

CURRICULUM VITAE

XIAO, Robert

PERSONAL:

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ACADEMIC CREDENTIALS:

Carnegie Mellon University, Pittsburgh, PA	Sept 2011 – Present
PhD in Human-Computer Interaction	
University of Waterloo, Waterloo, ON	Sept 2007 – Apr 2011
Bachelor of Mathematics Double Honours in Computer Science and Combinatorics & Optimization	
University of Saskatchewan, Saskatoon, SK	Sept 2006 – Apr 2007
Enrolled in Open Studies; attended two classes, Mathematics 110 and Computer Science 115	
Walter Murray Collegiate Institute, Saskatoon, SK	Sept 2003 – June 2007
High School Diploma	

HONOURS (MEDALS, FELLOWSHIPS, PRIZES, AWARDS):

Financial Support

NSERC Postgraduate Scholarship	2013-2015
\$63,000 award for three years, awarded to top Canadian graduates in their third year of a graduate program of study	
Qualcomm Innovation Fellowship	2012
\$100,000 award for one year for a team of two students	
NSERC Julie Payette Postgraduate Scholarship	2011
\$25,000 award for one year awarded to top Canadian students in their first year of a graduate program of study	
NSERC Undergraduate Student Research Award	2008, 2009, 2010
President's Scholarship of Distinction	2007
Awarded to students with a 95% entrance average or higher	
Rene Descartes Scholarship	2007-2011
Awarded to students with strong performance on the national Euclid math competition	

Selected Honours and Awards

Governor General's Silver Medal	2011
Awarded to the individual with the highest academic average over all graduating students	
Rising Stars of Research Honourable Mention	2010
Awarded to outstanding posters in the national Rising Stars of Research Poster Competition	
NSERC USRA Poster Competition First Prize	2009, 2010
Awarded to the top poster presented at the University of Saskatchewan USRA Poster Fair	
Putnam Mathematics Competition	
110 th place in North America (4 th in U of Waterloo)	2008

PUBLICATIONS

Conference Papers

Xiao, R., Harrison, C., Hudson, S.E. (2013). Lumitrack: High Speed, High Precision, Low-Cost Tracking with Projected m-Sequences. In *Proceedings of the ACM Symposium on User Interface Software and Technology, 2013* (UIST '13). ACM, New York, NY, USA. 3-12.

Xiao, R., Harrison, C., Hudson, S.E. (2013). WorldKit: Rapid and Easy Creation of Ad-hoc Interactive Applications on Everyday Surfaces. In *Proceedings of the ACM Special Interest Group on Computer-Human Interaction, 2013* (CHI '13). ACM, New York, NY, USA. 879-888.

Tang, J., Xiao, R., Hoff, A., Venolia, G., Therien, P., Roseway, A. HomeProxy: Exploring a Physical Proxy for Video Communication in the Home. In *Proceedings of the ACM Special*

Interest Group on Computer-Human Interaction, 2013 (CHI '13). ACM, New York, NY, USA. 1339-1342.

- Harrison, C., **Xiao, R.**, Hudson, S.E. (2012). Acoustic Barcodes: Passive, Durable and Inexpensive Notched Identification Tags. In *Proceedings of the 25th Annual ACM Symposium on User Interface Software and Technology (UIST '12)*. ACM, New York, NY, USA, 563-568.
- Xiao, R.**, Nacenta, M., Mandryk, R.L., Cockburn, A., Gutwin, C. (2011). Ubiquitous Cursor: A Comparison of Direct and Indirect Pointing Feedback in Multi-Display Environments. In *Proceedings of Graphics Interface 2011 (GI '11)*. Canadian Human-Computer Communications Society, Waterloo, Ontario, Canada, 135-142. Awarded the Michael A.J. Sweeney Award for Best Student Paper in HCI at GI '11.
- Bateman, S., Doucette, A., **Xiao, R.**, Gutwin, C., Mandryk, R.L., Cockburn, A. (2011). Effects of view, input device, and track width on video game driving. In *Proceedings of Graphics Interface 2011 (GI '11)*. Canadian Human-Computer Communications Society, Waterloo, Ontario, Canada, 207-214.
- Gutwin, C., Schneider, O., and **Xiao, R.** (2011). Chalk Sounds: Using Synthesized Audio to Improve Workspace Awareness in Distributed Groupware. In *Proceedings of the ACM 2011 conference on Computer supported cooperative work (CSCW '11)*. ACM, New York, NY, USA, 85-94. (USRA 2010 work, Bachelor's).

Journal Articles

- Bateman, S., Mandryk, R.L., Gutwin, C., **Xiao, R.** (2013). Analysis and Comparison of Target Assistance Techniques for Relative Ray-Cast Pointing. In *International Journal of Human-Computer Studies (IJHCS)*, 21. To appear. DOI=10.1016/j.ijhcs.2012.12.006.

Technical Reports

- Bateman, S., Mandryk, R.L., Gutwin, C., **Xiao, R.** (2009). Investigation of Targeting-Assistance Techniques for Distant Pointing with Relative Ray Casting. In *Technical Report 2-2009, University of Saskatchewan*. 8 pages. Published December 14, 2009.

Posters

- Xiao, R.**, Bateman, S., Mandryk, R., Gutwin, C. (2009). Enhancing the Effectiveness of Remote Pointing. Presented at the University of Saskatchewan USRA Poster Fair, August 2009.
- Xiao, R.**, Nacenta, M., Cockburn, A., Mandryk, R., Gutwin, C. (2010). Ubiquitous Cursor: Filling In the Space Between Displays. Presented at the University of Saskatchewan USRA Poster Fair, August 2010.
- Xiao, R.**, Harrison, C. (2012). Synthetic Sensors and Displays. Presented at the Qualcomm Innovation Winner's Day, September 2012.

POSITIONS AND APPOINTMENTS HELD

- Software Architect, Qeexo, Co. Pittsburgh, PA, USA. May-Aug 2013, summer internship with CMU spinoff. Work focused on engineering rich multitouch solutions for mobile devices.
- Research Intern, Microsoft Research, Redmond, WA, USA. May-Aug 2012, mentored by John Tang. Work focused on in-home physical proxies for video communication.
- Embedded Software Developer, Research in Motion, Waterloo, ON, Canada. Feb-Aug 2011.
- Summer Research Student, Interaction Lab, Department of Computer Science, University of Saskatchewan, Saskatoon, SK, Canada. May-Dec 2010.
- Research funded by NSERC under the Undergraduate Student Research Award program.
- Summer Research Student, Interaction Lab, Department of Computer Science, University of Saskatchewan, Saskatoon, SK, Canada. May-Sept 2009.
- Research funded by NSERC under the Undergraduate Student Research Award program.
- Summer Research Student, Imaging, Multimedia and Graphics Lab, Department of Computer Science, University of Saskatchewan, Saskatoon, SK, Canada. May-Aug 2008.
- Research funded by NSERC under the Undergraduate Student Research Award program.
- Tutoring and TA Positions, Faculty of Mathematics, University of Waterloo, Waterloo, ON, Canada.
- Tutoring in Residence, Sept 2008 – Dec 2008
- MATH 146 Marking (Advanced Linear Algebra), Jan 2009 – Apr 2009

Received outstanding evaluation from MATH 146 professor for TA work
Tutorial Centre Tutoring and MATH 227 Marking (Calculus 3 for Honours Physics), Sept
2009 – Dec 2009

Received outstanding evaluation from MATH 227 professor for TA work
Tutorial Centre Tutoring, Jan 2010 – Apr 2010
Tutoring in Residence, Sept 2010 – Dec 2010

Computer Science Tutoring (CS 116 – Introduction to Computer Science 2), Department of
Computer Science, University of Waterloo, Waterloo, ON, Canada, Jan 2009 – Apr 2009.

Database Report Writer, Centre for Continuing and Distance Education, University of
Saskatchewan, Saskatoon, Canada. May-Aug 2007. Minimum qualifications required 3rd year
Computer Science undergraduates; I took the job while in high school.

Additional Honors and Awards

First place, U of Saskatchewan Programming Contest	2007
Invited participant of the USA Mathematics Olympiad	2007
Pythagoras Contest Canadian Champion	2001
Canadian National Mathematics League Championship Competitions	
Second Place National in Grade Six	2001
First Place National in Grades Seven and Eight	2002, 2003
Canadian Mathematics Competition Pascal Contest	
National Champion (Grade Nine)	2004
Saskatchewan Math Counts Provincial Competition	
First Place Individual for Grade Nine and Overall	2004
Canadian Open Mathematics Challenge	
Two-time Saskatchewan Champion	2005, 2006
Canadian National Euclid Mathematics Contests	
Three-time Saskatchewan Champion	2005, 2006, 2007
E.C. Leslie Saskatchewan Debate Tournament	
Provincial Champion, Division IV Novice	2005
Provincial Champion, Division IV Open	2006
ISM Canada Award, Magna Cum Laude, Canada Wide Virtual Science Fair	
	2002, 2003, 2004
American Mathematics Competitions	
Fifty-Seventh Overall and Provincial Champion	2006

REFERENCES

Dr. Chris Harrison

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Carnegie Mellon University
5000 Forbes Ave
Pittsburgh, PA 15213-3891
Email: chris.harrison@cs.cmu.edu

Dr. John Tang

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Dr. Scott Hudson

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