

# Curriculum Vitae

## David A. Dearman

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### PERSONAL INFORMATION

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### RESEARCH INTERESTS AND APPROACH

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My research intersects the complementary fields of Human-Computer Interaction (HCI) and Ubiquitous Computing (UbiComp). I explore the problems that people encounter in everyday life which can benefit from the application of mobile computing technology and identify challenges users experience when interacting with their mobile devices. Informed by my observations, I design and develop methods, applications, services and interaction techniques that can benefit mobile users and then evaluate these solutions through a combination of *in situ* usage and structured human performance evaluations.

### EDUCATION

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<b>Department of Computer Science, University of Toronto</b> , Toronto, Canada <b>Doctor of Philosophy</b> – Advised by Dr. Khai N. Truong Thesis: <i>Using community authored content to identify place-specific activities</i>	09/2006 – 11/2011
<b>Faculty of Computer Science, Dalhousie University</b> , Halifax, Canada <b>Master of Computer Science</b> – Advised by Dr. Kori M. Inkpen Thesis: <i>Location awareness: exploring social coordination</i>	01/2004 – 02/2006
<b>Faculty of Computer Science, Dalhousie University</b> , Halifax, Canada <b>Bachelor of Computer Science</b>	09/1999 – 12/2003

### PROFESSIONAL EXPERIENCE

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<b>Senior Research Scientist, Nokia Research Center</b> , Palo Alto, USA Manager: Dr. Mirjana Spasojevic	09/2011 – Present
<b>Research Intern, Microsoft Research</b> , Redmond, USA Manager: Dr. Amy Karlson	06/2009 – 08/2009
<b>Research Intern, IBM Research</b> , Almaden, USA Manager: Dr. Jeffery S. Pierce	05/2007 – 09/2007

## PUBLICATIONS

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### Journal Articles (Peer reviewed)

- [J.5] Massimi, M., Truong, K.N., Dearman, D. and Hayes, G.R. 2010. Understanding recording technologies in everyday life. *IEEE Pervasive Computing* 9, 3 (2010), 64-71.
- [J.4] Dearman, D., Inkpen, K.M. and Truong, K.N. 2010. Mobile map interaction during a rendezvous: exploring the implications for automation. *Personal and Ubiquitous Computing* 14, 1 (2010), 1-13.
- [J.3] Inkpen, K.M., Dearman, D., Argue, R., Comeau, M., Fu, C., Kolli, S., Moses, J., Pilon, N. and Wallace, J. 2006. Left handed scrolling for pen-based devices. *International Journal of Human-Computer Interaction* 21, 1 (2006), 91-108.
- [J.2] Reilly, D., Dearman, D. and Inkpen, K.M. 2005. Evaluating early prototypes in context: trade-offs, challenges and successes. *IEEE Pervasive Computing* 4, 4 (2005), 42-50.
- [J.1] Dearman, D., Hawkey, K. and Inkpen, K.M. 2005. Rendezvousing with location-aware devices: enhancing social coordination. *Interacting with Computers* 17, 5 (2005), 542-566.

### Conference Papers & Notes (Peer reviewed & in the conference's main proceedings)

- [C.20] Dearman, D. and Truong, K.N. 2012. Exploring the implicit acquisition of second language vocabulary using a Live Wallpaper. In *Proceedings of CHI 2012: The ACM SIGCHI Conference on Human Factors in Computing Systems* (Austin, Texas, USA, May 5-10, 2012). ACM, New York, NY. *To appear*. [23% acceptance]
- [C.19] Dearman, D., Guy, T.R. and Truong, K.N. 2012. Determining the orientation of proximate mobile devices using their backside facing camera. In *Proceedings of CHI 2012: The ACM SIGCHI Conference on Human Factors in Computing Systems* (Austin, Texas, USA, May 5-10, 2012). ACM, New York, NY. *To appear*. [23% acceptance]
- [C.18] Sohn, T., Lee, L., Zhang, S., Dearman, D. and Truong, K.N. 2012. An examination of how households share and coordinate the completion of errands. In *Proceedings of CSCW 2012: The 2012 ACM Conference on Computer Supported Cooperative Work* (Seattle, Washington, USA, February 11-15, 2012). ACM, New York, NY. *To appear*.
- [C.17] Banovic, N., Li, F.C.Y., Dearman, D., Yatani, K. and Truong, K.N. 2011. Designing unimanual multi-finger pie menu interaction. In *Proceedings of ITS 2011: ACM International Conference on Interactive Tabletops and Surfaces* (Kobe, Japan, November 13-16, 2011). ACM, New York, NY, pp. 120-129. [33% acceptance]
- [C.16] Dearman, D., Sohn, T. and Truong, K.N. 2011. Opportunities exist: continuous discovery of places to perform activities. In *Proceedings of CHI 2011: The 29<sup>th</sup> International Conference on Human Factors in Computing Systems* (Vancouver, BC, Canada, May 7-13, 2011). ACM, New York, NY, pp. 2429-2438. [26% acceptance]
- [C.15] Li, F., Dearman, D. and Truong, K.N. 2010. Leveraging proprioception to make mobile phones more accessible to users with visual impairments. In *Proceedings of ASSETS 2010: The 12th International ACM SIGACCESS Conference on Computers and Accessibility*. (Orlando, FL, USA, October 25-27, 2010). ACM, New York, NY, pp. 187-194. [31% acceptance]

- [C.14] Scott, J., Dearman, D., Yatani, K. and Truong, K.N. 2010. Sensing foot gestures from the pocket. In *Proceedings of UIST 2010: The 23<sup>rd</sup> Annual ACM Symposium on User Interface Software and Technology* (New York, NY, USA, October 3-6, 2010). ACM, New York, NY, pp. 199-208. [18% acceptance]
- [C.13] Dearman, D. and Truong, K.N. 2010. Identifying the activities supported by locations using community-authored content. In *Proceedings of UbiComp 2010: The 12<sup>th</sup> International Conference on Ubiquitous Computing* (Copenhagen, Denmark, September 26 – 29, 2010). ACM, New York, NY, pp. 23-32. [19% acceptance]
- [C.12] Ho, J.T., Dearman, D. and Truong, K.N. 2010. Improving user's security choices on home wireless networks. In *Proceedings of SOUPS 2010: The 6<sup>th</sup> Symposium on Usable Privacy and Security* (Redmond, WA, USA, July 14-16, 2010) ACM, New York, NY, pp. 1-12. [25% acceptance]
- [C.11] Dearman, D., Karlson, A., Bederson, B. and Meyers, B. 2010. Multi-modal selection during text entry on mobile devices. In *Proceedings of GI 2010: The 36<sup>th</sup> Graphics International Conference* (Ottawa, ON, Canada, May 31-June 2, 2010). ACM International Conference Proceedings Series, Vol. 324. Canadian Information Processing Society, Toronto, ON, Canada, pp. 19-26. [33% acceptance]
- [C.10] Dearman, D. and Truong, K.N. 2010. Why users of Yahoo! Answers do not answer questions. In *Proceedings of CHI 2010: The 28<sup>th</sup> International Conference on Human Factors in Computing Systems* (Atlanta, GA, USA, April 10-15, 2010). ACM, New York, NY, pp. 329-332. [22% acceptance]
- [C.9] Dearman, D. and Truong, K.N. 2009. BlueTone: a framework for interacting with public displays using dual-tone multi-frequency through Bluetooth. In *Proceedings of Ubicomp 2009: The 11<sup>th</sup> International Conference on Ubiquitous Computing* (Orlando, FL, USA, September 30-October 03, 2009). ACM, New York, NY, pp. 97-100. [12% acceptance]
- [C.8] Li, F., Dearman, D. and Truong, K.N. 2009. Virtual shelves: interactions with orientation aware devices. In *Proceedings of UIST 2009: The 22<sup>nd</sup> Annual ACM Symposium on User Interface Software and Technology* (Victoria, BC, Canada, October 04-07, 2009). ACM, New York, NY, pp. 125-128. [18% acceptance]
- [C.7] Dearman, D., Kellar, M. and Truong, K.N. 2008. An examination of daily information needs and sharing opportunities. In *Proceedings of CSCW 2008: The 2008 ACM Conference on Computer Supported Cooperative Work* (San Diego, CA, USA, November 08-12, 2008). ACM, New York, NY, pp. 679-688. [23% acceptance]
- [C.6] Dearman, D. and Pierce, J.S. 2008. "It's on my other computer!": computing with multiple devices. In *Proceedings of CHI 2008: The 26<sup>th</sup> Annual SIGCHI Conference on Human Factors in Computing Systems* (Florence, Italy, April 05-10, 2008). ACM, New York, NY, pp. 1144-1153. [22% acceptance]
- [C.5] Dearman, D., Varshavsky, A., de Lara, E. and Truong, K.N. 2007. An exploration of location error estimation. In *Proceedings of Ubicomp 2007: The 9<sup>th</sup> International Conference on Ubiquitous Computing* (Innsbruck, Austria, September 16-19, 2007). Springer-Verlag, Berlin, Heidelberg, pp. 181-198. [19% acceptance]

- [C.4] Dearman, D., Inkpen, K.M. and Truong, K.N. 2007. Target selection on mobile devices using display segmentation. In *Proceedings of MobileHCI 2007: The 9<sup>th</sup> International Conference on Human Computer Interaction with Mobile Devices and Services* (Singapore, September 09-12, 2007). ACM, New York, NY, pp. 371-374. [22% acceptance]
- [C.3] Reilly, D., Dearman, D., Ha, V., Smith, I. and Inkpen, K.M. 2006. Need to know: examining information need in location discourse. In *Proceedings of PERVASIVE 2006: The 4<sup>th</sup> International Conference on Pervasive Computing* (Dublin, Ireland, May 07-10, 2006). Springer-Verlag, Berlin, Heidelberg, pp. 33-49. [13% acceptance]
- [C.2] MacKay, B., Dearman, D., Inkpen, K.M. and Watters, C. 2005. Walk 'n Scroll: a comparison of software-based navigation techniques for different levels of mobility. In *Proceedings of MobileHCI 2005: The 7<sup>th</sup> International Conference on Human-Computer Interaction with Mobile Devices and Services* (Salzburg, Austria, September 19-22, 2005). ACM, New York, NY, pp. 183-190. [25% acceptance]
- [C.1] Dearman, D., Cox, A. and Fisher, M. 2005. Adding control-flow to a visual data-flow representation. In *Proceedings of IWPC 2005: The 13<sup>th</sup> International Workshop on Program Comprehension* (St. Louis, MO, USA May 15-16, 2005). IEEE Computer Society, pp. 297-306. [40% acceptance]

**Conference Extended Abstracts** (Peer reviewed & in conference's adjunct proceedings)

- [c.2] Dearman, D., Hawkey, K. and Inkpen, K.M. 2005. Effect of location-awareness on rendezvous behaviour. In *CHI 2005 Extended Abstracts on Human Factors in Computing Systems* (Portland, OR, USA, April 02-07, 2005). ACM, New York, NY, pp. 1929-1932. [25% acceptance]
- [c.1] Kellar, M., Reilly, D., Hawkey, K., Rodgers, M., MacKay, B., Dearman, D., Ha, V., MacInnes, J.W., Nunes, M., Parker, J.K., Whalen, T. and Inkpen, K.M. 2005. It's a jungle out there: practical considerations for evaluation in the city. In *CHI 2005 Extended Abstracts on Human Factors in Computing Systems* (Portland, OR, USA, April 02-07, 2005). ACM, New York, NY, pp. 1533-1536. [25% acceptance]

**Conference and Workshop Presentations without Proceedings**

- [W.4] Dearman, D. 2006. That doesn't tell me what I want! Presented at the *Workshop of Mobile Social Software* at CHI 2006 (Montreal, QC, Canada, April 24-27).
- [W.3] Dearman, D., Hawkey, K. and Inkpen, K.M. 2005. Impact of location awareness on rendezvous behaviour and communication. Presented but not archived at *LoCA 2005: The 1<sup>st</sup> International Workshop on Location- and Context-Awareness* (Oberpfaffenhofen, Germany, May 12-13, 2005). [39% acceptance]
- [W.2] Dearman, D., and Hawkey, K. 2005. Exploring the behavioral effect of location awareness within the social context of rendezvousing. Presented at the *Workshop on Social Implications of Ubiquitous Computing* at CHI 2005 (Portland, OR, USA, April 02-07, 2005).
- [W.1] Dearman, D. Let's rendezvous: application of location-aware computing. Presented at the *Workshop on Applications of Location-Aware Computing* at Ubicomp 2004 (Nottingham, England, UK, September 07-11, 2004).

**Invited Talks**

- [T.1] Dearman, D. Ubiquitous support for contextualized and situated problems. *Google Tech Talk Series* (November 6, 2008).

## TEACHING EXPERIENCE

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### Graduate Teaching Assistant, University of Toronto

- CSC428/2514: Human-Computer Interaction 09/2009 – 12/2009
- CSC318: The Design of Interactive Computational Media 01/2010 – 04/2010  
09/2008 – 12/2008  
01/2008 – 04/2008  
09/2007 – 12/2007
- CSC148: Introduction to Computer Science 01/2007 – 04/2007
- CSC104: The How and Why of Computing 09/2006 – 12/2006

### Graduate Teaching Assistant, Dalhousie University

- CSCI1101: Computer Science II 05/2004 – 12/2004
- CSCI1100: Computer Science I 01/2004 – 04/2004

## PROFESSIONAL SERVICES

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### Program Committee Member

- CHI: ACM Conference on Human Factors in Computing Systems 2012
- PerCom: IEEE Conference on Pervasive Computing and Communication 2012

### Reviewer (Conferences)

- UIST: ACM Symposium on User Interface Software and Technology 2010
- Pervasive: International Conference of Pervasive Computing 2007, 2010, 2011
- CHI: ACM Conference on Human Factors in Computing Systems 2005-2012
- CSCW: ACM Conference on Computer Supported Collaborative Work 2006, 2008, 2011, 2012
- UbiComp: ACM Conference on Ubiquitous Computing 2007, 2009, 2010, 2011
- MobiSys: ACM Conference on Mobile Systems, Applications and Services 2008
- MobileHCI: ACM SIGCHI International Conference on Human-Computer Interaction with Mobile Devices and Services 2011
- PerCom: IEEE Conference on Pervasive Computing and Communication 2012
- GI: Graphics Interfaces 2008, 2011

### Reviewer (Journals)

- IEEE Pervasive Computing 2006
- Interacting with Computers: Interdisciplinary Journal of HCI 2005

### University Activities

- Dalhousie University, Computer Science Scholarship Committee 2005-2006

## SCHOLARSHIPS & FELLOWSHIPS

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- Doctoral Completion Award 2011
- Ontario Graduate Scholarship (OGS) 2010-2011
- NSERC Postgraduate Scholarship (PGS-D) 2006-2010

- Walter C. Sumner Memorial Fellowship 2006-2008
- Rosetti Scholarship 2005

## STUDENTS ADVISED

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### Graduate Students (University of Toronto)

- Richard (Tommy) Guy – Computer Science Ph.D. 2011
- Nikola Banovic – Computer Science Masters 2010-2011
- Frank Li – Computer Science Masters 2009-2011
- Justin Ho – Computer Science Masters 2008-2009

### Undergraduate Students (University of Toronto)

- Adora Tam – Computer Science 2011-Present
- Chris Lee-Shanok – Computer Science 2011-Present
- Wei-Han (Tony) Chen – Engineering Science 2011
- Lorikeet Lee – Computer Science 2010-2011
- Jeremy Scott – Engineering Science 2010

## REFERENCES

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- Dr. Khai N. Truong  
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