

**Kamilah Joanna-Marie Taylor**

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**Research Interests**

Robotics, Sensing, Planning Algorithms.

**Personal Data**

**Gender:** Female

**Nationality:** Jamaican

**Education**

- University of Illinois at Urbana-Champaign** 2007-Present
  - Degree: Master of Science
  - Area: Computer Science
- The University of the West Indies Mona Campus; Jamaica** 2004-2007
  - Degree: Bachelor of Science (First Class Honours)
  - Double Major: Computer Science and Mathematics
- **Campion College; Jamaica** 2003-2004
  - Sixth Form Certificate
- North Springs High School; Atlanta, GA** 1999-2003
  - College Preparatory High School Diploma with Distinction, Math, Science, and Performing Arts Magnet

**Work/Research Experience**

- **Research Assistant** August 2007 - Present  
Motion Strategy Lab Urbana, Illinois
  - Introduced a sensor-based planning algorithm for a robot that is able to navigate itself to a goal in an unknown environment while being denied position coordinates, angular coordinates, time, and odometry.
  - Implemented the above algorithm using the LEGO Mindstorms NXT platform and infrared beacons.
- **Geometry Teacher** Summer 2008  
University of Illinois Upward Bound Summer Academy Champaign, Illinois
  - Taught geometry to high school students from low-income families or families in which neither parent holds a bachelor's degree.
- **Educational Software Designer/Consultant** Summer 2007  
EPA Technologies Kingston, Jamaica
  - Designed user interfaces and storyboards for the Caribbean Secondary Examination Curriculum for Mathematics. Converted and revised material written by master teachers into e-learning pedagogical format.

- Scientific Assistant** September 2006 - January 2007  
 • The University of the West Indies Physics Department Kingston, Jamaica  
 – Assisted in preparation of instructional material and was a teaching assistant for Modern Physics 1 (P23E), taught by Dr. Michael Ponnambalam.
- Intern** Summer 2006  
 • International Centre for Environmental and Nuclear Sciences Kingston, Jamaica  
 – Implemented a web based GIS visualization port.
- Robotics Teacher** January-July 2004  
 • Halls of Learning Kingston, Jamaica  
 – Taught high school students principles of robotics using LEGO Mindstorms Kits
- Tutor** 2001-present  
 • Private Tutor for high school level Math and Physics

### Awards Received

- The National Innovation in Science and Technology Award [of Jamaica] 2008
- The Saburo Muroga Fellowship 2007-08
- The Harold Chan Scholarship for Best Performance in Pure Mathematics 2005-06
- UWI Dean's List for the Faculty of Pure and Applied Sciences 2004-06
- University Lodge/Euclid King Prize (Top First Year Math Student) 2004-05
- Champion College Prefect 2004
- The AP Program Diploma 2003
- The AP Scholar with Distinction Award 2003
- The George Takis Excellence In Mathematics Award (Top Senior Math Student) 2003
- North Springs High School Top 10 % of the Graduating Class 2003
- Performing Arts Magnet Seal, Math and Sciences Magnet Seal 2003
- National Honor Society Seal 2003
- North Springs High School VIP Award for outstanding students 2000-03
- North Springs High School Super Honor Roll 2000-03
- North Springs H.S. Legion of Honor Award for exemplary citizenship 2000-03
- 3rd Place: Georgia Institute of Technology LEGO Robot Challenge 2002

## Community Outreach

- IEEE RAS Student Member 2008-Present
- Computer Science Student Leadership Council 2008-Present
- Women in Computer Science at University of Illinois 2007-Present
- Piano education with Angela Elliott 1995-96; 2004 to 2007
- Physics Outreach Programme (Physics Outta Road) 2006-07
- The University of the West Indies Electronics Club 2005-07  
(*Vice President 2005-06; President 2006-2007*)
- UWI Dance Society Feb 2005 to Dec 2005
- Key Club 2003-04
- National Honor Society 2002-03
- 21st Century Leaders 2001-03
- North Springs Math Team (*President 2002-03*) 2001-03
- National Beta Club 2000-03
- Piano education with Portia Hawkins 1998-2003

**Reviewer:** DCOSS '09 International Conference on Distributed Computing in Sensor Systems,  
IROS '09 IEEE/RSJ International Conference on Intelligent Robots and Systems, ICRA '10  
IEEE International Conference on Robotics and Automation

## Skills

**Computer Languages:** Java, L<sup>A</sup>T<sub>E</sub>X, C++, Haskell, Scheme

**Applications:** Mathematica, Inkscape, Adobe Photoshop

**Piano:** 15 years of piano; The Associated Board of the Royal Schools of Music Grade 5 Theory;  
American College of Musicians District Member Intermediate Class

**Languages:** Can read and understand some Spanish

**References** Available upon request.

## Publications

- Kamilah Taylor, Steven LaValle. I-Bug: An Intensity-Based Bug Algorithm.  
*To appear in IEEE International Conference on Robotics and Automtation, May 2009.*