Robert John Teather, PhD

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OVERVIEW

EDUCATION BACKGROUND: Department of Electrical Engineering and Computer Science, York University (PhD 2013, MSc 2008); Department of Computer Science, Brock University (BSc, 2003)

EMPLOYMENT: Assistant Professor (Carleton, 2016), Adjunct Professor (McMaster, 2016-present)

AWARDS: Nominated by former grad students for FGPA Faculty Graduate Mentoring Award (2019), ACM Symposium on Spatial User Interaction (SUI) Best Demo Award, 2017

MAJOR RESEARCH FUNDING: Total funding (internal and external combined) amount of **$350,000** (my portion, of approx. $550,000 total). Co-PI on Carleton FPA Postdoctoral Fellowship Award (2020-2022), NSERC Engage with ToonRush Inc. (2020-2021), NSERC Engage with SimWave Consulting (2017-2018), Co-PI on CFI John Evan's Leaders Fund and ORF Small Infrastructure Fund (2017-2022), NSERC Discovery Grant (2016-2022).

PUBLICATION RECORD (SINCE 2016): A total of **29 publications**: **6 journal articles** in prestigious journals including IEEE Transactions on Visualization and Computer Graphics, Virtual Reality, and Entertainment Computing; **9 conference papers** in conferences with a competitive peer-review process (where such conference publications are the expected norm in my field) and **14 peer-reviewed extended abstracts** or full papers accepted based on abstract reviews in various conferences including IEEE 3DUI, ACM SUI, Graphics Interface, and ACM CHI. Co-applicant on one patent. Several invited talks, e.g., at Hamburg, York, and Brock.

CITATION RECORD: Approximately 1050 lifetime citations and **H-Index of 19** according to Google Scholar (Aug. 29, 2020); 672 of these citations are since 2016.

TEACHING RECORD: Four distinct undergraduate courses, and **1 graduate course**. Developed one completely new undergrad course (IMD 4008), completely new graduate course (ITEC 5208), new content for another (IMD 4005), and new assessment schemes for a third (IMD 3004). **Overall average teaching score of 4.72** excluding lowest scores, or 4.51 including two lowest scores for 2017 and 2019 to provide additional data.

UNDERGRADUATE SUPERVISION (CARLETON): Advisor for **9 IMD Senior Project teams** (43 students total), **2 directed studies**, **4 I-CUREUS RAs**, **1 NSERC USRA**, and **3 MITACS Globalink Interns**, one of whom returned for graduate studies under my supervision.

GRADUATE SUPERVISION (CARLETON): Completed **10 master theses** (3 co-supervised). **Four co-supervised PhD students** in progress (one ABD). One co-supervised post-doctoral fellow (2020-2022). Directed study for 6 graduate students, plus one Emerging Leaders in the Americas (ELAP) international intern.

SCHOOL/UNIVERSITY SERVICE: IMD Program Coordinator (2018-present). Served in **6 School committees**, participated in **5 distinct recruitment activities** (e.g., Portfolio Days, SEDs, Portfolio Review). Member of the **Carleton University Research Ethics Board** (2017, 2019-present). Participated in **18 thesis/comprehensive exams** (12 as examiner, 6 as chair).

PROFESSIONAL SERVICE: Program co-chair (2017-2019) for IEEE 3DUI/VR Conference Papers, program co-chair for ACM SUI (2016, 2017), and Graphics Interface (2019). General Chair for ACM VRST 2020. Served on Program Committee for leading conferences, e.g., CHI, IEEE VR, ACM SUI.

INTERRUPTIONS: Parental Leave (5 months, January 2018 - June 2018)

EDUCATION

PhD, Computer Science 2008 - 2013
York University**,** Toronto, Ontario
Dissertation: Evaluating 3D Pointing Techniques
Supervisor: Dr. Wolfgang Stuerzlinger

MSc, Computer Science 2005 - 2008
York University**,** Toronto, Ontario
Dissertation: Comparing 2D and 3D Direct Manipulation Interfaces
Supervisor: Dr. Wolfgang Stuerzlinger

Ontario College Diploma, Computer Programming 2004 - 2005
Niagara College**,** Welland, Ontario

BSc (Hons), Computer Science 1999 - 2003
Brock University**,** St. Catharines, Ontario
Graduated with first-class standing, concentration in Software Engineering

PROFESSIONAL POSITIONS

Assistant Professor, School of Information Technology 2016 - present
Carleton University, Ottawa, Ontario

Adjunct Professor, Department of Computing and Software 2016 - present
McMaster University, Hamilton, Ontario

Adjunct Professor, Department of Computer Science 2014 - 2017
Brock University, St. Catharines, Ontario

Postdoctoral Fellow, Department of Computing and Software 2013 - 2015
McMaster University, Hamilton, Ontario
Advisor: Dr. Jacques Carette

Research Assistant, Augmented Reality Lab 2007 - 2008
Brock University, St. Catharines, Ontario
Supervisor: Dr. John Bonnett

Research Assistant/Programmer, Centre for Advanced Visualization 2003 – 2007
Niagara College, Niagara-on-the-Lake, Ontario
Supervisor: Dr. Mike Duncan

RECOGNITIONS – AWARDS, SCHOLARSHIPS, AND OTHER HONOURS

Faculty Graduate Mentoring Award, nominated by former graduate students 2019
Faculty of Graduate and Postdoctoral Affairs, Carleton University

Excellence in Graduate Teaching Award, nominated by former graduate students 2019
Graduate Student Association, Carleton University

Best Demo Award, awarded 2017
ACM Symposium on Spatial User Interaction, for demo of Haptobend

Governor General's Gold Medal, nominated 2014
York University

Bill Buxton Dissertation Award, nominated 2014
Canadian Human-Computer Communication Society

Susan Mann Dissertation Scholarship, awarded $21,000 2012-2013
York University, Department of Electrical Engineering and Computer Science

OGS Scholarship, awarded $15,000 2011-2012
Ontario Graduate Scholarship Program

Clarke Thomson Award for Excellence in Sessional Teaching, nominated 2010, 2011
Brock University, Department of Computer Science

PGS D3 Scholarship, awarded $21,000/year 2008-2011
Natural Sciences and Engineering Research Council of Canada (NSERC)

Joseph Liu Thesis Prize, awarded 2008
York University, Department of Computer Science and Engineering

Master's Thesis Prize, nominated 2008
York University, Faculty of Graduate Studies

Applied Research Fellowship, awarded $10,000 2006
Niagara College of Applied Arts and Technology

Dean's Honour List, awarded 2002, 2003
Brock University, Faculty of Science

Returning Student Scholarships, awarded 2002, 2003
Brock University, Faculty of Science

TEACHING

I have taught over 20 unique courses across approximately 30 offerings at seven institutions. These are listed by institution, level (undergrad vs. grad), then course title, course code (and credit weight), number of students, and year. Most recent offerings are listed first.

Carleton University – Undergraduate Courses

- Mobile User Interfaces Design & Development – IMD 4008 (0.5): 30 students Fall 2020
- Mobile User Interfaces Design & Development – IMD 4008 (0.5): 48 students Fall 2019
- Human Computer Interaction & Design – IMD 3004 (0.5): 45 students Fall 2019
- Mobile User Interfaces Design & Development – IMD 4008 (0.5): 45 students Fall 2018
- Human Computer Interaction & Design – IMD 3004 (0.5): 40 students Fall 2018
- Human Computer Interaction & Design – IMD 3004 (0.5): 38 students Fall 2017
- Design Studio IV – IMD 4902 (1.0): 42 students Fall 2016
- Advanced Topics in Digital Media – IMD 4005 (0.5): 30 students Winter 2016

Carleton University – Graduate Courses

- Virtual and Augmented Reality Technology – ITEC 5208 (0.5): TBD — Winter 2021
- Selected Topics in Digital Media (VR/AR) – ITEC 5920B (0.5): 12 students — Winter 2020
- Selected Topics in Digital Media (VR/AR) – ITEC 5920B (0.5): 5 students — Winter 2019
- Entertainment Technologies – ITEC 5200 (0.5): 6 students — Winter 2017

York University – Undergraduate Courses

- Introduction to Virtual Reality – EECS 4471 (0.5): 10 students — Winter 2015
- User Interfaces – CSE 3461 (0.5): 40 students — Winter 2007

Brock University – Undergraduate Courses

- Human-Computer Interaction – COSC 3P94 (0.5): 30 students — Winter 2015
- Introduction to Media Computation – APCO 1P00 (0.5): 30 students — Spring 2013
- Fluency with Technology – APCO 1P01 (0.5): 50 students — Spring 2013
- Operating Systems – COSC 2P13 (0.5): 12 students — Spring 2012
- Procedural Programming – COSC 2P91 (0.5): 35 students — Winter 2012
- Operating Systems – COSC 2P13 (0.5): 15 students — Spring 2011
- Operating Systems – COSC 2P13 (0.5): 35 students — Winter 2011
- Operating Systems – COSC 2P13 (0.5): 12 students — Spring 2010
- Operating Systems – COSC 2P13 (0.5): 25 students — Winter 2010
- Applied Programming – APCO 1P93 (0.5): 45 students — Fall 2010
- Operating Systems – COSC 2P13 (0.5): 5 students — Spring 2009
- Procedural Programming – COSC 2P91 (0.5): 25 students — Winter 2008
- Operating Systems – COSC 2P13 (0.5): 20 students — Spring 2007
- Procedural Programming – COSC 2P91 (0.5): 30 students — Winter 2007
- Applied Programming – APCO 1P93 (0.5): 25 students — Fall 2006

McMaster University – Undergraduate Courses

- Interactive Digital Culture for Software Engineers – ENG 4GA3 (0.5): 20 students — Fall 2014
- Human-Computer Interaction – CS 4HC3 (0.5): 100 students — Fall 2014
- Computer Graphics – CS 3GC3 (0.5): 100 students — Fall 2014
- Human-Computer Interaction – CS 4HC3 (0.5): 140 students — Fall 2013
- Computer Graphics – CS 3GC3 (0.5): 70 students — Fall 2012
- Computer Graphics – CS 3GC3 (0.5): 55 students — Fall 2012
- Computer Graphics – CS 3GC3 (0.5): 65 students — Fall 2011
- Computer Graphics – CS 3GC3 (0.5): 75 students — Fall 2010

Other Undergraduate Courses (Various Institutions)

- Digital Computation and Programming (Ryerson U) – CPS 125 (0.5): 100 students — Winter 2013
- Computer Graphics I (Humber College) – GAME 540 (0.5): 35 students — Fall 2010
- Computer Graphics I (Humber College) – GAME 540 (0.5): 30 students — Fall 2009
- Enterprise Computing I (Niagara College) – CTEC 1430 (0.5): 10 students — Winter 2008
- C Programming (Niagara College) – CTEC 1435 (0.5): 2 sections of 15 students — Winter 2008

Guest Lectures in Undergraduate Courses

- Human-Computer Interaction (Brock U) – COSC 3P94 — Winter 2016
- Modeling for Virtual Reality (McMaster U) – CS 3GB3 — Winter 2014
- Human-Computer Interaction (Brock U) – COSC 3P94 — Winter 2013
- Virtual Reality (York U) – CSE 4471 — Winter 2012

SUPERVISION OF HQP

Overview

	Current		Over the past 5 years		Total
	Supervised	Co-Supervised	Supervised	Co-Supervised	
Postdoctoral Fellow	0	1	0	0	1
Doctoral	0	4	0	0	4
Master's	4	1	7	3	15
Undergrad	7	0	42	0	49

**Note on doctoral student co-supervision*: Pre-tenure faculty at Carleton cannot sole-supervise PhD students. Co-supervisors are listed in brackets after the student names below.

Current Doctoral Students and Postdoctoral Fellows

Name	Years	Thesis/Topic
Sojung Bahng (V. McArthur) *Postdoctoral Fellow*	2020-now	VR-based non-fiction storytelling in museums
Sepanta Montazeri (A. Girouard) *PhD Digital Media*	2019-now	Magnetic-based haptic displays for VR
Assem Kroma (A. Girouard) *PhD Digital Media*	2019-now	Directing viewer attention in interactive VR film
Heather Qian (C. Joslin) *PhD Digital Media*	2019-now	Eye-based interaction in VR
Anthony Scavarelli (A. Arya) *PhD Candidate Digital Media (ABD)*	2016-now	A framework for VR/AR social learning spaces

Current Masters Students

Name	Years	Thesis/Topic
Naz Al Kassm *MCS (HCI*)	2019-now	Volumetric selection of cloud data in VR
Elaheh Samimi *MIT (Digital Media)*	2019-now	Multi-touch marking menus for progressive refinement selection in VR
Stanislav Kyian *MIT (Digital Media)*	2019-now	Mobile devices as interaction surfaces in VR
Siju Philip *MIT (Digital Media)*	2019-now	Tilt and flick interaction in mobile UIs

Graduated Masters Students

Name	Years	Thesis Title	Current Position
Alexandra Close (S. Field) *MDes*	2019-2020	Visual Thinking in Virtual Environments: Evaluating Multidisciplinary Interaction through Drawing Ideation in Real-Time Remote Co-Design	TBD
Amir Didehkhorshid *MIT (Digital Media)*	2019-2020	Performance Evaluation of Warped Virtual Surfaces in Virtual Reality	TBD
Eduardo Soto *MIT (Digital Media)*	2017-2020	Text Entry in Virtual Reality: Implementation of FLIK method and Text Entry Test-Bed	Programmer Canada Border Services
Erin Martel (K. Muldner) *MASc (HCI)*	2019-2020	Controlling VR Games: Control Schemes and the Player Experience	Lead Game Designer Vinci Education
Justin Chin (L. Frankel) *MDes*	2018-2019	Identifying interactions for VR: A study of collaboration and engagement in different media	Freelance Designer

Jordan Pollock *MASc (HCI)*	2017-2019	CountMarks: Multi-finger marking menus for mobile interaction with head-mounted displays ** 2019 3-Minute Thesis Finalist*	UX Researcher, Shopify
John McClelland (A. Girouard) *MIT (Digital Media)*	2017-2018	Haptic feedback in virtual reality with deformation and shape-change ** Nominated for best thesis award*	Interaction Designer, You.i TV
Siqi Luo *MCS (HCI)*	2016-2018	Camera-based selection with low-cost mobile VR head-mounted displays	Software Developer, Bell Canada
Adrian Ramcharitar *MCS (HCI)*	2016-2018	2D selection in virtual reality with head mounted displays	UX Software Developer, CaseWare RCM
Yasin Farmani *MCS (HCI)*	2016-2018	Discrete viewpoint control to reduce cybersickness in virtual environments	UI Developer Cisco Systems
Heather Qian *MCS (HCI)*	2016-2018	Empirical studies on selection and travel performance of eye-tracking in virtual reality	PhD Student, Carleton University

International Visiting Students

Name	Years	Project
Johann Felipe Gonzalez Avila *Emerging Leaders in the Americas Program (ELAP)* Universidaad de los Andes, Colombia	Jan. 2019 – June 2019	Reconfigurable haptic props for VR telepresence
Daniela Flovier Javier *Mitacs Globalink Research Intern* Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico	Summer 2019	Multi-touch marking menus and progressive-refinement selection techniques in VR
Fernanda Marana *Mitacs Globalink Research Intern* Universidade de Sao Paulo, Brazil	Summer 2019	Cybersickness reduction in virtual environments
Stanislav Kyian *Mitacs Globalink Research Intern* Zaporizhia State Engineering Academy, Ukraine	Summer 2018	Virtual joysticks for mobile game control

Undergraduate Students

Name	Years	Project
Eric Lacey *Students as Partners Program*	Fall 2020	Developing online content for IMD 3004
Quinlan Walker *I-CUREUS Research Assistant*	Fall/Winter 2020-21	Cybersickness in VR
Mathew King *I-CUREUS Research Assistant*	Fall 2020	Cursor Warping in VR
Eric DeMarbre *I-CUREUS Research Assistant*	Winter 2020	Tabletop based gaming
Eric DeMarbre *NSERC USRA*	Summer 2019	Camera-based detection of game tokens
Eric Aylward *Undergrad Directed Study*	Winter 2017	Virtual reality
Shuyi Yang *Undergrad Directed Study*	Winter 2017	Virtual reality

Undergraduate Senior Project Teams

Team Name	Team Members	Years	Project
Fornax Studios	Julianna Clarke Kyle Coleman	Fall/Winter 2020-2021	*Multiplayer asynchronous VR/desktop game*

	Malcolm Goolamallee Eric Lacey		
Make/Shift	Matt Bell Christa Buttera Matt Donoghue Heather Hennessey Quin Henschel Andrew Selfridge	Fall/Winter 2019-2020	*Out on a Limb*: First-person VR game involving 3D object manipulation for solving puzzles
Mirus Games	Nico Monet Yousef Rahman Matt Threader Braeden Timlin Jacbo Tynski Sven Whitesell	Fall/Winter 2019-2020	*Nitor*: 3rd person action/adventure game ala "Dark Souls" with expansive 3D environments and complex game mechanics
Dark Shore Interactive	Ben Brinkman Max Leeming Aaron Lynch Josh van der Linden	Fall/Winter 2018-2019	*Metal Shepherd*: Third-person action platformer game with robots.
Starbyte Studios	Devon Elson Duncan McIntosh Benjamin Miller Andrew Thompson	Fall/Winter 2018-2019	*Sentinel*: Sci-fi third-person action adventure game.
BonePrizm	Ayan Abdalla Dima Doulov Alexandre Larocque Bianca Mitchel-Reyes Mubashera Shaikh	Fall/Winter 2018-2019	*Iridescence*: Procedural real-time rendered 3D animation using the Unreal engine with visual effects.
Legacy Studios	Joanna Cooper Emilina Dinardo Julia Laninga Scott Taylor	Fall 2017	Junior's Journey: Interactive 3D animation with branching story about a baby dinosaur finding his way home. *Note: Only supervised for Fall 2017.
Sixth Degree Games	Charlene Chu Sheri Koon Nicole Mackin Fred Pilon David Tucciarone	Fall 2017	Ego: Virtual reality narrative experience in which you use your hands as controllers to manipulate the objects in front of you. *Note: Only supervised for Fall 2017.
Flat Earth Studios	Tomiwa Aina Eric Aylward Mark Brouwer Akito Roberge Patrick Stevens	Fall/Winter 2016-2017	*Odyssey*: VR game involving puzzle solving in a mobile vehicle while driving on a terrain
Doorjam Studios	Rebecca Baird Brad Campbell Claudia Gunn-Harcus Chris Heyerdahl Erica Lekawski	Fall/Winter 2016-2017	*Choleric Vision*: Virtual reality horror game that uses pulse sensor to modify game play.

While I do not provide an exhaustive list of all former senior project students' current positions, I have included some examples. Former senior project students have gone on to developer positions in game companies (e.g., Bioware, SnowedIn Studios, SkyPyre Studios), VR development (VR Vision Inc., SEM Ltd.), software testing (You.i TV, Shopify), UI design and development (Employment and Social Development Canada, Shopify, You.i TV), and graduate school (Carleton).

RESEARCH INTERESTS

My research interests span several overlapping areas of interactive digital media, focusing primarily on interaction in virtual reality (VR), augmented reality (AR) and other 3D spaces. I also lead other projects in more "traditional" human-computer interaction topics (e.g., mobile device interaction, 2D user interfaces) and computer game user interfaces. My principle research area is evaluating human performance in 3D environments (e.g. VR/AR), and how interaction techniques and the unique properties of 3D display and input technologies influence user experience in these novel mediums. A summary of current project keywords follows:

- **Virtual Reality and 3D User Interfaces**:
  - Hybrid 2D/3D selection/manipulation interfaces, perceptual illusions, cybersickness
- **Human-Computer Interaction**:
  - Mobile device interaction, interaction on large displays, experimental methodology
- **Computer Game User Interfaces**:
  - Game control and input devices, VR games, scale effects in game UIs, game information visualization

RESEARCH FUNDING

Postdoctoral Fellowship Award, $100,000 2020 – 2022
Faculty of Public Affairs, Carleton University
Co-PI with V. McArthur, School of Journalism and Communication, 50%, 2 other co-applicants
Project: Storytelling in interactive 3D virtual and augmented reality environments
Note: Internal fund from the FPA at Carleton to support faculty hiring a postdoctoral fellow.

Engage, $25,000 2019 – 2020
Natural Sciences and Engineering Research Council of Canada (NSERC)
Partner with ToonRush Inc., Toronto
Project: User view direction in 360° films

International Research Seed Grant, $6,000 2019 – 2020
Office of the Vice President Research and International, Carleton University
Partner with P. Figueroa, Universidaad de los Andes, Colombia
Project: Reconfigurable Haptic Props for Virtual Telepresence Applications

Multidisciplinary Research Catalyst Fund, $30,000 2019 – 2020
Office of the Vice President Research and International, Carleton University
PI: J. Lefevre, co-applicant with 9 others
Project: Disruptive Technologies Applied to Learning (DisTAL)

Engage, $25,000 2017 – 2018
Natural Sciences and Engineering Research Council of Canada (NSERC)
Partner with SimWave Consulting, Kanata
Project: Cybersickness reduction when navigating virtual environments in small physical environments

Small Infrastructure Fund, $107,000 2017 – 2022
Ontario Research Fund
Co-PI with A. Girouard, 50%
Project: Creative Interactions Lab: Emerging User Interfaces for Digital Media

John Evans Leaders Fund, $107,000 2017 – 2022
Canada Foundation for Innovation
Co-PI with A. Girouard, 50%
Project: Creative Interactions Lab: Emerging User Interfaces for Digital Media

Discovery Grant & Early Career Researcher Supplement, $22,000/year 2016 – 2022
Natural Sciences and Engineering Research Council of Canada (NSERC)
Project: Towards walk-up usable 3D user interfaces
Note: This grant's original dates were 2016-2021 (5 years). However, it has been extended by one (funded) year due to the COVID-19 pandemic (6 years).

Funding for Specific HQP

Carleton University I-CUREUS, $1125 2020
Student: Quinlan Walker
Project: Reducing User Cybersickness in Virtual Reality

Carleton University I-CUREUS, $1125 2020
Student: Mathew King
Project: Virtual Cursor Warping in VR

Mitacs Globalink Research Internship (up to 4 students) Applied June 2020
Project: Warped Virtual Haptic Surfaces in VR *Results December 2020*
Project: Mobile User Interfaces for VR and Games
Project: Cybersickness in VR
Project: Haptic Devices in Multi-User VR

Mitacs Globalink Research Internship 2019
Student: Daniela Flovier Javier
Project: Marking Menus with Progressive Refinement in VR Selection

Mitacs Globalink Research Internship 2019
Student: Fernanda Marana
Project: Marking Menus with Progressive Refinement in VR Selection

Carleton University I-CUREUS, $1125 2019
Student: Eric DeMarbre
Project: Digital Tabletop Gaming

NSERC Undergraduate Student Research Award, $4500 2019
Student: Eric DeMarbre
Project: Camera-based detection of game tokens

Emerging Leaders in the Americas Program, $9700 2019
Student: Johann Felipe Gonzalez Avila
Project: Haptic Devices in Virtual Reality Telepresence

Mitacs Globalink Research Internship 2018
Student: Stanislav Kyian
Project: Virtual Joysticks for Mobile Game Controllers

Carleton University I-CUREUS, $1125 2017
Student: Alex Trostanovksy
Project: Navigation in VR

RESEARCH CONTRIBUTIONS – PUBLICATIONS & CITATIONS

My work has been collectively cited **over 1000 times** (via Google Scholar). **My h-index is currently 19**[1]. I presented all conference papers and posters listed below where I am first author. Papers in submission (but not yet accepted) and those in a late stage of preparation are also included in a separate section at the end.

Note on publication venues: Publications in Computer Science, including HCI and virtual reality are typically presented at international conferences rather than journals given the rapid rate of technology advancement. Conferences listed in the "Refereed Conference Proceedings" section below all employ highly competitive thorough peer-review processes, and typically have acceptance rates in the 25-35% range.[2] Conference acceptance rates (where available) are indicated below.

Note on student authors and author order: Student authors under my supervision (or co-supervision) are listed in **boldface** font. I always put student authors first on co-authored papers. Later author order otherwise denotes a more supervisory role with the published paper. Papers with an asterisk* by my name are those where I presented the paper despite not being the first author. I additionally presented all papers where I am first author. Where students are first authors, the student presented the paper.

Publication Lifetime Summary

Publication Type	In the last 5 years	Total
Conference Proceedings	6	6
Articles in peer-reviewed journals	6	8
Papers in peer-reviewed conference proceedings	9	30
Peer reviewed abstracts, workshop papers, full papers accepted based on abstract review	6	15
Posters, Demos, etc.	10	27
Patents	1	1
Journal manuscripts under review	1	
Papers submitted under review, or in preparation	1	
Invited Talks	6	15
Total	***46***	***102***

Conference Proceedings, Edited Books, etc.

1. Andrea Tagliasacchi, Robert J. Teather, Mikhail Bessmeltsev (2019). "Proceedings of Graphics Interface 2019", ISBN 978-0-9947868-4-5, May 2019.
2. Ferran Argelaguet, Joe Gabbard, Yuta Itoh, Dan Keefe, Anne-Helene Olivier, Robert J. Teather**.** (2019). "Proceedings of the IEEE Conference on Virtual Reality and 3D User Interfaces - VR 2019", ISBN: 978-1-7281-1377-7, March 2019.
3. Robert J. Teather, Maud Marchal, Takuji Narumi. (2018), "Proceedings of the IEEE Conference on Virtual Reality and 3D User Interfaces – VR 2018", New York: IEEE, ISBN: 978-1-5386-3365-6, March 2018.
4. Kyle Johnsen, Robert J. Teather, Christian Sandor. (2017), "Proceedings of the 5th ACM Symposium on Spatial User Interaction – SUI '17", New York: ACM, ISBN: 978-1-4503-5486-8, October 2017.
5. Maud Marchal, Robert J. Teather**,** Bruce Thomas. (2017), "Proceedings of the IEEE Symposium on 3D User Interfaces – 3DUI 2017", New York: IEEE, ISBN: 978-1-5090-6716-9, March 2017.

[1] Per Google Scholar, as of July 24 2020: https://scholar.google.ca/citations?user=KjJbkk8AAAAJ&hl=en

[2] "Evaluating Computer Scientists and Engineers for Promotion and Tenure" (cra.org, 1999).

6. Robert J. Teather, Evan Suma, Kyle Johnsen. (2016), "Proceedings of the 4th ACM Symposium on Spatial User Interaction – SUI '16", New York: ACM, ISBN: 978-1-4503-4068-7, October 2016.

Journal Articles

7. David Brickler, Robert J. Teather, Andrew Duchowski, Sabarish Babu. (2020) "A Fitts' law evaluation of visuo-haptic fidelity and sensory mismatch on user performance in a near-field disc transfer task in virtual reality", *ACM Transactions on Applied Perception*, in press, Fall 2020 issue.

   Note: Best Paper Honourable Mention Award at ACM Symposium on Applied Perception.

8. **Anthony Scavarelli**, Ali Arya, Robert J. Teather. (2020) "Virtual reality and augmented reality in social learning spaces: a literature review", *Virtual Reality: Special Issue on XR (VR, AR, MR) and Immersive Learning Environments*, May 2020, ISSN: 1434-9957.

9. **Yasin Farmani**, Robert J. Teather. (2020) "Evaluating discrete viewpoint control to reduce cybersickness in virtual reality", *Virtual Reality*, January 2020, ISSN: 1434-9957.

10. Nicholas Katzakis, Oscar Ariza, Lee Chen, Robert J. Teather, Frank Steinicke. (2019) "Evaluation of 3D pointing accuracy in the fovea and periphery in immersive head-mounted display environments", *IEEE Transactions on Visualization and Computer Graphics*, October 2019, ISSN: 1077-2626.

11. **Margaree Peacocke**, Robert J. Teather, Jacques Carette, I. Scott MacKenzie, Victoria McArthur. (2018). "An empirical comparison of first-person shooter information displays: HUDs, diegetic displays, and spatial representations", *Entertainment Computing*, 26, pp. 41-58, May 2018.

12. Robert J. Teather, Andrew Roth, I. Scott MacKenzie. (2017), "Touch-tilt synergy: input controls for 'dual-analog' style mobile games", *Entertainment Computing*, 21, pp. 33-43, April 2017.

13. Nicholas Katzakis, Robert J. Teather, Kiyoshi Kiyokawa, Haruo Takemura. (2015). "INSPECT: Extending plane-casting for 6-DOF control", *Human-Centric Computing and Information Sciences*, 5 (22), ISSN: 2192-1962, pp. 1-22, July 2015.

14. Victoria McArthur, Robert J. Teather, Wolfgang Stuerzlinger. (2010). "Comparing 3D content creation interfaces in two virtual worlds: World of Warcraft and Second Life", *Journal of Gaming & Virtual Worlds,* 2 (3), ISSN 1757-191X, pp. 239-258, December 2010.

Papers in Refereed Conference Proceedings

15. **Amir Didehkhorshid**, Robert J. Teather. (2020) "Selection performance using a scaled virtual stylus cursor in VR", Proceedings of *Graphics Interface 2020*, 10 pages, May 2020.

16. **Daniel Hawes**, Robert J. Teather, Ali Arya, Max Krichenbauer. (2019) "Assessing the value of 3D software experience with camera layout in virtual reality", Proceedings of the *IEEE Conference on Artificial Intelligence and Virtual Reality – AIVR 2019*, pp. 179-183, Dec. 2019.

17. **Anthony Scavarelli**, Ali Arya, Robert J. Teather. (2019) "Circles: exploring multi-platform accessible, socially scalable VR in the classroom", Proceedings of *IEEE Games Entertainment and Media – GEM 2019*, ISBN: 978-1-7281-2404-9, pp. 1-4, June 2019.

18. **YuanYuan Qian**, Robert J. Teather. (2018) "Look to go: An empirical evaluation of eye-based travel in virtual reality", Proceedings of the *ACM Symposium on Spatial User Interaction – SUI 2018*, ISBN: 978-1-4503-5708-1, pp. 130-140, October 2018. *Acceptance Rate*: 31%.

19. **Yasin Farmani**, Robert J. Teather. (2018) "Viewpoint snapping to reduce cybersickness in virtual reality", Proceedings of *Graphics Interface 2018*, ISBN: 2018,978-0-9947868-2-1, pp. 159-166, May 2018.

20. **Adrian Ramcharitar**, Robert J. Teather. (2018) "EZCursorVR: 2D selection with virtual reality head-mounted displays", Proceedings of *Graphics Interface 2018*, ISBN: 2018,978-0-9947868-2-1, pp. 114-121, May 2018.

21. **John McClelland**, Robert J. Teather, Audrey Girouard. (2017) "HaptoBend: Shape-changing passive haptic feedback in virtual reality", Proceedings of the *ACM Symposium on Spatial User Interaction - SUI 2017*, ISBN: 978-1-4503-5486-8, pp. 82-90, October 2017. *Acceptance Rate*: 35%.

    Note: The demo of HaptoBend was awarded the best demo award for SUI 2017.

22. **YuanYuan Qian**, Robert J. Teather. (2017) "The eyes don't have it: An empirical comparison of head-based and eye-based selection in virtual reality", Proceedings of the *ACM Symposium on Spatial User Interaction - SUI 2017*, ISBN: 978-1-4503-5486-8, pp. 91-98, October 2017. Acceptance Rate: 35%.

    Note: As one of the top reviewed papers of SUI 2017, this paper was selected for additional presentation in the partner conference ISS 2017 "Highlights of SUI" track.

23. Thomas S. Young, Robert J. Teather, I. Scott MacKenzie. (2017). "An arm-mounted inertial controller for 6DOF input: design and evaluation", Proceedings of the *IEEE Symposium on 3D User Interfaces – 3DUI 2017*, ISBN: 978-1-5090-6716-9, pp. 26-35, March 2017. *Acceptance Rate: 32%.*

24. Victoria McArthur, Robert J. Teather. (2015). "Serious mods: A case for modding in serious game pedagogy", Proceedings of the *IEEE Consumer Electronics Society Games, Entertainment, and Media Conference – GEM 2015,* ISBN: 978-1-4673-7452-1, pp. 222-225, October 2015.

25. **Geneva Smith**, Robert J. Teather*, Jordan Lass, Jacques Carette. (2015). "Effects of interior bezel size and configuration on gaming performance with large tiled displays", Proceedings of the *IEEE Consumer Electronics Society Games, Entertainment, and Media Conference – GEM 2015*, ISBN: 978-1-4673-7452-1, pp. 130-137, October 2015.

26. **Margaree Peacocke**, Robert J. Teather*, Jacques Carette, I. Scott MacKenzie. (2015). "Evaluating the effectiveness of HUDs and diegetic ammo displays in first-person shooter games", Proceedings of the *IEEE Consumer Electronics Society Games, Entertainment, and Media Conference – GEM 2015*, ISBN: 978-1-4673-7452-1, pp. 138-145, October 2015.

27. Robert J. Teather, Jacques Carette, Manivanna Thevathasan. (2015). "Uniform vs. non-uniform scaling of shooter games on large displays", Proceedings of the *IEEE Consumer Electronics Society Games, Entertainment, and Media Conference – GEM 2015*, ISBN: 978-1-4673-7452-1, pp. 257-264, October 2015.

28. Robert J. Teather, Wolfgang Stuerzlinger. (2015). "Factors affecting mouse-based 3D selection in desktop VR systems", Proceedings of the *ACM Symposium on Spatial User Interaction – SUI 2015*, ISBN: 978-1-4503-3703-8, pp. 10-19, August 2015. *Acceptance Rate: 35%.*

29. Victoria McArthur, Robert J. Teather, Jennifer Jenson. (2015). "The avatar affordances framework: Mapping affordances and design trends in character creation interfaces", Proceedings of the *ACM Symposium on Computer-Human Interaction in Play – CHI Play 2015*, ISBN: 978-1-4503-3466-2, pp. 231-240, October 2015. *Acceptance rate: 27%.*

30. Robert J. Teather, I. Scott MacKenzie. (2014). "Comparing order of control for tilt and touch games", Proceedings of the *ACM Interactive Entertainment Conference – IE 2014,* ISBN: 978-1-4503-2790-9, pp. 1-10, December 2014.

31. Robert J. Teather, Victoria McArthur (2014). "Teaching user interface evaluation methods with games", Proceedings of the *IEEE Consumer Electronics Society Games, Entertainment, and Media Conference – GEM 2014*, ISBN 978-1-4799-7546-7, pp. 204-207, October 2014. *Acceptance rate: 45%.*

32. Robert J. Teather, Wolfgang Stuerzlinger (2014). "Visual aids in 3D point selection experiments", Proceedings of the *ACM Symposium on Spatial User Interaction – SUI 2014*, ISBN 978-1-4503-2820-3, pp. 127-136, October 2014. *Acceptance Rate: 29%.*

33. Robert J. Teather, I. Scott MacKenzie. (2014). "Position vs. velocity control for tilt-based interaction", Proceedings of *Graphics Interface 2014*, ISBN 978-1-4822-6003-8, pp. 51-58, May 2014. *Acceptance Rate: 37%.*
34. Steven Castellucci, Robert J. Teather*, Andriy Pavlovych. (2013). "Novel metrics for 3D remote pointing", Proceedings of the *ACM Symposium on Spatial User Interaction – SUI 2013,* ISBN 978-1-4503-2141-9, pp. 17-20, July 2013. *Acceptance Rate: 38%.*
35. Robert J. Teather, I. Scott MacKenzie. (2013). "Effects of user distraction due to secondary calling and texting tasks", Proceedings of the *International Conference on Multimedia and Human Computer Interaction – MHCI 2013*, pp. 115.1 – 115.8, July 2013.
36. Robert J. Teather, Wolfgang Stuerzlinger. (2013). "Pointing at 3D target projections with one-eyed and stereo cursors", Proceedings of the *ACM Conference on Human Factors in Computing Systems – CHI 2013,* ISBN 978-1-4503-1899-0, pp. 159-168, April 2013. *Acceptance Rate: 20%, ~2000 submissions*.
37. I. Scott MacKenzie, Robert J. Teather. (2012). "Fitts Tilt: The application of Fitts' law to tilt-based interaction", Proceedings of the *Nordic Conference on Human-Computer Interaction – ACM NordiCHI 2012*, ISBN 978-1-4503-1482-4, pp. 568-577, October 2012. *Acceptance Rate: 24%.*
38. Robert J. Teather, Wolfgang Stuerzlinger. (2011). "Pointing at 3D targets in a stereo head-tracked virtual environment", Proceedings of the *IEEE Symposium on 3D User Interfaces – 3DUI 2011*, ISBN 978-1-4577-0062-0, pp. 87-94, March 2011. *Acceptance Rate: 36%*
39. Loutfouz Zaman, Daniel Natapov, Robert J. Teather. (2010). "Touchscreens vs. traditional controllers in handheld gaming", Proceedings of the *ACM International Academic Conference on the Future of Game Design and Technology – FuturePlay 2010,* ISBN 978-160558218-4, pp. 207-214, May 2010.
40. Robert J. Teather, Robert S. Allison, Wolfgang Stuerzlinger. (2009). "Evaluating visual/motor co-location in fish-tank virtual reality", Proceedings of the *IEEE Toronto International Conference on Science and Technology for Humanity – Symposium on Human Factors and Ergonomics – TIC-STH 2009*, ISBN 978-1-4244-3878-5, pp. 624-629, September 2009.
41. Robert J. Teather, Andriy Pavlovych, Wolfgang Stuerzlinger, I. Scott Mackenzie. (2009). "Effects of tracking technology, latency, and spatial jitter on object movement", Proceedings of the *IEEE Symposium on 3D User Interfaces – 3DUI 2009*, IBSN 978-142443965-2, pp. 43-50, March 2009. *Acceptance Rate: 25%*
42. Robert J. Teather, Wolfgang Stuerzlinger. (2008). "Exaggerated head motions for game viewpoint control", Proceedings of the *ACM International Academic Conference on the Future of Game Design and Technology – FuturePlay 2008*, ISBN 978-160558218-4, pp. 240-243, November 2008.
43. Robert J. Teather, Wolfgang Stuerzlinger. (2008). "Assessing the effects of orientation and device on (constrained) 3D movement techniques", Proceedings of the *IEEE Symposium on 3D User Interfaces* – 3DUI 2008, ISBN 978-142442047-6, pp. 43-50, March 2008. *Acceptance Rate: 31%*
44. Robert J. Teather, Wolfgang Stuerzlinger. (2007). "Guidelines for 3D positioning techniques", Proceedings of the *ACM International Academic Conference on the Future of Game Design and Technology – FuturePlay 2007*, ISBN 978-159593943-2, pp. 61-68, Nov 2007.

Peer-Reviewed Extended Abstracts, Papers Accepted Based on Abstract Review, Workshop Papers

45. **Amir Didenhkhorshid, Siju Philip, Elaheh Samini**, Robert J. Teather (2020). "Text input in virtual reality using a tracked drawing tablet", Proceedings of *HCI International 2020, Lecture Notes in Computer Science*, 15 pages.

46. **Jordan Pollock**, Robert J. Teather. (2020) "CountMarks: multi-finger marking menus for mobile interaction with head-mounted displays", Proceedings of *HCI International 2020, Lecture Notes in Computer Science*, 20 pages.
47. **Siqi Luo**, Robert J. Teather, Victoria McArthur. (2020) "Camera-based selection with cardboard head-mounted displays", Proceedings of *HCI International 2020, Lecture Notes in Computer Science*, 20 pages.
48. **Eduardo Soto**, Robert J. Teather. (2020) "Text entry in virtual reality: Implementation of FLIK method and text entry testbed", Proceedings of the *HCI International 2020, Lecture Notes in Computer Science*, 20 pages.
49. **Adrian Ramcharitar**, Robert J. Teather. (2017). "A Fitts' law evaluation of video game controllers: thumbstick, touchpad and gyrosensor", Extended Abstracts of the *ACM Conference on Human Factors in Computing Systems – CHI EA 2017*, ISBN: 978-1-4503-4656-6, pp. 2860-2866, May 2017. *Acceptance Rate: 38%.*
50. **Anthony Scavarelli**, Robert J. Teather. (2017). "VR Collide! Comparing collision-avoidance methods between co-located virtual reality users", Extended Abstracts of the *ACM Conference on Human Factors in Computing Systems – CHI EA 2017*, ISBN: 978-1-4503-4656-6, pp. 2915-2921, May 2017. *Acceptance Rate: 38%.*
51. Wolfgang Stuerzlinger, Robert J. Teather. (2014). "Considerations for targets in 3D pointing experiments", Invited paper in the *ACM HCI Korea Invited Paper for SIGCHI Premier Session,* ISBN 978-896848752-1, 162-168, December 2014.
52. **Alexander Zaranek, Bryan Ramoul, Hua Fei Yu, Yiyu Yao**, Robert J. Teather. (2014). "Performance of modern game input devices in first-person shooter target acquisition", Extended Abstracts of the *ACM Conference on Human Factors in Computing Systems – CHI EA 2014*, ISBN 978-1-4503-2474-8, pp. 1495-1500, April 2014. *Acceptance Rate: 31%.*
53. **Graeme Browning**, Robert J. Teather. (2014). "Screen scaling: effects of screen scale on moving target selection", Extended Abstracts of the *ACM Conference on Human Factors in Computing Systems – CHI EA 2014*, ISBN 978-1-4503-2474-8, pp. 2053-2058, April 2014. *Acceptance Rate: 31%.*
54. **Benjamin F. Janzen**, Robert J. Teather. (2014). "Is 60FPS better than 30? The impact of frame rate and latency on moving target selection", Extended Abstracts of the *ACM Conference on Human Factors in Computing Systems – CHI EA 2014*, ISBN 978-1-4503-2474-8, pp. 1477-1482, April 2014. *Acceptance Rate: 31%.*
55. Robert J. Teather, Wolfgang Stuerzlinger, Andriy Pavlovych. (2014). "Fishtank Fitts: A desktop VR testbed for evaluating 3D pointing techniques", *Extended Abstracts of the ACM Conference on Human Factors in Computing Systems – CHI EA 2014*, ISBN 978-1-4503-2474-8, pp. 519-522, April 2014. *Acceptance Rate: 31%.*
56. Robert J. Teather, Wolfgang Stuerzlinger. (2012). "Cursors for 3D pointing", Presentation at the *ACM CHI 2012 Workshop: The 3rd Dimension of CHI (3DCHI)*, May 2012.
57. Robert J. Teather, Daniel Natapov, Michael Jenkin. (2010). "Evaluating haptic feedback in virtual environments using ISO 9241-9", *Poster at the IEEE Virtual Reality Conference – VR 2010*, ISBN 978-142446258-2, pp. 307-308, March 2010.
58. Robert J. Teather, Andriy Pavlovych, Wolfgang Stuerzlinger. (2009). "Effects of latency and spatial jitter on 2D and 3D pointing", *Poster at the IEEE Virtual Reality Conference – VR 2009*, ISBN 978-142443943-0, 229-230, March 2009.
59. Robert J. Teather, Wolfgang Stuerzlinger. (2008). "Assessing the effects of orientation and device on 3D positioning", *Poster at the IEEE Virtual Reality Conference – VR 2008*, ISBN 978-142441971-5, pp. 293-294, March 2008.

Posters, Technical Demonstrations

60. **John McClelland, Johann Felipe Gonzalez Avila**, Robert J. Teather, Pablo Figueroa, Audrey Girouard. (2019). "Adaptic: A shape changing prop with haptic retargeting", Poster at the *IEEE World Haptics Conference 2019*, July 2019.
61. **Johann Felipe Gonzalez Avila, John McClelland**, Robert J. Teather, Pablo Figueroa, Audrey Girouard. (2019). "Haptic retargeting with a shape-changing prop", Demonstration at the *IEEE World Haptics Conference 2019*, July 2019.
62. **Siqi Luo**, Robert J. Teather. (2019). "Camera-based selection with cardboard HMDs", Poster at the *IEEE Conference on Virtual Reality and 3D User Interfaces – VR 2019*, March 2019.
63. **Anthony Scavarelli**, Ali Arya, Robert J. Teather. (2019). "Towards a framework on accessible and social VR in education", Poster at the *IEEE Conference on Virtual Reality and 3D User Interfaces – VR 2019*, March 2019.
64. **YuanYuan Qian**, Robert J. Teather. (2018). "Two empirical studies of eye-based travel in virtual reality", Poster at the *ACM Symposium on User Interface Software and Technology – UIST*, Oct. 2018.
65. **Yasin Farmani, Siqi Luo**, Robert J. Teather. (2018). "A longitudinal pilot study of presence in immersive VR", Poster in the *23rd Annual CyberPsychology, CyberTherapy & Social Networking Conference – CYPSY23*, June 2018.
66. **Yasin Farmani**, Robert J. Teather. (2017). "Player performance with different input devices in virtual reality first-person shooter games", Poster at the *ACM Symposium on Spatial User Interaction - SUI 2017*, pp. 165, October 2017.
67. **John McClelland**, Robert J. Teather, Audrey Girouard. (2017). "Haptic feedback with HaptoBend: Utilizing shape-change to enhance virtual reality", Demonstration at the *ACM Symposium on Spatial User Interaction - SUI 2017*, pp. 150, October 2017. **Note*: *Received the Best Demo Award for SUI '17.*
68. **YuanYuan Qian**, Robert J. Teather. (2017). "Head vs. eye-based selection in virtual reality", Demonstration at the *ACM Symposium on Spatial User Interaction - SUI 2017*, pp. 151, October 2017.
69. **Adrian Ramcharitar**, Robert J. Teather. (2017). "A head coupled cursor for 2D selection in virtual reality", Poster at the *ACM Symposium on Spatial User Interaction - SUI 2017*, pp. 162, October 2017.
70. **Graeme Browning**, Robert J. Teather*, Jacques Carette. (2015). "Differences in perspective and software scaling", Poster at the *ACM Symposium on Spatial User Interaction – SUI 2015*, pp. 128, August 2015.
71. **Geneva Smith**, Robert J. Teather*, Jordan Lass, Jacques Carette. (2015). "Effects of bezel size in large tiled display gaming", Poster at the *ACM Symposium on Spatial User Interaction – SUI 2015*, pp. 129, August 2015.
72. Robert J. Teather, Andrew Roth. (2015). "Performance of tilt and touch in mobile games", Poster at *Graphics Interface 2015*, June 2015.
73. **Margaree Peacocke**, Robert J. Teather, Jacques Carette. (2015). "Performance of HUDs and diegetic displays in FPS games", Poster at *Graphics Interface 2015*, June 2015.
74. Nicholas Katzakis, Robert J. Teather, Kiyoshi Kiyokawa, Haruo Takemura. (2015). "INSPECT: Extending plane-casting for 6-DOF control", Poster at the *IEEE Symposium on 3D User Interfaces – 3DUI 2015*, pp. 165-166, March 2015.
75. Robert J. Teather, Manivanna Thevathasan, Jacques Carette. (2014). "Scale effects in 'bullet hell' games", Poster at the *IEEE Consumer Electronics Society Games, Entertainment, and Media Conference – GEM 2014*, pp. 303-304, October 2014.

76. **Margaree Peacocke**, Robert J. Teather, Jacques Carette. (2014). "Diegetic vs. non-diegetic game displays", Poster at the *IEEE Consumer Electronics Society Games, Entertainment, and Media Conference – GEM 2014*, pp. 305-306, October 2014.
77. Vamsi K. Adihikarla, Paweł Woźniak, Robert J. Teather*. (2014). "HoloLeap: Towards efficient 3D object manipulation on light field displays", Poster at the *ACM Symposium on Spatial User Interaction – SUI 2014*, pp. 158, October 2014.
78. Robert J. Teather, Wolfgang Stuerzlinger (2014). "Depth cues and mouse-based 3D target selection", Poster at the *ACM Symposium on Spatial User Interaction – SUI 2014*, pp. 156, October 2014.
79. Bartosz Bajer, Robert J. Teather*, Wolfgang Stuerzlinger. (2013). "Effects of stereoscopy and head tracking on 3D selection tasks", Poster at the *ACM Symposium on Spatial User Interaction – SUI 2013*, pp. 77, July 2013.
80. Sidrah Laldin, Robert J. Teather*, Wolfgang Stuerzlinger. (2013). "Up- and downwards motions in 3D pointing", Poster at the *ACM Symposium on Spatial User Interaction – SUI 2013*, pp. 89, July 2013.
81. Robert J. Teather, Wolfgang Stuerzlinger. (2013). "Pointing at perspective scaled 3D targets", *Poster for the GRAND-NCE Annual Meeting*, May 2013.
82. Robert J. Teather, Wolfgang Stuerzlinger. (2012). "A system for evaluating 3D pointing techniques", Demonstration at the *ACM Symposium on Virtual Reality Software and Technology – VRST 2012*, pp. 209, December 2012.
83. Robert J. Teather, Wolfgang Stuerzlinger. (2012). "Investigating one-eyed and stereo cursors for 3D pointing tasks", Poster at the *IEEE Symposium on 3D User Interfaces – 3DUI 2012*, pp. 167-168, March 2012.
84. Loutfouz Zaman, Dmitri Shuralyov, Robert J. Teather*, Wolfgang Stuerzlinger. (2012). "Evaluation of a 3DUI using game console hardware", Poster at the *IEEE Symposium on 3D User Interfaces – 3DUI 2012*, pp. 173-174, March 2012.
85. Robert J. Teather, Wolfgang Stuerzlinger. (2012). "Investigating one-eyed and stereo cursors for 3D pointing tasks", *Poster for York University Department of Computer Science & Engineering Graduate Student Poster Day*, March 2012.
86. Robert J. Teather, Wolfgang Stuerzlinger. (2010). "Target pointing in 3D user interfaces", *Poster at Graphics Interface*, June 2010.
87. Robert J. Teather, Wolfgang Stuerzlinger. (2010). "Evaluating reaching and tapping motions in 3D interfaces", *Poster for York University Department of Computer Science & Engineering Graduate Student Poster Day*, March 2010
88. Robert J. Teather, Robert S. Allison, Wolfgang Stuerzlinger. (2009). "Evaluating visual/motor coupling in fish tank virtual reality", *Poster at CVR 2009 - Centre for Vision Research International Conference on Vision in 3D Environments*, June 2009.
89. Robert J. Teather, Wolfgang Stuerzlinger. (2008). "Exaggerating head-coupled camera motions in fish tank VR", *Poster at Graphics Interface*, May 2008.
90. Robert J. Teather, Wolfgang Stuerzlinger. (2007). "An evaluation of 3D positioning techniques for scene assembly", *Poster at IEEE Symposium on 3D User Interfaces – 3DUI 2007*, March 2007.

Patents

91. **John McClelland**, Robert J. Teather, Audrey Girouard (2020) "Passive haptic feedback input device", *United States Patent #US2020/0117276 A1,* April 2020.

Invited Talks, Presentations, Etc.

Note: This section excludes conference presentations for the papers listed above

92. Empirical Evaluation of User Interaction in Virtual Reality — January 2020
School of Computer Science, Queen's University (Host: Nick Graham)
93. Spatial User Interfaces: Towards Understanding User Interactions in VR and Games — March 2019
Faculty of Business and Information Technology, UOIT (Host: Loutfouz Zaman)
94. Towards Standardized Evaluation of 3D Pointing Techniques — October 2018
Department of Informatics, University of Hamburg (Host: Frank Steinicke)
95. Spatial User Interfaces: Towards Usable VR and Understanding Game Interactions — February 2018
School of Information Technology, York University (Host: Sotirios Liaskos)
96. Game User Interfaces: Empirical Studies of Scale, Input Methods, & Information Display — April 2016
Dept. of Electrical Engineering & Computer Science, York University (Host: Scott MacKenzie)
97. Game User Interfaces: Empirical Studies of Scale, Input Methods, & Information Display — March 2016
Dept. of Computer Science, Brock University (Host: Michael Winter)
98. 3D User Interfaces: Design and Evaluation — March 2015
Dept. of Computer Science, University of Toronto (Host: Olivier St.-Cyr)
99. 3D User Interfaces: Design and Evaluation — November 2014
Dept. of Computer Science, University of Toronto (Host: Olivier St.-Cyr)
100. Target Selection in Spatial User Interfaces — November 2014
School of Interactive Arts and Technology, Simon Fraser University (Host: Wolfgang Stuerzlinger)
101. Games and Visual Scale — July 2014
Games Institute, University of Waterloo (Host: Neil Randall)
102. Evaluating 3D Pointing Techniques — September 2013
Dept. of Computer Science, Brock University (Host: Brian Ross)
103. Evaluating 3D Direct Manipulation Interfaces — January 2012
Human-Media Lab, Queen's University (Host: Roel Vertegaal)
104. Evaluating 3D Direct Manipulation Interfaces — May 2011
Dept. of Game Development and Entrepreneurship, UOIT (Host: Andrew Hogue)
105. Evaluating 3D Direct Manipulation Interfaces — April 2011
Dept. of Computer Science, Algoma University (Host: Simon Xu)

UNIVERSITY SERVICE ACTIVITIES

This table summarizes the university admin activities I have performed since joining Carleton. CSIT service indicates service to School, while FED service is service to the Faculty of Engineering and Design. A brief description follows some of the duties with more extensive responsibilities or workload.

Service to the School of Information Technology, Faculty of Engineering & Design, and Carleton

Service Type	Activity	Level	Year(s)
Committee	Carleton University Research Ethics Board (CUREB-B) *Review 2-3 REB protocols/month and attend monthly board meeting*	University	2017, 2019-21

Advisory	IMD Program Coordinator *Advise undergrad students, applicants, curriculum changes*	CSIT	2018-21
Committee	Joint Academic Council *Attend two meetings per semester with Algonuin College*	CSIT	2018-21
Committee	Hiring Committee Chair *Screening 30+ applicants, scheduling and conducting two rounds of interviews with candidates*	CSIT	2018, 2020
Event	Academic Procession - Convocation	University	2017, 2018, 2019
Recruitment	Faculty Call Campaign *Calling applicants admitted to the IMD program*	CSIT	Spring 2019
Recruitment	IMD Portfolio Days Reviewing *Reviewing applicants portfolios to provide advice*	CSIT	2019
Recruitment	IMD Recruitment	CSIT	2018-19
Committee	Director Search Committee	CSIT	2019
Recruitment	IMD Recruitment (GTA Parents Evening)	CSIT	2017
Advisory	CSIT Co-op Coordinator *Examining co-op reports, attending co-op program meetings*	CSIT	2016, 2017
Advisory	IMD SP Coordinator *Managing senior project course, deadlines, fair*	CSIT	2016, 2017
Committee	Hiring Committee (admin assistant) *Interviewing candidates for admin assistant position*	CSIT	2017
Recruitment	IMD Portfolio Review *Reviewing ~150 portfolios of applicants to IMD*	CSIT	2017
Recruitment	IMD Recruitment (GTA Parents Evening, SEDS)	CSIT	2016-17
Committee	Awards Committee *Reviewing ~15 grad student scholarship applications*	CSIT	2016-17
Committee	Networking Committee	CSIT	2016-17
Outreach	Virtual Ventures Presentation	FED	2016

Thesis Examination Boards

Role	Student	Level	Type	Program	Supervisor	Year
Chair	Mihaela Petriu	Masters	Thesis Exam	HCI (MASc)	Joslin	2020
Examiner	Lea Zhu	Masters	Thesis Exam	Information Technology	Joslin	2020
Examiner	Alfrancis Guerrero	Masters	Thesis Exam	HCI (MASc)	Girouard	2020
Examiner	Fiona Westin	Masters	Thesis Exam	HCI (MA)	Chiasson	2020
Examiner	Gerry Chan	PhD	Proposal	Digital Media	Arya	2020
Chair	Chanpreet Singh	Masters	Thesis Exam	Information Technology	Shafiq	2020
Examiner	Darren O'Neill	Masters	Thesis Exam	Industrial Design	Field	2019
Examiner	Omar Hesham	PhD	Thesis Exam	Systems & Computer Engineering	Wainer	2019
Examiner	Sam Qorbani	PhD	Comp. Exam	Digital Media	Arya/Joslin	2019
Examiner	Agata Lawrynczyk	Masters	Thesis Exam	HCI (MASc)	Herdman	2018
Examiner	Danielle Krukowski	Masters	Thesis Exam	Cognitive Science	Herdman	2018
Chair	Lee Jones	PhD	Comp. Exam	Digital Media	Girouard	2018

Chair	Anna Theus	Masters	Thesis Exam	HCI (MA)	Muldner	2018
Examiner	Nicholas Fellion	Masters	Thesis Exam	HCI (MASc)	Girouard	2017
Examiner	Xudong Li	Masters	Thesis Exam	HCI (MASc)	Whitehead	2017
Examiner	Shaikah Bakerman	Masters	Thesis Exam	HCI (MASc)	Joslin	2016
Chair	Paden Shorey	Masters	Thesis Exam	HCI (MASc)	Girouard	2016
Chair	Chrstine Mekhail	Masters	Thesis Exam	HCI (MA)	Chiasson	2016

EXTERNAL SERVICE TO THE RESEARCH COMMUNITY

I have been highly active in the virtual reality research community, serving on several organizing committees of and/or chairing the technical program of three of the key events in the VR/3D user interface research area (IEEE VR/3DUI, ACM VRST, ACM SUI) in the past five years. I have also served in several poster/demo chair roles, on program committees for over 10 conferences, and as an external reviewer for many more.

Conference Organizing Committees

- General Chair, ACM Symposium on Virtual Reality Software & Technology (VRST) 2020
- Workshop Organizer, IEEE VR Workshop on Novel Input Devices and Interaction Techniques 2020
- Workshop Organizer, IEEE VR Workshop on Novel Input Devices and Interaction Techniques 2019
- Publication Chair, IEEE Virtual Reality Conference (VR) 2016
- Support Co-Chair, IEEE Virtual Reality Conference (VR) 2015
- 3DUI Contest Co-Chair, IEEE Symposium on 3D User Interfaces (3DUI) 2012, 2013, 2014
- Student Volunteer Co-Chair, GRAND-NCE Annual Meeting 2012

Conference Technical Program Chair Roles

- Program Chair, Graphics Interface (HCI Track) 2019
- Conference Paper Chair, IEEE Conference on Virtual Reality & 3D User Interfaces (VR) 2018, 2019
- Technical Program Chair, IEEE Symposium on 3D User Interfaces (3DUI) 2017
- Technical Program Chair, ACM Symposium on Spatial User Interaction (SUI) 2016, 2017
- Posters Co-Chair, IEEE Virtual Reality Conference (VR) 2017
- Poster and Demo Co-Chair, ACM Symposium on Spatial User Interaction (SUI) 2015
- Posters Co-Chair, IEEE Symposium on 3D User Interfaces (3DUI) 2015
- Posters Co-Chair, ACM Symposium on Spatial User Interaction (SUI) 2013, 2014
- Proceedings Co-Chair, ACM Conference on Human Factors in Computing Systems (CHI) 2013
- Research Notes (Student Research Track) Co-Chair, GRAND-NCE Annual Meeting 2013

Program Committee & Editorial Board Positions

- Associate Chair, ACM Symposium on Spatial User Interaction (SUI) 2013-2015, 2018-2020
- Review Editor, Frontiers in Virtual Reality and Human Behaviour 2019 – present
- Associate Chair, ACM Conference on Human Factors in Computing Systems (CHI) 2018
- Program Committee Member, Graphics Interface 2013, 2017, 2018
- Program Committee Member, IEEE Symposium on 3D User Interfaces (3DUI) 2013-2016
- Program Committee Member, IEEE Games, Entertainment, and Media Conference (GEM) 2015
- Program Committee Member, Australasian User Interface Conference (AUIC) 2015, 2016
- Program Committee Member, Advances in Computer-Human Interaction 2015
- Review Editor, Frontiers in Virtual Environments 2014 – present
- Associate Chair, ACM Conference on Virtual Reality Software and Technology (VRST) 2012
- Associate Chair, GRAND-NCE RNotes (Student Research Track) 2011 – 2013

Reviewer (Conferences and Journals)

- ACM Symposium on Computer-Human Interaction in Play (CHI Play) 2014, 2015, 2016, 2020
- ACM Conference on Human Factors in Computing Systems 2013, 2014, 2015, 2019, 2020
- ACM Symposium on Virtual Reality Software and Technology 2008, 2012, 2016, 2019
- International Symposium on Mixed and Augmented Reality (ISMAR) 2019, 2020
- IEEE Conference on Virtual Reality and 3D User Interfaces (Journal track) 2019
- ACM Symposium on User Interface Software and Technology 2014, 2018
- International Journal of Human Computer Studies 2008, 2010, 2011, 2017
- International Journal of Human-Computer Interaction 2016
- ACM Human-Computer Interaction with Mobile Devices and Services (MobileHCI) 2015, 2017
- IEEE Transactions on Visualization and Computer Graphics 2010, 2014, 2015
- IEEE Games, Entertainment, and Media Conference 2014
- IEEE Symposium on 3D User Interfaces (3DUI) 2009 – 2014
- Graphics Interface 2008, 2010, 2014
- IEEE Virtual Reality Conference 2009 – 2012
- Computers and Graphics Journal 2012
- ACM FuturePlay 2009 – 2010
- IEEE Computer Graphics & Applications, Special Issue on 3D User Interfaces 2009

Student Volunteer

- ACM Conference on Human Factors in Computing Systems 2006 – 2007, 2010 – 2013
- IEEE Virtual Reality Conference (VR) 2006 – 2007, 2009 – 2013
- International Symposium on Mixed and Augmented Reality 2009

Other

- Session Chair, ACM SUI 2018
- Session Chair, IEEE 3DUI 2016
- Session Monitor, Graphics Interface 2014
- Session Monitor, GRAND-NCE RNotes 2012, 2013
- Session Monitor, ACM Conference on Virtual Reality Software and Technology 2012