Daniel Vogel, curriculum vitae

dvogel@uwaterloo.ca / www.nonsequitoria.com
+1 (519) 888-4567 ext. 33561

Assistant Professor, University of Waterloo, *2013 -*
Human-Computer Interaction Lab
Cheriton School of Computer Science

degrees and fellowships

Banting Postdoctoral Fellow, University of Waterloo, *2011 - 2013*
Cheriton School of Computer Science

PhD Computer Science, University of Toronto, *2005 - 2010*
Human Computer Interaction, "Direct Pen Input and Hand Occlusion"

★ **BILL BUXTON DISSERTATION AWARD**

MSc Computer Science, University of Toronto, *2004 - 2005*
Human Computer Interaction, "Interactive Public Ambient Displays"

BFA Intermedia, Emily Carr University of Art and Design, *1993 - 1996*
specializing in 3-D computer animation, interactive media, installation art, and printmaking

BA Computer Science and Visual Arts, University of Western Ontario, *1989 - 1993*

★ **DEAN'S HONOUR LIST**

publications

2000+ citations, h-index 18 (Google Scholar)
750+ citations (ACM Digital Library)
2300+ citations, 21 highly influential publications, citation velocity 303 (Semantic Scholar)

peer-reviewed conference proceedings

Note about conference papers: in Human-Computer Interaction, as in many fields of experimental Computer Science, conference proceedings are the preferred publication venue. They are timelier and typically have a greater impact than journals. Top tier conferences are very selective with rigorous multi-stage review of full manuscripts creating very high quality proceedings. See Meyer et al. (2009) and Patterson et al. (1999) for more background regarding conference proceedings in experimental Computer Science.

Note about paper length: all conference papers are reviewed using the same process and criteria, regardless of page length. All papers in this section are considered full archived publications, not works-in-progress.

C38 Hemant Surale, Fabrice Matulic, Daniel Vogel (to appear 2017). Experimental Analysis of Mode Switching Techniques in Touch-based User Interfaces. ***Proc. of CHI'17, the 35th Conference on Human Factors in Computing Systems***. 10 p.

C37 Jun Gong, Lang Li, Daniel Vogel, Xing-Dong Yang (to appear 2017). Cito: An Actuated Smartwatch for Extended Interactions. ***Proc. of CHI'17, the 35th Conference on Human Factors in Computing Systems***. 10 p.

C36 Pei-Yu Chi, Mira Dontcheva, Wilmot Li, Daniel Vogel, Björn Hartmann (2016). Authoring Illustrations of Human Movements by Iterative Physical Demonstration. ***Proc. of UIST'16, the 29th ACM Symposium on User Interface Software and Technology.*** p. 809-820.

C35 **Mathieu Nancel**, Daniel Vogel, Bruno De Araujo, Ricardo Jota, Géry Casiez (2016). Next-Point Prediction Metrics for Perceived Spatial Errors. ***Proc. of UIST'16, the 29th ACM Symposium on User Interface Software and Technology.*** p. 271-285.

C34 Hassan Khan, Urs Hengartner, Daniel Vogel (2016). Targeted Mimicry Attacks on Touch Input Based Implicit Authentication Schemes. ***Proc. of MobiSys'16, the 14th ACM International Conference on Mobile Systems, Applications, and Services.*** p. 387-398.

C33 **William Saunders,** Daniel Vogel (2016). Tap-Kick-Click: Foot Interaction for a Standing Desk. ***Proc. of DIS'16, the ACM SIGCHI Conference on Designing Interactive Systems***. p. 323-333.

C32 **Jingjie Zheng,** Daniel Vogel (2016). Finger-Aware Shortcuts. ***Proc. of CHI'16, the 34th Conference on Human Factors in Computing Systems***. p. 4274-4285.

C31 **Teddy Seyed,** Xing-Dong Yang, Daniel Vogel (2016). Doppio: A Reconfigurable Dual-Face Smartwatch for Tangible Interaction. ***Proc. of CHI'16, the 34th Conference on Human Factors in Computing Systems***. p. 4675-4686.

C30 **Alix Goguey, Mathieu Nancel**, Géry Casiez, Daniel Vogel (2016). The Performance and Preference of Different Fingers and Chords for Pointing, Dragging, and Object Transformation. ***Proc. of CHI'16, the 34th Conference on Human Factors in Computing Systems***. p. 4250-4261.

C29 **Mingyu Liu**, **Mathieu Nancel**, Daniel Vogel (2015). Gunslinger: Subtle Arms-down Mid-air Interaction. ***Proc. of UIST'15, the 28th ACM Symposium on User Interface Software and Technology***. p. 63-71.

C28 **Yuexing Luo**, Daniel Vogel (2015). Pin-and-Cross: A Unimanual Multitouch Technique Combining Static Touches with Crossing Selection. ***Proc. of UIST'15, the 28th ACM Symposium on User Interface Software and Technology***. p. 323-324.

C27 Hassan Khan, Urs Hengartner, Daniel Vogel (2015). Usability and Security Perceptions of Implicit Authentication: Convenient, Secure, Sometimes Annoying. ***Proc. of SOUPS'15, the 11th Symposium on Usable Privacy and Security***. p. 225-239.

C26 **William Saunders**, Daniel Vogel (2015). The Performance of Indirect Foot Pointing using Discrete Taps and Kicks While Standing. ***Proc. of Graphics Interface 2015***. p. 265-272.

C25 **Faizan Haque, Mathieu Nancel**, Daniel Vogel (2015). Myopoint: Pointing and Clicking Using Forearm Mounted Electromyography and Inertial Motion Sensors. ***Proc. of CHI'15, the 33rd Conference on Human Factors in Computing Systems***. p. 3653-3656.

C24 Jaime Ruiz, Daniel Vogel (2015). Soft-Constraints to Reduce Legacy and Performance Bias to Elicit Whole-body Gestures with Low Arm Fatigue. ***Proc. of CHI'15, the 33rd Conference on Human Factors in Computing Systems***. p. 3347-3350.

C23 **Mathieu Nancel**, Daniel Vogel, Edward Lank (2015). Clutching Is Not (Necessarily) the Enemy. ***Proc. of CHI'15, the 33rd Conference on Human Factors in Computing Systems.*** p. 4199-4202.

C22 **Jeff Avery**, **Mark Choi**, Daniel Vogel, Edward Lank (2014). Pinch-to-Zoom-Plus: An enhanced pinch-to-zoom that reduces clutching and panning. ***Proc. of UIST'14, the 27th ACM Symposium on User Interface Software and Technology***. p. 595-604.

C21 Alix Goguey, Géry Casiez, Daniel Vogel, Thomas Pietrzak, Nicolas Roussel (2014). Adoiraccourcix: multi-touch command selection using finger identification. ***Proc. of. IHM'14, 26e conférence francophone sur l'Interaction Homme-Machine.*** (French Text) p 28-37.

★ **BEST PAPER AWARD**

C20 James Wallace, Daniel Vogel, Edward Lank (2014). Effect of Interior Bezel Width on Visual Search Performance. ***Proc. of. the International Symposium on Pervasive Displays.*** 6 p.

C19 James Wallace, Daniel Vogel, Edward Lank (2014). The Effect of Interior Bezel Presence and Width on Magnitude Judgement. ***Proc. of Graphics Interface 2014***. p.175-182.

C18 Yuexing Luo, Daniel Vogel (2014). Crossing-Based Selection with Direct Touch Input. ***Proc. of CHI'14, the 32nd Conference on Human Factors in Computing Systems***. p. 2627-2636.

★ **BEST PAPER HONOURABLE MENTION**

C17 Tiffany Inglis, Daniel Vogel, Craig Kaplan. (2013). Rasterizing and antialiasing line art in the pixel art style. ***Proc. of NPAR'13, the Symposium on Non-Photorealistic Animation and Rendering***, p. 25-32.

C16 Géry Casiez, Nicholas Roussel, Jonathan Aceituno, Daniel Vogel. (2012). Giving a Hand to the Eyes: Leveraging Input Accuracy for Subpixel Interaction. ***Proc. of UIST'12, the 25th ACM Symposium on User Interface Software and Technology***. p. 351-358.

C15 Shehroz Khan, Daniel Vogel. (2012). Evaluating Visual Aesthetics in Photographic Portraiture. ***Proc. of CAe '12, Symposium on Computational Aesthetics***. p. 55-62.

C14 Alec Azad, Jaime Ruiz, Daniel Vogel, Mark Hancock, Edward Lank. (2012). Territoriality and Behaviour On and Around Large Vertical Publicly-Shared Displays. ***Proc. of DIS'12,*** ACM conference on ***Designing Interactive Systems***. p. 468-477.

C13 Daniel Vogel, Géry Casiez. (2012). Hand Occlusion on a Multi-Touch Tabletop. ***Proc. of CHI'12, the 30th Conference on Human Factors in Computing Systems***. p. 2307-2316.

C12 Géry Casiez, Nicholas Roussel, Daniel Vogel. (2012). 1€ Filter: A Simple Speed-based Low-pass Filter for Noisy Input in Interactive Systems. ***Proc. of CHI'12, the 30th Conference on Human Factors in Computing Systems.*** p. 2527-2530.

C11 Daniel Vogel, Géry Casiez. (2011). Conté: Multimodal Input Inspired by an Artist's Crayon. ***Proc. of UIST'11, the 24th ACM Symposium on User Interface Software and Technology.*** p. 357-366.

C10 Radu-Daniel Vatavu, Daniel Vogel, Géry Casiez, Laurent Grisoni. (2011). Estimating the Perceived Difficulty of Pen Gestures. ***Proc. of INTERACT'11, the 13th IFIP TCI3 Conference on Human-Computer Interaction***. Springer. p. 89-106.

C9 Daniel Vogel, Ravin Balakrishnan. (2010). Occlusion-Aware Interfaces. ***Proc.of CHI'10, the 28th Conference on Human Factors in Computing Systems***. p. 263-272.

★ **BEST PAPER AWARD**

C8 Daniel Vogel, Matthew Cudmore, Géry Casiez, Ravin Balakrishnan, Liam Keliher. (2009). Hand Occlusion with Tablet-sized Direct Pen Input. ***Proc. of CHI'09, the 27th Conference on Human Factors in Computing Systems.*** p. 557-566.

C7 Géry Casiez, Daniel Vogel. (2008). The Effect of Spring Stiffness and Control Gain with an Elastic Rate Control Pointing Device. ***Proc. of CHI'08, the 27th Conference on Human Factors in Computing Systems***. p. 1709-1718.

★ **BEST PAPER HONOURABLE MENTION**

C6 Ian Vollick, Daniel Vogel, Maneesh Agrawala, Aaron Hertzmann. (2007). Specifying Label Layout Styles by Example. ***Proc. of UIST'07, the 20th ACM Symposium on User Interface Software and Technology.*** p. 221-230.

C5 Géry Casiez, Daniel Vogel, Qing Pan, Christophe Chaillou. (2007). RubberEdge: Reducing Clutching by Combining Position and Rate Control with Elastic Feedback. ***Proc. of UIST'07, the 20th ACM Symposium on User Interface Software and Technology.*** p. 129-138.

C4 Daniel Vogel**,** Patrick Baudisch. (2007). Shift: A Technique for Operating Pen-Based Interfaces Using Touch. ***Proc. of CHI'07, the 26th Conference on Human Factors in Computing Systems***. p. 657-666.

★ **BEST PAPER AWARD**

C3 Clifton Forlines, Daniel Vogel, Ravin Balakrishnan. (2006). HybridPointing: Fluid Switching Between Absolute and Relative Pointing with a Direct Input Device. ***Proc. of UIST'06, the 19th ACM Symposium on User Interface Software and Technology.*** p. 211-220.

C2 Daniel Vogel, Ravin Balakrishnan. (2005). Distant freehand pointing and clicking on very large high resolution displays. ***Proc. of UIST'05, the 18th ACM Symposium on User Interface Software and Technology***. p. 33-42.

C1 Daniel Vogel, Ravin Balakrishnan. (2004). Interactive public ambient displays: transitioning from implicit to explicit, public to personal, interaction with multiple users. ***Proc. of UIST'04, the 17th ACM Symposium on User Interface Software and Technology.*** p. 137-146.

★ **8TH MOST CITED ARTICLE IN THE 27 YEAR HISTORY OF UIST**

journal articles

J3 Alix Goguey, Daniel Vogel, Fanny Chevalier, Thomas Pietrzak, Nicolas Roussel, Géry Casiez (to appear 2017). Leveraging Finger Identification to Integrate Multi-touch Command Selection and Parameter Manipulation. ***International Journal of Human-Computer Studies.*** Elsevier, 47 pages.

J2 Daniel Vogel, Ravin Balakrishnan. (2010). Direct Pen Interaction with a Conventional Graphical User Interface. ***Human-Computer Interaction Journal***. Taylor & Francis, 25(4), p. 324-388.

J1 Géry Casiez, Daniel Vogel, Ravin Balakrishnan, Andy Cockburn. (2008). The Impact of Control-Display Gain on User Performance in Pointing Tasks. ***Human-Computer Interaction Journal***. Taylor & Francis. 23(3), p. 215-250.

★ **TOP TEN CITED ARTICLE FOR HCIJ FROM 2007 - 2010**

patents

P4 Géry Casiez, Daniel Vogel. (Submitted 2011). Multitouch Human Interface System and Device for Graphical Input, and Method for Processing Image in Such a System. 1000126888, Oct 14, 2011.

P3 Patrick Baudisch, Ken Hinckley, Raman Sarin, Edward Cutrell, Andy Wilson, Daniel Vogel. (Awarded 2010). Operating touch screen interfaces. US 7692629 B2, Filed Dec 7, 2006.

P2 Géry Casiez, Daniel Vogel. (Awarded 2009). Isotonic / elastic touch-sensitive input device. WO Patent 2,009,043,591, Filed Oct 5, 2007.

P1 Maneesh Agrawala, Adam Eversole, Daniel Vogel, Charles Jacobs, David Salesin. (Awarded 2006). Techniques for generating the layout of visual content. US 2006/0200759 A1, Filed Mar 5, 2005.

art exhibitions

A17 Siftor and My Name is Owen (2013). Owens Art Gallery, Sackville, NB. (solo exhibition).

★ **EXHIBITION CATALOG WITH INVITED ESSAY BY SUSAN EDLESTEIN**

A16 Mondo Media (2013). Struts Art Gallery, Sackville, NB. (group exhibition).

A15 Travelogue (1997). Artspeak Gallery, Vancouver. (group exhibition).

A14 Las Vegas (1997). Havana, Vancouver. (group exhibition).

A13 Suburbia (1997). The Helen Pitt Gallery, Vancouver. (group exhibition).

A12 3 Sections, 1 Body (1997). Community Arts Council of Vancouver. (group exhibition).

A11 Exact Change (1996). The Helen Pitt Gallery, Vancouver. (group exhibition).

A10 Anniversary of the Comic (1996). Wedgemount Gallery, Belgium. (juried group exhibition).

A9 Beyond Borders (1996). Viking Union, Bellingham, WA. (juried group exhibition).

A8 Straight White Male (1996). Emily Carr Institute, Vancouver. (group exhibition).

A7 Canadaustralia Exchange (1996). Sydney, Toronto; Vancouver. (juried group exhibition).

A6 Images and Objects (1995). Kamloops, British Columbia. (juried group exhibition).

A5 Blue Plate Special (1995). The Flat, Vancouver. (group exhibition).

A4 Hydromedia (1995). Flux Studios, Vancouver. (group exhibition).

A3 Speed Kills (1995). The Flat, Vancouver. (group exhibition).

A2 13th Annual Vancouver Exhibition (1995). Community Arts Council of Vancouver. (juried group exhibition).

A1 Toys 'R' Art (1994). The Flat, Vancouver. (group exhibition).

reports, demonstrations, editorials, other adjunct publications

O5 Dustin Freeman, Ricardo Jota, Daniel Vogel, Daniel Wigdor, Ravin Balakrishnan. (2015). A Dataset of Naturally Occurring, Whole-Body Background Activity to Reduce Gesture Conflicts. ***arXiv preprint arXiv:1509.06109.*** Technical Report. 10 p.

O4 Alix Goguey, Géry Casiez, Daniel Vogel, Fanny Chevalier, Thomas Pietrzak, Nicolas Roussel. (2014). A three-step interaction pattern for improving discoverability in finger identification techniques. ***Proc. of the adjunct publication of the 27th annual ACM symposium on User interface software and technology (UIST'14 Adjunct).*** Demonstration. p. 33-34.

O3 Daniel Vogel. (2013). Introduction to Mondo Monde New Media Festival Catalogue. ***Faucet Media Arts Centre***.

O2 Daniel Vogel. (2012). Book Review: Form+Code in Design, Art, and Architecture, by Casey Reas, Chandler McWilliams, and LUST. ***Journal of Mathematics and the Arts*** v6 i4, p. 221-223.

O1 Clifton Forlines, Daniel Vogel, Nicholas Kong, Ravin Balakrishnan. (2006). Absolute vs. relative direct pen input. ***Mitsubishi Electric Research Labs Tech Report, TR2006-066.*** Technical Report. 10 p.

research funding

Canada Foundation for Innovation (CFI) Innovation Fund, *2015*

$616,306, part of $1.9 million “Facility for Fully Interactive Physio-digital Spaces”

(principle investigator, with 4 co-investigators)

Ontario Research Fund (ORF) – Large Infrastructure Fund, *2015*

$616,306, part of $1.9 million “Facility for Fully Interactive Physio-digital Spaces”

(principle investigator, with 4 co-investigators)

NSERC Engage Grant, *Jan – Aug 2015*

$25,000, Tactual Labs, “Touch Dragging Latency Compensation with High Frequency Input”

(principle investigator)

MITACS Globallink Research Award – Inria, *Jun – Sep 2015*

$4,629 for Alix Goguey’s 4 month Phd internship at University of Waterloo for research on “Human Performance of Finger Identification for Multitouch Input”

(principle investigator with Géry Casiez)

Chronic Disease Prevention Initiative (CDPI) Seed Funding, *2015*

$10,000, “COMPuterized Sideline Screening (COMPaSS) of neuromotor performance to prevent Chronic Effects of Traumatic Brain Injury (TBI)”

(co-investigator with 7 others from Engineering and Kinesiology)

NSERC Engage Grant, *Oct 2013 – Mar 2014*

$24,544, Thalmic Labs, "Gestural Two-Dimensional Pointing and Target Selection using Inertial Arm Motion and Muscle Activity"

(principle investigator)

NSERC Discovery Grant, *May 2013 – May 2018*

$100,000 over 5 years, "Subtle Whole-body Interaction"

(principle investigator)

Banting Postdoctoral Fellowship, *Jul 2011 – May 2013*

$140,000 salary and $50,000 start-up funds over 24 months for "The Design and Evaluation of an Interactive Public Ambient Display in an Art Gallery Context: Understanding Aesthetic Interaction Experiences"

NSERC Postdoctoral Fellowship, *2011 (declined to accept Banting PDF)*

$80,000 over 24 months based on research potential

Travel Bursary, Mount Allison University, *2010*

$1,500 bursary for conference travel to Computation Aesthetics 2010

NRC Industrial Research Assistance Program (IRAP), *2008*

$4,300 grant for research consulting: "HCI Research and Novel Input Technologies"

awards and honours

Best Paper Award, ACM IHM, *2014*

for C21 Adoiraccourcix (with 4 other authors)

Best Paper Honourable Mention (top 5%), ACM CHI, *2014*

for C18 Crossing-Based Selection with Direct Touch Input (with Yuexing Luo)

GRAND Young Network Investigator Award, *2013*

$5,000

Bill Buxton Dissertation Award, Cdn Human Computer Communications Society, *2011*

best Canadian doctoral dissertation in Human-Computer Interaction (co-recipient)

Best Paper Award (top 1%), ACM CHI, *2010*

for C9 Occlusion-Aware Interfaces (with Ravin Balakrishnan)

Best Paper Honourable Mention (top 5%), ACM CHI, *2008*

for C7 The Effect of Spring Stiffness (with Géry Casiez)

Best Paper Award (top 1%), ACM CHI, *2007*

for C4 Shift (with Patrick Baudisch)

scholarships

NSERC Canada Graduate Scholarship (CGSD3), *2005 – 2008*

$105,000 over 36 months based on research potential and academic merit

NSERC Postgraduate Scholarship, Masters (PGSM), *2004*

$17,300 scholarship based on research potential and academic merit

Ontario Graduate Scholarship, *2004 (declined to accept NSERC PGSM)*, *2005 (declined to accept NSERC CGSD3)*

$15,000 scholarship based on academic merit

University of Toronto Wolfond Fellowship, *2003*

$7,900 scholarship based on academic merit

Senior Student Artist Grant, British Columbia Cultural Services, *1995*

$2,250 juried award for senior art students

symposia

Rank Prize Symposium, invited participant, Nov *2013, Grasmere, United Kingdom*

"Natural User Interfaces, Augmented Reality and Beyond: Challenges at the Intersection of HCI and Computer Vision",

Schloss Dagstuhl Seminar, invited participant, Nov *2013, St. Wendel, Germany*

"Proxemics in Human-Computer Interaction" (#13452)

invited talks

Keynote

"Immersive Analytics" Workshop, ACM ISS, Niagara Falls*, Nov 6, 2016*

Invited Speaker

Toronto User Experience (TUX) Member Presentation, "Expressive Interaction"*, Mar 28, 2017*

Carleton University, Ottawa, "Expressive Interaction", *Jan 20, 2017*

University of Copenhagen, Denmark, "Expressive Interaction", *Jan 29, 2016*

CS4U Day (high school outreach), University of Waterloo, "Computer Vision", *Dec 7, 2015*

Thalmic Labs, Kitchener, ON, "Human-Computer Interaction", *May 20, 2015*

Critical Media Lab, University of Waterloo, "Subtle Interaction and Art"*, Apr 15, 2015*

University of Saskatchewan, "Subtle Interaction and Art", *Aug, 2014*

Kitchener Public Library, Canada, "Human-Computer Interaction"*, Feb 2014*

Owens Art Gallery, Sackville, NB, "Siftor and My Name is Owen", *Mar 2013*

University of Waterloo, Canada, "Interacting without a Mouse"*, Oct 2010*

Baked Ham Speaker Series, Sackville, NB, "Digital Conte"*, Aug 2010*

Université Paris-Sud, France, "Hand Occlusion and Direct Input"*, Jun 2010*

EuraTechnologies, Lille, France, "Hand Occlusion and Direct Input"*, Jun 2010*

Atlantic Provinces Art Gallery Association, PEI, "Keynote: Beyond the Keyboard"*, May 2008*

Mount Allison University, NB, "Direct Input on Very Large and Very Small Displays"*, Mar 2007*

Université de Lille, France, "Large Display Interaction"*, Oct 2006*

Mount Allison University, NB, "Interactive Public Ambient Displays"*, Feb 2005*

Conference Presentations

DIS 2016, Brisbane; CHI 2016, San Jose; UIST 2015, Charlotte; GI 2015, Halifax; CHI 2010, Atlanta; CHI 2009, Boston; CHI 2007, San Jose; UIST 2011, Santa Barbara; UIST 2006, Montreux; UIST 2005, Seattle; UIST 2004, Santa Fe

teaching

course instructor

Advanced Human-Computer Interaction, University of Waterloo, ***Winter 2017, Spring 2015***
graduate special topics course on "Applied Computer Vision for HCI" (CS 889)

Introduction to Computer Programming, University of Waterloo, ***Fall 2014, Fall 2015, Fall 2016***
1st year non-Math majors, computer programming for interactive media (CS 105)

Introduction to Computer Science II, University of Waterloo, ***Winter 2016***
1st year course for non-CS majors using Scheme and Python (CS 116)

User Interfaces, University of Waterloo, ***Spring 2013***
3rd year computer science course in user interface programming (2 sections of CS 349)

Advanced Human-Computer Interaction, University of Waterloo, ***Spring 2012***
graduate special topics course on "Advanced Interaction Techniques" (CS 889)

Computer Graphics, Mount Allison University, ***Winter 2012***
3rd year computer science course in computer graphics (COMP 3831)

Advanced Computer Graphics, University of Waterloo, ***Fall 2011***
graduate special topics course on "Aesthetics and Computer Graphics" (CS 899)

Computer Graphics, Mount Allison University, ***Winter 2010***
3rd year computer science course in computer graphics (COMP 3831)

Design of Interactive Computational Media, University of Toronto, ***Fall 2006***
3rd year computer science course in human-computer interaction (CSC 318)

other

Programming for Artists Workshop, Struts Gallery and Artist Run Centre, ***Fall 2012***
weekend workshop for visual artists and technologists using the Processing language for algorithmic drawing using online data streams and computer vision

Algorithmic Drawing Workshop, Mount Allison University, ***Winter 2012***
2 day workshop for visual arts students, introduced graphic programming with the Processing language for algorithmic drawing and aesthetic manipulation of pen input

Self-directed Project Course, University of Toronto, ***Summer 2010***
supervised summer project course in requirements and design for online software
held via weekly video conference meetings with two students

Teaching Assistant, University of Toronto, ***Spring 2006, Spring 2004, Fall 2003***
3rd year computer science course in human-computer interaction (CSC318)

Computer Camp Instructor, University of British Columbia, ***1993***
taught HyperCard animation and programming to children ages 8 to 12

supervision

post-doctoral

Fabrice Matulic, Posdoctoral Fellow, *May 2016 –*
Pen and Touch Input, Large Display Interaction

past

Mathieu Nancel, Posdoctoral Fellow, *Mar 2014 – Aug 2015*
Clutching, Novel Input Techniques, Touch Prediction
co-supervision (with Ed Lank)

graduate

Blaine Lewis MMath, *Jan 2017 –*
"Spatial Augmented Reality"

Jeremy Hartmann MMath, *May 2016 –*
"Spatial Augmented Reality"

Lisa Elkin, MMath, *May 2016 –*
"Contact-sensing Input Device Manipulation and Expertise"

Hemant Surale, PhD, *Sep 2015 –*
"Mode Switching in Touch and Virtual Reality"

Terence Dickson, MMath, *Sep 2015 –*
"Absolute vs. Relative Input for Interactive Walls and Surfaces"

Gustavo Tondello, PhD, *Sep 2015 –*
"Games Research"
co-supervision (with Lennart Nacke)

Jingjie Zheng, MMath, *Sep 2014 -*
"Subtle Interaction Enabled by Keyboard Finger Identification"

Jeff Avery, PhD, *May 2012 -*
"Improving Pinch-to-Zoom"
co-supervision (with Ed Lank)

past

Qifan Li, MMath, *Sep 2014 – May 2016*
"Quantifying and Improving Selfie Photographs"

Alix Goguey, PhD Globallink Exchange, *Jun. 2015 – Sep. 2015*
"Subtle Interaction Enabled by Touchscreen Finger Identification"
co-supervision (with Géry Casiez, Inria Lille, France)

Mingyu Liu, MMath, *Sep 2013 – May 2015*
"Subtle Mid-air Input"

Yuexing Luo, MMath, *May 2013 – May 2015*
"Multi-touch Crossing"

William Saunders, MMath, *May 2013 – May 2015*
"Foot Input for Desktop Applications"

undergraduate

Drini Cami, Research Assistant, *part time Jan – May 2017*
"Unimanual pen and touch"

past

Kishor Prins Sudarshanakumar, Research Assistant, *part time Sep – Dec 2016*
"Pointing using gaze, head tracking, and non-verbal audio"

Minyoung Yoo, Research Assistant, *part time Sep – Dec 2016*
"Near Eye Display for Secure Input"

Tristan Hume, Research Assistant, *full time Jan – May 2016*
"Pointing using gaze, head tracking, and non-verbal audio"

Somayan Chakrabarti, Research Assistant, *full time Sep – Dec 2015*
"Conté Mode Switching"

Shao-Yan Tan, Research Assistant, *full time May– Aug 2015, part time Sep - Dec 2015*
"Kinematic Log for Two-finger Transformations"

Blaite Han, Research Assistant, *part time May– Aug 2015*
"Scripting and Visualizing Live Coding Demonstrations"

Qifan Li, Research Assistant, *part time Jan - Apr 2014*
"Quantifying Aesthetics of Photographic Portraiture"

Faizan Haque, Research Assistant, *full time Nov 2013 – Apr 2014*
"Gestural Pointing using Electromyography and Inertial Motion"

Ray Sun, Research Assistant, *part time Sept - Dec 2013*
"Errant Touches"

Yuexing Luo, MMath, *part time Jan - May 2013*
CS 499 "Multi-touch Crossing"

Greg Legere, Research Assistant, Mount Allison University, *full time May – Sep 2011*
"Human-in-the-loop Classification of Diatoms"
co-supervision (with Andrew Irwin)

Chris MacLeod, Research Assistant, Mount Allison University, *full time May – Sep 2009*
undergraduate research project: "Sensing Techniques for Large Public Display Input"
co-supervision (with Liam Keliher)

Matthew Cudmore, Research Assistant, Mount Allison University,
full time May – Sep 2008, May – Sep 2009
undergraduate research project: "Direct Pen Input and Occlusion"
co-supervision (with Liam Keliher)

mentoring

Teddy Seyed, University of Calgary, *2015 -*
PhD research: "interaction techniques for wearable and smartphone computing"
mentoring (with Xing-Dong Yang, Dartmouth College)

past

Hassan Khan, University of Waterloo, *2015 - 2016*
PhD research: “Implicit Authentication Usability and Mimicry”
mentoring (with Urs Hengartner, advisor)

Shu Ke, Singapore Management University, *2012*
masters thesis: “Errant Touches with Direct Input”
mentoring (with Richard Davis, advisor)

Shehroz Kahn, University of Waterloo, *2012*
research project: “Aesthetic Photographic Portraiture”

Alex Azad, University of Waterloo, *2011 - 2012*
masters thesis: “Behaviour On and Around Large Displays”
mentoring (with Ed Lank, advisor and Mark Hancock)

residences and internships

Visiting Researcher, INRIA / Université de Lille, France, *May – Jun 2010*
“Hybrid device input for multi-touch tables” with Géry Casiez

Summer Research Internships, Microsoft Research, Redmond
“Touch Screen Interaction” with Patrick Baudisch, *Summer 2006*
“Automated Document Layout” with Maneesh Agrawala and David Salesin, *Summer 2004*

Artist Residency, Banff Centre for the Arts, *Jul – Aug 1998*
studio residency in digital silkscreen printmaking

service

Cheriton School of Computer Science

School Advisory Committee on Appointments (SACA), *2016 –*
Responsible for recruiting new faculty members who will hold regular appointments

Undergraduate Academic Plans Committee (UAPC), *2013 – 2016*
Led effort to create new introductory programming course for arts students (2014)

UAPC Sub-committee Chair, *2015*
Created new HCI Option for CS Majors

UAPC Sub-committee Chair, *2015*
Created new Computational Art Option for CS Majors

University of Waterloo

Internal-External PhD Thesis Examiner
Deltcho Vatlchanov (supervised by Colin Ellard), “Physiological and Affective Responses to Immersion in Virtual Reality: Effects of Nature and Urban Settings”, Dept. of Psychology, University of Waterloo, Aug 2013

Research Ethics and Integrity Advisory Committee (REIAC), *2015 –*
Represented the Faculty of Mathematics on a university wide committee to advise the Office of Research Ethics (ORE) on policy development and guidelines.

Electronically Assisted Marking RFP Adviser, *2014*

Faculty of Mathematics committee to select and evaluate a new grading system

Expense System Selection Committee, *2012 – 2014*

University wide committee to select, evaluate, and integrate a new expense claims system

external

External PhD Thesis Examiner

Anders Markussen (supervised by Kasper Hornbæk), "Interacting On and Around Large Displays", Dept. of Computer Science, University of Copenhagen, Jan 2016

Andre Doucette (supervised by Carl Gutwin and Regan Mandryk), "Group Reaching over Digital Tabletops with Digital Arm Embodiments", Dept. of Computer Science, University of Saskatchewan, Aug 2014

Program Chairing

International Conference on Interactive Surfaces and Spaces (ISS), Panels Co-Chair*, 2016*

Symposium on User Interface Software and Technology (UIST), Posters Co-Chair*, 2014, 2015*

Program Committees

Conference on Human Factors in Computing Systems (CHI), *2013, 2016*

Symposium on User Interface Software and Technology (UIST)*, 2012, 2014, 2015*

Mobile HCI*, 2015*

Graphics Interface (GI), *2014*

Pervasive Displays (PerDis), *2014*

Interactive Tabletops and Surfaces (ITS), *2011, 2012*

Peer Reviewing

Conferences: ACM Conference on Human Factors in Computing Systems (CHI), ACM Symposium on User Interface Software and Technology (UIST), Graphics Interface (GI), UbiComp, SIGGRAPH, INTERACT, IEEE Symposium on 3D User Interfaces (3DUI), Designing Interactive Systems (DIS), Mobile HCI, Eurographics Data Visualization (EuroVis),

Journals: Transactions on Computer-Human Interaction Journal (ToCHI), Human-Computer Interaction Journal, International Journal of Human-Computer Interaction (IJHCI), International Journal of Human-Computer Studies (IJHCS), IEEE Computer Graphics and Applications (CGA), IEEE Transactions on Visualization and Computer Graphics (ToVCG)

Books: Morgan & Claypool Publishers

Grants: NSERC Discovery Grants, NSERC Collaborative Research and Development Grants (CRD), Mitacs Accelerate

other academic and cultural service

Steering Committee, CultureWorks, Mount Allison University, *2010 – 2012*

SSHRC Aid to Small Universities Research Program (ASUP)

Board of Directors, Struts Gallery and Artist Run Centre, *2008 - 2012*

served as president of the board from 2011 - 2012

employment and consulting

Assistant Professor, University of Waterloo, *2013 -*

Human-Computer Interaction Lab

Cheriton School of Computer Science

past

Banting Postdoctoral Fellow, University of Waterloo, *2011 – 2013*
Computer Graphics Lab and Human-Computer Interaction Lab
Cheriton School of Computer Science

Visiting Researcher, Inria Lille, France, *2010*
Mint Research Team

Adjunct Professor, Mount Allison University, *2008, 2009, 2010 - 2012*
Department of Mathematics and Computer Science

Freelance Consultant, *2002 – 2013*
Information Architecture, Graphic Design, Usability Recommendations
clients include Sapient, The Royal Bank Financial Group, and Bell Sympatico/MSN

Organic, Toronto, *May – Oct 2002*
Senior Information Architect (contract)
design, production, and sales; clients include Sony, Honda, and Bell Mobility

Cyberplex, Toronto, *Sep 1999 – May 2002*
Department Manager and Senior Information Architect
created new department, processes and techniques for information architecture, trained and led team; clients include Starbucks, Thomson Learning, and 3M

Bratch Innovation, Toronto, *Jan 1999 – Aug 1999*
Creative Director

Referentia*,* Honolulu, *1998 – 2000*
3-D Computer Animator (freelance)

Computer Visualizations, Honolulu, *Oct 1996 – Feb 1997, May 1994 – Aug 1994*
3-D Computer Animator

press

re: C33 Tap-Kick-Click paper

R&D Mag, "Tap-Kick-Click Your Way to Physically Active Computing", *Jun 2016*

Seeker, "Cyberslackers: Tap, Kick Your PC to Health", *Jun 2016*

re: C32 Finger-Aware Shortcuts paper

Gizmodo, "The Keys on This Keyboard Respond Differently to Every Finger", *May 2016*

Gizmag, "Keyboard shortcut tech keeps an eye on your fingers", *May 2016*

Digital Trends, "Could posture-based inputs soon replace keyboard shortcuts?", *May 2016*

re: C31 Doppio paper

Gizmodo, "A Multi-Screen Smartwatch Might Actually Be A Brilliant Idea", *May 2016*

Slashgear, "Doppio: a smartwatch prototype with a removable 2nd screen", *May 2016*

Android Community, "Researchers working on dual-screen smartwatch", *May 2016*

Science Daily, "Dual screen smartwatch unveiled", *May 2016*

Gizmag, "Experimental smartwatch has a movable second screen", *May 2016*

Times of India, "Now a smartwatch with two displays", *May 2016*

SlashGear, "Doppio: a smartwatch prototype with a removable 2nd screen", *May 2016*

re: A17 Siftor art exhibition

CBC Radio, Spark, interview on "Listen, Touch, Command", *Apr 2013*

CBC News, "Will gesture controls replace your mouse and keyboard?" *Apr 19, 2013*

Times and Transcript, "Dan Vogel's exhibit – the future of art galleries?", *Mar 2013*

HERE NB, "An Experiment in Digital Art", *Mar 2013*

Telegraph Journal, Feature article in Salon Arts, *Mar 2013*

CBC Radio, Information Morning, interview on "Byte Sized Art", *Mar 2013*

various

MIT Technology Review, invited commentary on "The Invisible iPhone", *May 2011*

CBC Radio, Information Morning, "Computer Art Show", *Nov 2010*

ERCIM News, "RubberEdge", *Apr 2008*

MIT Technology Review, "Precision Pointing with Fat Fingers", *May 2007*

ComputerWorld, "Microsoft Research tackles mobile touch-screen problems", *May 2007*

CBC Radio Ideas, "By Design: The Politics of Everyday Objects", *Jun 2006*

Mix Magazine, “Artist Run Portfolio: Fax Sux”, *Sep 1995*

MuchMusic Television, “Fax: Hydromedia”, *Apr 1995*; “Speed Kills”, *Apr 1995*

portfolio

research and artwork portfolio available

http://www.nonsequitoria.com