems, November 2008.

[2]   M. Schwager, J. McLurkin, J. J. E. Slotine, D. Rus. "From Theory to Practice: Distributed Coverage Control Experiments with Groups of Robots" Proceedings of International Symposium on Experimental Robotics , July, 2008.

[3]   Jonathan Bachrach, James McLurkin, and Anthony Grue. "Protoswarm: a language for programming multi-robot systems using the amorphous medium abstraction." Proceedings of the 7th International Joint Conference on Autonomous Agents and Multiagent systems, 2008.

[4]   Mac Schwager, James McLurkin, and Daniela Rus. "Distributed Coverage Control with Sensory Feedback for Networked Robots." Proceedings of *Robotics: Science and Systems*, August 2006.

[5]   James McLurkin and Daniel Yamins. "Dynamic Task Assignment in Robot Swarms." Proceedings of *Robotics: Science and Systems*, June 8, 2005.

[6]   James McLurkin and Jennifer Smith. "Distributed Algorithms for Dispersion in Indoor Environments using a Swarm of Autonomous Mobile Robots." Proceedings of *Distributed Autonomous Robotic Systems*, June 23, 2004.

[7]   Anita M. Flynn, K.R. Udayakumar, David S. Barrett, James D. McLurkin, Dean L. Franck and Arthur N. Schectman. "Tomorrow's Surgery: Micromotors and Microrobots for Minimally Invasive Procedures," *Journal of Minimally Invasive Therapy and Allied Technologies*, 1998:7/4:343-352.

OTHER REFEREED PUBLICATIONS

[8]   James McLurkin, Jennifer Smith, James Frankel, David Sotkowitz, David Blau, Brian Schmidt. "Speaking Swarmish: Human-Robot Interface Design for Large Swarms of Autonomous Mobile Robots," Proceedings of *AAAI Spring Symposium*, March 28, 2006

THESES

[9]   "Analysis and Implementation of Distributed Algorithms for Multi-Robot Systems", Ph.D. Thesis Computer Science, Massachusetts Institute of Technology, 2008, Advisor: Leslie Kaelbling

[10]   "Stupid Robot Tricks: A Behavior-Based Distributed Algorithm Library for Programming Swarms of Robots", S.M. Thesis Computer Science, Massachusetts Institute of Technology, 2003, Advisor: Leslie Kaelbling

[11]   "Algorithms for Distributed Sensor Networks", M.S. in Electrical Engineering, University of California, Berkeley, 1999, Advisor: Kristofer Pister

[12]   "The Ants: A Community of Microrobots", S.B. in Electrical Engineering, Minor in Mechanical Engineering, MIT, 1995, Advisor: Rodney Brooks

TEACHING

2009 Winter	University of Washington: CSE481C: Multi-Robot Systems Capstone
2005 Spring	MIT 6.188J Robotics: Science and Systems 2. TA, Lab design
2005 Spring	MIT SEED Academy: Robotics, Instructor and lab design
2004 Fall	MIT 6.188J Robotics: Science and Systems 1. Robot design, Lab design
2004 Fall	MIT SEED Academy: Computer Science, Instructor and lab design
2004 Spring	MIT SEED Academy: Renewable Energy, Instructor and lab design
2003 Fall	MIT SEED Academy: Civil Engineering, Instructor and lab design
2003 Spring	MIT SEED Academy: Aeronautical Engineering, Instructor and lab design
2002 Fall	MIT SEED Academy: Civil Engineering, Instructor and lab design
2002 Spring	MIT SEED Academy: Mechanical Engineering, Instructor and lab design
2001 Summer	MIT Project Interphase, Physics, Instructor and lab design
1997 Summer	MIT Project Interphase, Physics, Instructor and lab design
1996 Summer	MIT Project Interphase, Physics, Instructor and lab design
1996 Spring	MIT Integrated Studies Program, Eng. Systems, Instructor and lab design
1995 Summer	MIT Project Interphase, Physics, Instructor and lab design

STUDENTS SUPERVISED

UNDERGRADUATES

2009 Winter	Ryan McElroy, UW Teaching Assistant

2007 Fall   Jeremy Smith, Tony Valderrama; MIT UROP

2007 Summer   Angelique Moscicki, Rian Hunter; MIT UROP

2007 Spring   Jeremy Smith; MIT UROP

2006 Fall   Jong-Moon Kim, Alex Sanchex, Kevin Luu; MIT UROP

2006 Summer   Kevin Yang, Yurida Robeson; MIT Summer Research Program,

2006 Spring   Kah Keng Tay, Brian Schmidt, David Blau; MIT UROP

2005 Fall   Anthony Quivers, Brian Schmidt, David Blau; MIT UROP

1996 Fall   Ahmed Nassr; MIT UROP

1995 Spring   Hope Evans, Rony Kubat; MIT UROP

INVITED TALKS

2008   Rutgers, "Measuring the Accuracy of Distributed Algorithms on Multi-Robot Systems"

2007   Georgia Tech, "Complexity Metrics for Distributed Algorithms on Multi-Robot Systems"

2006   Dagstuhl Seminar on Robot Navigation, "Distributed Algorithms for Multi-Robot Systems"

2004   University of Washington Robotics Seminar Series, "A Library of Distributed Algorithms for Multi-Robot Systems"

1995   U.C. Berkeley Robotics Seminar Series; Interval Research Inc.; Lego Advanced Design Center

GUEST LECTURES

2007   St. Paul's School Conroy Visiting Lecturer, "Swarm in a Nutshell"

        MIT 16.35: Real-Time Systems & Software, "Developing on the Metal"

2006   Harvard CS266: "Biologically-Inspired Distributed and Multi-agent Systems"

        Harvard Literature 147: Robots: Imagination, Fiction and Reality., "Robotics for Poets"

        MIT 16.35: Real-Time Systems & Software, "Developing on the Metal"

        Olin College Advanced Robotics: "Swarm in a Nutshell"

2005   MIT 16.35: Real-Time Systems & Software, "Developing on the Metal"

2004   Harvey Mudd College Bio/Eng 190B: Biomechanics, "Biologically-Inspired Robots"

PUBLIC LECTURES

2008   Bruce Museum, Norfolk Technical College, South Lake Public Library, El Centro College, Springfield Public Forum, Dallas County Community College

2007   South Carolina Department of Education Summit, University of Richmond, Newark Museum, Starbase Directors Workshop, Worcester Polytechnic Institute, Michigan Career Educators Conference, Rensselaer Polytechnic Institute, Indian River Community College

2006   Sandia National Labs, John Griffen Middle School, Johnson C. Smith University, Penn State Altoona, National Tech Prep Network, Presbyterian College, Starbase Robins Robotics Academy, Lemelson-MIT InvenTeams, IBM Technical Recognition Conference, Boys and Girls Club of America, Boston Museum of Science "The Science of Star Wars" Exhibit

2005   Lemelson-MIT InvenTeams, St. Mark's School of Texas, Emeryville Secondary School, Lincoln-Sudbury Primary School

2004   Lemelson-MIT InvenTeams, Boston Museum of Science, Children's Museum of Indianapolis, Starbase Robins Robotics Academy, Buffalo Museum of Science, Honda Research and Development Center

2003   Association of Science-Technology Centers Conference

1996   Dartmouth College, Lincoln-Sudbury Regional High School

1995   Smithsonian Museum of American History Lemelson Center, Center for Materials Science and Engineering Outreach Program

ACADEMIC AWARDS

2003   Lemelson-MIT student prize for Invention and Innovation

1995   Finalist in Masters of Engineering Technical Presentation Competition at MIT (Presented Bachelor's thesis)

PUBLIC MEDIA AWARDS

2008   Dominion Power, Strong Men & Women Excellence in Leadership Series

2004   Time Magazine, named one of top five robotictsts

Black Enterprise Magazine, named as one of America's top designers

2003   Black Enterprise Magazine, named to "Hot List" of Innovators

1996   Finalist in Discover Magazine Awards for Technical Excellence

MUSEUM EXHIBITS (CONTRIBUTOR)

2006   "Leonardo da Vinci: Man, Inventor, Genius", Museum of Science and Industry Chicago

2003   "Invention at Play", Smithsonian National Museum of American history (Traveling Exhibit)