

DMITRY PYRYESKIN

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Research Interests

My main research interest is Human-Computer Interaction (HCI), focusing on making the user experience more natural, seamless and integrated into the physical world.

Education

2012 MMath in Computer Science, University of Waterloo
Thesis Topic: Investigating interaction in the space above a multitouch surface
2008 BSc in Computer Science, Ryerson University (Cum Laude)

Projects

Sept 2011 – **Investigating interaction in the space above a multitouch surface**
Aug 2012 **University of Waterloo**, Waterloo, Ontario
Advised by Jesse Hoey and Mark Hancock

The purpose of this research was to study new ways of interacting with a computer in the space above the surface of a multitouch table. The research involved modifying the hardware of a custom-build multitouch table, developing computer vision algorithms for tracking a person's hand and fingers on and above the surface of the table, developing a custom user interface. It also included two user studies, in which participants were asked to perform various actions with graphical user interface elements, such as navigating menus and selecting buttons.

Sept 2007 – **Mobile Autonomous Robot Simulation (MARS) Framework**
May 2008 **Ryerson University**, Toronto, Ontario
Advised by Alexander Ferworn

The objective of this project is to develop a framework that enables fast, easy and flexible way to simulate a small autonomous mobile robot moving on a surface of a table, as well as its interactions with the environment and other objects on the table.

Publications

Pyryeskin, D. Investigating Selection above a Multitouch Surface. Master's thesis, *University of Waterloo*, October 2012.

Pyryeskin, D., Hancock, M., and Hoey, J. Comparing elicited gestures to designer-created gestures for selection above a multitouch surface. *Proceedings of Interactive Tabletops & Surfaces 2012*.

Pyryeskin, D., Hancock, M., and Hoey, J. Extending interactions into hoverspace using reflected light. *Proceedings of Interactive Tabletops & Surfaces 2011*.

Academic Awards

2010 University of Waterloo Graduate Research Studentship
2004–2006, 2008 Ryerson University In-Program Scholarship
2004–2006, 2008 Ryerson University Dean's Honour List
2004–Present Golden Key International Honour Society Member (membership offered to the top 15% of students)

Working Experience

June 2008 – **Software Developer**

Feb 2011 **IBM Toronto Lab**, Markham, Ontario

- Developed and managed an internal web-based application (J2EE, Struts and EJB running on WebSphere)
 - Assumed the responsibility for completing the development cycle
 - Managed the defect tracking and resolution process
 - Managed deployment process
 - Created and organised documentation for the project
- Researched and wrote articles for Globalization Implementation Guide (IBM's internal repository of globalization techniques for developers)
 - "How to globalize applications in Flash and Flex?"
 - "How to detect unmappable characters when converting character set of the text data"

May 2006 – **Software Developer (internship student)**

Sept 2007 **IBM Toronto Lab**, Markham, Ontario

- Developed an internal web-based application (J2EE, Struts and EJB running on WebSphere)
 - Front-end to Back-end development involvement
 - Performed the Unit and Function Testing; designed test scenarios for the User Acceptance Testing
 - Developed a flexible Java-based framework for the legacy functionality integration
 - Translated and integrated the legacy C and REXX code into the Java framework
- Maintained and enhanced Lotus Notes databases
- Trained and supervised the incoming student

May 2005 – **Web Application Developer**

Sept 2005 **Devlin eBusiness Architects Inc.**, Toronto, Ontario

- Developed several applications end-to-end: from the Presentation Layer to the Backend Logic
- Worked with Quality Assurance teams and customers to resolve problems

May 2004 – **Software Developer**

Oct 2004 **RE/MAX Commercial Focus Inc.**, Toronto, Ontario

- Designed and implemented a web-based application allowing users to quickly, easily and interactively design, print, edit, share and mail to customers online real estate marketing brochures using the Macromedia Flash software