

# BRENNAN JONES

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Email: [brennanjones@acm.org](mailto:brennanjones@acm.org)

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I am a human-computer interaction (HCI) researcher who is passionate about designing and evaluating technologies for people, the future, and the greater good. Domains include: development tools for cloud gaming; technologies for emergency response (search and rescue, emergency video calling); virtual, augmented, and mixed reality (VR/AR/MR) interfaces; technologies for remote and hybrid work; and technologies for connecting friends and family members. I graduated with a PhD in Computer Science from the University of Calgary in June 2021. I am experienced in conducting user studies and foundational research in HCI using methods such as interviews, observations, lab experiments, survey research, and ethnographic methods, to understand user behaviours and technologies' impacts on factors such as group collaboration, awareness, and presence. I have published at top-tier HCI venues, including ACM CHI, CSCW, and DIS. I am both a researcher and a builder, with experience in full-stack development, and comfortable embracing a variety of tools to build prototypes. I have a rich range of experience in front-end web development, back-end server coding, AR/VR development, mobile app development, and robotics programming. I like to blow minds and warm hearts.

## EDUCATION

### Ph.D. in Computer Science

Apr. 2017 - Jun. 2021

Research area: Human-Computer Interaction (HCI), Computer-Supported Cooperative Work (CSCW)

University of Calgary, Calgary, AB, Canada, GPA: 4.00/4.00

Supervisory committee: Dr. Anthony Tang (University of Toronto), Dr. Carman Neustaedter (Simon Fraser University), Dr. Ehud Sharlin, Dr. Wesley Willett

Thesis title: *Designing Remote Collaboration Technologies for Wilderness Search and Rescue*

### Visiting Ph.D. Scholar

Apr. 2017 - Aug. 2018, Jan. 2019 - Jun. 2021

Simon Fraser University School of Interactive Arts & Technology, Surrey, BC, Canada

Advisor: Dr. Carman Neustaedter

### M.Sc. in Computer Science

Sep. 2014 - Dec. 2016

Research area: Human-Computer Interaction (HCI), Computer-Supported Cooperative Work (CSCW)

University of Calgary, Calgary, AB, Canada, GPA: 3.85/4.00

Thesis advisor: Dr. Anthony Tang

Thesis title: *Elevating Communication, Collaboration, and Shared Experiences between Peers in Mobile Video Communication using Drones*

### B.Sc. in Computer Science (with First-Class Honours)

Sep. 2011 - Apr. 2014

Concentration: Human-Computer Interaction (HCI)

University of Calgary, Calgary, AB, Canada, GPA: 3.75/4.00

Honours thesis title: *Improving Collaboration in Online Group Art Therapy*

Extracurricular activities: RezNet, UCalgaryCares

## Computer Science (University Transfer)

Sep. 2010 - Apr. 2011

Mount Royal University, Calgary, AB, Canada, GPA: 3.96/4.00

Extracurricular activities: Students in Free Enterprise (SIFE MRU)

## WORK EXPERIENCE

### User Experience (UX) Researcher III (Contractor via Adecco)

Nov. 2021 - present

Google – Stadia Team, Los Angeles, CA, USA

Working on UX research to help build and improve tools used by game developers and publishers to develop and port their games to the cloud-gaming service.

**JEM Research Intern** – with Dr. Andy Wilson, Dr. Kori Inkpen, Dr. John Tang, Dr. Sasa Junuzovic, and Greg Baribault (Microsoft Teams product group) Jun. 2021 - Oct. 2021

Microsoft Research (MSR) – Extended Perception, Interaction & Cognition (EPIC) Group, Redmond, WA, USA

Worked on research exploring how to improve hybrid meetings, video conferencing, and the future of work, in collaboration with the Microsoft Teams product group, the MSR Extended Perception, Interaction & Cognition (EPIC) research group, and the MSR Cambridge Socially Intelligent Meetings research group.

**Graduate (M.Sc./Ph.D.) Researcher** – Supervised by Dr. Anthony Tang

Sep. 2014 - Jun. 2021

University of Calgary Department of Computer Science – Interactions Lab (iLab), Calgary, AB, Canada

Worked on research projects related to telepresence, video communication, remote collaboration robotics (e.g., telepresence robots, drones), and emergency response. Designed, implemented, and evaluated research prototypes; conducted experiments using various research methodologies; collaborated with other students, post-docs, and professors; written and published papers and posters at top-tier venues; presented and demoed at workshops and conferences; and helped other colleagues with their presentations and written work.

**Visiting Ph.D. Scholar** – Supervised by Dr. Carman Neustaedter Apr. 2017 - Aug. 2018, Jan. 2019 - Jun. 2021

Simon Fraser University School of Interactive Arts & Technology – Connections Lab (cLab), Surrey, BC, Canada

Worked in collaboration with my Ph.D. co-supervisor and other students in the lab on research related to telepresence, remote collaboration, and social computing.

**Research Intern** – Supervised by Dr. Sean Rintel

Jul. 2019 - Sep. 2019

Microsoft Research (MSR) Cambridge – Socially Intelligent Meetings Project, Cambridge, England, UK

Worked on a research project titled “VROOM” (Virtual Robot Overlay for Online Meetings): a two-way extended-reality (XR) telepresence-robot augmentation utilizing an augmented-reality (AR) avatar overlay, immersive virtual reality (VR), and 360° video streaming. We built VROOM as a technology probe to study how pairs of users adapt to different styles of remote collaboration and ‘belonging to a space’.

**Research Intern** – with Ignacio Avellino, Dr. Cédric Fleury, Dr. Michel Beaudouin-Lafon, Dr. Joseph Malloch, & Dr. Wendy Mackay

Apr. 2016 - Sep. 2016

Inria Saclay – ExSitu Group, Orsay, France

Worked on research involving the design and development of a telepresence system for distributed workrooms with large wall displays. Our explorations involved the use of motion-capture systems (e.g., VICON), moving on-screen videos, and telepresence robots acting as physical surrogates for remote users. Helped prototype input devices and run a user study on remote collaboration through large wall displays.

**Teaching Assistant** – CPSC 481: Human-Computer Interaction I Sep. 2015 – Dec. 2015  
*University of Calgary Department of Computer Science, Calgary, AB, Canada*

Assisted students with their project work; provided feedback on students' work; taught material not taught in lectures; taught programming and development in Microsoft Visual Studio and Expression Blend; prepared tutorial slides; evaluated students' work (portfolios, presentations, and assignment deliverables).

**Undergraduate Researcher** – Supervised by Dr. Anthony Tang Nov. 2012 – Aug. 2014  
*University of Calgary Department of Computer Science – Interactions Lab (iLab), Calgary, AB, Canada*

Worked on undergraduate research projects on remote group art therapy, physical and tangible gaming using Sphero robots, and camera work in mobile video communication.

**Web Developer Intern** Jul. 2012 - Nov. 2012  
*E-Patches and Crests, Sylvan Lake, AB, Canada*

Assisted in developing and maintaining the company's website; helped implement an online checkout system for custom orders; and updated online newsletters and the website's main stylesheet. Wrote code using PHP, MySQL, HTML, and CSS.

**RezNet Technician** Sep. 2011 - Apr. 2012  
*University of Calgary Residence Services, Calgary, AB, Canada*

Assisted students living in residence with connecting to the Internet and opening IT accounts; troubleshoot network issues; and updated software on students' computers.

## PERSONAL PROJECTS

**XRmas: XR Multi-Agency Spaces for Remote Family Meetings during Christmas** Nov. 2020 - Jul. 2021  
*In collaboration with Yaying Zhang (Microsoft) and Sean Rintel (Microsoft Research Cambridge)*

Video demo: <https://youtu.be/vsGzLRctESA> Project page: <https://tinyurl.com/xrmas-proj>

An XR telepresence system that allows a remote family member to visit their loved one's home during Christmas. XRmas enables a remote (VR) user to visit the living room of a local (HoloLens and smartphone-AR) user and interact in a virtual augmented space together in a Christmas context. The remote user can spawn virtual gifts, decorate the room with virtual ornaments, and light up the Christmas tree in the local user's room via IoT.

## PUBLICATIONS

### Journal Articles (refereed):

Dash, P., Neustaedter, C., **Jones, B.**, and Yip, C. (2022). The Design and Evaluation of Emergency Call Taking User Interfaces for Next Generation 9-1-1. To appear in *Frontiers in Human Dynamics, Digital Impacts*.

**Jones, B.**, Tang, A., and Neustaedter, C. (2022). RescueCASTR: Exploring Photos and Live Streaming to Support Contextual Awareness in the Wilderness Search and Rescue Command Post. To appear in *Proceedings of the ACM on Human-Computer Interaction (CSCW 2022)*, ACM.

**Jones, B.**, Zhang, Y., Wong, P.N.Y., and Rintel, S. (2021). Belonging There: VROOM-ing into the Uncanny Valley of XR Telepresence. In *Proceedings of the ACM on Human-Computer Interaction, 5 (CSCW1)*, ACM.

**Jones, B.**, Tang, A., and Neustaedter, C. (2020). Remote Communication in Wilderness Search and Rescue: Implications for the Design of Emergency Distributed-Collaboration Tools for Network-Sparse Environments. In *Proceedings of the ACM on Human-Computer Interaction*, 4 (GROUP), ACM.

Yang, L., **Jones, B.**, Neustaedter, C., and Singhal, S. (2018). Shopping Over Distance through a Telepresence Robot. In *Proceedings of the ACM on Human-Computer Interaction*, 2 (CSCW), ACM. (Acceptance rate: 25.5% - 184/722)

#### **Archival Conference Papers\* (refereed):**

**Jones, B.**, Maiero, J., Mogharrab, A., Aguilar, I.A., Adhikari, A., Riecke, B.E., Kruijff, E., Neustaedter, C., and Lindeman, R.W. (2020). FeetBack: Augmenting Robotic Telepresence with Haptic Feedback on the Feet. In *Proceedings of the 2020 ACM International Conference on Multimodal Interaction (ICMI 2020)*, ACM, 194-203. (Acceptance rate: 29% - 65/159)

Heshmat, Y., **Jones, B.**, Xiong, X., Neustaedter, C., Tang, A., Riecke, B.E., and Yang, L. (2018). Geocaching with a Beam: Shared Outdoor Activities through a Telepresence Robot with 360 Degree Viewing. In *Proceedings of the 2018 ACM Conference on Human Factors in Computing Systems (CHI 2018)*, ACM. (Acceptance rate: 25.7% - 666/2592)

Neustaedter, C., **Jones, B.**, O'Hara, K., and Sellen, A. (2018). The Benefits and Challenges of Video Calling for Emergency Situations. In *Proceedings of the 2018 ACM Conference on Human Factors in Computing Systems (CHI 2018)*, ACM. (Acceptance rate: 25.7% - 666/2592) - **Honourable Mention Award (top 5% of all submissions)**

**Jones, B.**, Dillman, K., Tang, R., Tang, A., Sharlin, E., Oehlberg, L., Neustaedter, C., and Bateman, S. (2016). Elevating Communication, Collaboration, and Shared Experiences in Mobile Video through Drones. In *Proceedings of the 2016 ACM Conference on Designing Interactive Systems (DIS 2016)*, ACM, 1123-1135. (Acceptance rate: 26% - 107/418)

**Jones, B.**, Witcraft, A., Bateman, S., Neustaedter, C., and Tang, A. (2015). Mechanics of Camera Work in Mobile Video Collaboration. In *Proceedings of the 2015 ACM Conference on Human Factors in Computing Systems (CHI 2015)*, ACM, 957-966. (Acceptance rate: 23% - 486/2120)

#### **Book Chapters:**

**Jones, B.**, Tang, A., Neustaedter, C., Antle, A.N., and McLaren, E.S. (2020). Designing Technology for Shared Communication and Awareness in Wilderness Search and Rescue. In McCrickard, S., Jones, M., and Stelter, T. (Eds.), *HCI Outdoors: Theory, Design, Methods and Applications*, Springer, 175-194.

Neustaedter, C., Heshmat, Y., **Jones, B.**, Forghani, A., and Xiong, X. (2020). Shared Family Experiences over Distance in the Outdoors. In McCrickard, S., Jones, M., and Stelter, T. (Eds.), *HCI Outdoors: Theory, Design, Methods and Applications*, Springer, 155-174.

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\* Due to the fast-paced nature of research in my discipline, some conference publication venues are considered equivalent in rank to journals: [https://scholar.google.com/citations?view\\_op=top\\_venues&hl=en&vq=eng\\_humancomputerinteraction](https://scholar.google.com/citations?view_op=top_venues&hl=en&vq=eng_humancomputerinteraction)

Hankinson, S.P., **Jones, B.**, and Collie, K. (2017). Adapting Art Therapy for Online Groups. In Brooke, S.L. (Ed.), *Combining the Creative Therapies with Technology: Using Social Media and Online Counseling to Treat Clients*, Charles C. Thomas Publisher Ltd., 34-52.

#### **Non-Archival Conference Papers (refereed):**

Zhang, Y., **Jones, B.**, Rintel, S., and Neustaedter, C. (2021). XRmas: Extended Reality Multi-Agency Spaces for a Magical Remote Christmas. In *Companion of the 2021 ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2021)*, ACM.

**Jones, B.**, Zhang, Y., Wong, P.N.Y., and Rintel, S. (2020). VROOM: Virtual Robot Overlay for Online Meetings. In *Extended Abstracts of the 2020 ACM Conference on Human Factors in Computing Systems (CHI 2020)*, ACM. (Acceptance rate: 41.8% - 323/772)

**Jones, B.**, Tang, A., Neustaedter, C., Antle, A.N., and McLaren, E.S. (2018). Designing a Tangible Interface for Manager Awareness in Wilderness Search and Rescue. In *Companion of the 2018 ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2018)*, ACM, 161-164. (Acceptance rate: 28% - 1847/6682)

**Jones, B.**, Dillman, K., Manesh, S.A., Sharlin, E., and Tang, A. (2014). Designing an Immersive and Entertaining Pervasive Gameplay Experience with Spheros as Game and Interface Elements. In *Proceedings of the 2014 ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (CHI PLAY 2014)*, ACM, 425-426. (Acceptance rate: 30% - 233/778)

**Jones, B.**, Hankinson, S.P., Collie, K., and Tang, A. (2014). Supporting Non-Verbal Visual Communication in Online Group Art Therapy. In *Extended Abstracts of the 2014 ACM Conference on Human Factors in Computing Systems (CHI 2014)*, ACM, 1759-1764. (Acceptance rate: 31% - 1000/3200)

#### **Doctoral Consortium (peer reviewed):**

**Jones, B.** (2018). Designing for Distributed Collaboration in Wilderness Search and Rescue. In *Companion of the 2018 ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2018; Doctoral Colloquium)*, ACM, 77-80.

#### **Workshop Papers (peer reviewed):**

Zhang, Y., **Jones, B.**, and Rintel, S. (2021). XRmas: Virtual Augmented Experience for Remote Family Meetings during Christmas. (Video abstract for workshop). In *Social VR: A New Medium for Remote Communication and Collaboration (Workshop at CHI 2021)*.

**Jones, B.**, Zhang, Y., Wong, P.N.Y., Rintel, S., and Heshmat, Y. (2020). VR-Enabled Telepresence as a Bridge for People, Environments, and Experiences. In *Social VR: A New Medium for Remote Communication and Collaboration (Workshop at CHI 2020)*.

Zhang, Y. and **Jones, B.** (2020). Virtual Reality for Telecommuting. In *Social VR: A New Medium for Remote Communication and Collaboration (Workshop at CHI 2020)*.

Heshmat, Y., **Jones, B.**, and Neustaedter, C. (2020). 360° View for Sharing Geocaching Experience with a Telepresence Robot. In *Social VR: A New Medium for Remote Communication and Collaboration (Workshop at CHI 2020)*.

**Jones, B.**, Tang, A., and Neustaedter, C. (2019). Drones for Remote Collaboration in Wilderness Search and Rescue. In *iHDI: International workshop on Human-Drone Interaction (Workshop at CHI 2019)*.

**Jones, B.**, Tang, A., and Neustaedter, C. (2018). Designing Outdoor Remote-Communication Tools for Serious Collaborative Activities. In *HCI Outdoors: A CHI 2018 Workshop on Understanding Human-Computer Interaction in the Outdoors*.

**Jones, B.**, and Tang, A. (2015). Improving Collaboration and Shared Experiences in Out-and-About Mobile Video Conferencing. In *Everyday Telepresence: Emerging Practices and Future Research (Workshop at CHI 2015)*.

#### Technical Reports:

Neustaedter, C., **Jones, B.**, O'Hara, K., and Sellen, A. (2017). An Analysis of Next Generation 9-1-1: Video Calling for Emergency Situations. *Connections Lab Technical Report 2017-0605-01*, Simon Fraser University.

#### Theses:

**Jones, B.** (2021). Designing Remote Collaboration Technologies for Wilderness Search and Rescue. *Ph.D. Dissertation*, University of Calgary.

**Jones, B.** (2016). Elevating Communication, Collaboration, and Shared Experiences between Peers in Mobile Video Communication using Drones. *M.Sc. Thesis*, University of Calgary.

**Jones, B.** (2014). Improving Collaboration in Online Group Art Therapy. *B.Sc. Honours Thesis*, University of Calgary.

## TALKS AND PRESENTATIONS

**Belonging There: VROOM-ing into the Uncanny Valley of XR Telepresence** Oct. 2021  
*CSCW 2021 Paper Presentation*, Online/Virtual Conference

**Bridging People and Places through Telepresence** Mar. 2021  
*Invited Talk: Michigan Information Interaction (Mi2) Lab, University of Michigan, Ann Arbor, MI, USA (Online Talk)*

**FeetBack: Augmenting Robotic Telepresence with Haptic Feedback on the Feet** Oct. 2020  
*ICMI 2020 Paper Presentation*, Online/Virtual Conference

**VR-Enabled Telepresence as a Bridge for People, Environments, and Experiences** Apr. 2020  
*CHI 2020 Workshop Presentation*, Online/Virtual Workshop  
Workshop: Social VR: A New Medium for Remote Communication and Collaboration

**Remote Communication in Wilderness Search and Rescue** Jan. 2020  
*GROUP 2020 Paper Presentation*, Sanibel, FL, USA

<b>Designing for Remote Communication, Collaboration, and Telepresence in the Outdoors</b> <i>Invited Talk: Participatory Information Technology (PIT) Research Centre, Aarhus Universitet, Aarhus, Denmark</i>	Oct. 2019
<b>Designing for Remote Communication, Collaboration, and Telepresence in the Outdoors</b> <i>Invited Talk: ExSitu Group, Inria Saclay &amp; Université Paris-Saclay, Orsay, France</i>	Oct. 2019
<b>Drones for Remote Collaboration in Wilderness Search and Rescue</b> <i>CHI 2019 Workshop Presentation, Glasgow, Scotland, UK</i> Workshop: iHDI: International workshop on Human-Drone Interaction	May 2019
<b>Designing a Tangible Interface for Manager Awareness in Wilderness Search and Rescue</b> <i>CSCW 2018 Poster, Jersey City, NJ, USA</i>	Nov. 2018
<b>Designing for Distributed Collaboration in Wilderness Search and Rescue</b> <i>CSCW 2018 Doctoral Colloquium and Poster, Jersey City, NJ, USA</i>	Nov. 2018
<b>Designing Outdoor Remote-Communication Tools for Serious Collaborative Activities</b> <i>CHI 2018 Workshop Presentation, Montréal, QC, Canada</i> Workshop: HCI Outdoors: A CHI 2018 Workshop on Understanding Human-Computer Interaction in the Outdoors	Apr. 2018
<b>Elev. Communication, Collaboration, and Shared Experiences in Mobile Video through Drones</b> <i>DIS 2016 Paper Presentation, Brisbane, QLD, Australia</i>	Jun. 2016
<b>Mechanics of Camera Work in Mobile Video Collaboration</b> <i>CHI 2015 Paper Presentation, Seoul, South Korea</i>	Apr. 2015
<b>Improving Collaboration and Shared Experiences in Out-and-About Mobile Video Conferencing</b> <i>CHI 2015 Workshop Presentation, Seoul, South Korea</i> Workshop: Everyday Telepresence: Emerging Practices and Future Research Directions	Apr. 2015
<b>Designing an Immersive and Entertaining Pervasive Gameplay Experience with Spheros</b> <i>CHI PLAY 2014 Madness Presentation, Poster, and Demo, Toronto, ON, Canada</i>	Oct. 2014
<b>Designing an Immersive and Entertaining Pervasive Gameplay Experience with Spheros</b> <i>SurfNet 2014 Poster and Demo, Calgary, AB, Canada</i>	Oct. 2014
<b>Collaboration in Mobile Video Conferencing</b> <i>SurfNet 2014 Madness Presentation, Calgary, AB, Canada</i>	Oct. 2014
<b>Supporting Non-Verbal Visual Communication in Online Group Art Therapy</b> <i>CHI 2014 Poster, Toronto, ON, Canada</i>	Apr. 2014
<b>Non-Verbal Visual Communication in Online Art Therapy</b> <i>University of Calgary SU Undergraduate Research Symposium Poster, Calgary, AB, Canada</i>	Nov. 2013

## OTHER CONTRIBUTIONS

### Prototypes for Online Art Therapy Tools

Feb. 2019

*Digital International Creative Arts Therapies Symposium (DICATS)*, Online/Virtual Conference  
*Presentation of work in collaboration with Sara Prins Hankinson, Kate Collie, and Anthony Tang.*  
*Presented by Sara Prins Hankinson.* <https://youtu.be/S9QMUHKLRWU>

## COMMUNITY AND VOLUNTEER EXPERIENCE

### Conference and Journal Reviewer – multiple occasions

2014 - present

*Conferences: CSCW 2021, CHI 2021, CSCW 2020, RO-MAN 2020, DIS 2020, CHI 2020, GROUP 2020, UIST 2019, DIS 2019, CHI 2019, MobileHCI 2018, CSCW 2018, DIS 2018, CHI 2018, TEI 2018, ISS 2017, RO-MAN 2017, CHI 2017, CHI 2015*

*Journals: IEEE Robotics and Automation Letters (RA-L), International Journal of Human-Computer Studies (IJHCS), Journal on Multimodal User Interfaces (JMUI)*

Reviewed papers submitted to top international conferences and journals in the fields of Human-Computer Interaction (HCI), Computer-Supported Cooperative Work (CSCW), and Human-Robot Interaction (HRI).

### Associate Chair (AC) – multiple occasions

2018 - 2021

*ACM CHI Conference, Late-Breaking-Work (LBW) Track*

Assign and manage reviewers for the LBW track for the ACM CHI conference.

### Program Committee (PC) Meeting Student Volunteer Assistant – multiple occasions

2019 - 2020

*ACM DIS Conference*

Assist Session Chairs and the Technical Chairs during the PC meeting for the ACM DIS conference.

### Student Volunteer – multiple occasions

2014 - 2020

*Conferences: GROUP 2020, CHI 2019, CHI 2018, DIS 2016, CHI 2015, CHI PLAY 2014*

Assisted with tasks that kept the conferences running. Duties included (but were not limited to): telepresence assistance; workshop assistance; session monitoring; and assistance with demo and poster receptions.

### Telepresence Assistant

May 2019

*ACM CHI Conference 2019*

Assisted the telepresence chairs in providing opportunities to allow some attendees to attend and participate in conference and workshop activities remotely.

### Graduate College Scholar

Sep. 2018 - Dec. 2018

*University of Calgary Graduate College*

The College is a cohort of graduate students at the University of Calgary who strive to connect the university and city communities and promote discourse on important and challenging topics. As a member, I served on a subcommittee, helped organize events on and off campus, and volunteered in the community.

### Residence Move-In Volunteer

Sep. 2012 and Aug. 2015

*University of Calgary Residence Services, Calgary, AB, Canada*

Helped residence students move their belongings into their suites on Move-In Day.



- Volunteer** – multiple occasions Oct. 2011 – Aug. 2014  
*University of Calgary Centre for Community-Engaged Learning, Calgary, AB, Canada*  
 Sample duties: helped build an elementary-school playground; helped sort clothing at the Mustard Seed; helped recruit for UCalgaryCares programs; helped sort flood-relief donations at the Siksika First Nation.
- Volunteer** Aug. 2013  
*Alberta Flood Aid Benefit Concert, Calgary, AB, Canada*  
 Helped clean up the field; set up the VIP area; and directed parking.
- Flood-Relief Volunteer** Jun. 2013  
*The City of Calgary, Calgary, AB, Canada*  
 Helped clean up homes in two neighbourhoods on two separate days after the June 2013 flooding in Calgary.
- Relay for Life Volunteer** – multiple occasions Jun. 2008 – Apr. 2013  
*Canadian Cancer Society, Strathmore, AB, Canada and Calgary, AB, Canada*  
 Helped set up and run five Relay for Life events in Strathmore and at the University of Calgary.
- UCalgaryCares Costa Rica Volunteer** May 2012  
*University of Calgary Centre for Community-Engaged Learning, Isla Chira, Costa Rica.*  
 Travelled with a group of other students to Costa Rica for two weeks to complete numerous volunteer projects for an elementary school and a lodge in a rural island community. The projects involved painting classrooms, sidewalks, fence posts, and bedrooms; repainting a basketball court; and building a bus stop.
- Web Developer** Sep. 2010 - Apr. 2011  
*Students in Free Enterprise at Mount Royal University (SIFE MRU), Calgary, AB, Canada*  
 Set up and maintained the organization's team wiki; assisted with the development of the organization's website.

## HONOURS AND AWARDS

<b>NSERC Postgraduate Doctoral Scholarship (PGS-D)</b> (\$21,000/year)	2018 - 2021
<b>Alberta Innovates Graduate Student Scholarship</b> (\$31,500/year)*	2018 - 2020
<b>U of C Eyes High Doctoral Recruitment Scholarship</b> (\$25,000/year)*	2017 - 2020
<b>Alberta Graduate-Student Scholarship</b> (\$3000)	2016
<b>U of C Computer Science Department Research Award</b> (\$1500)	2015
<b>Alberta Innovates-Technology Futures Graduate Student Scholarship</b> (\$26,500/year)	2014 - 2016
<b>NSERC Undergraduate Student Research Award (USRA)</b> (\$6000 for 4 months)	2014
<b>Queen Elizabeth II Graduate Scholarship</b> (\$10,800)†	2014
<b>U of C SU Undergraduate Research Symposium - GSA Award Honourable Mention</b> (\$500)	2013
<b>NSERC Undergraduate Student Research Award (USRA)</b> (\$5700 for 4 months)	2013
<b>Jason Lang Scholarship</b> (\$1000)	2012 and 2013
<b>Louise McKinney Scholarship</b> (\$2500)	2011

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\* Reduced to top-up.

† Awarded but not disbursed.

## PRESS COVERAGE

<b>Metaphorigins (podcast)</b> "S3E6: Tripping Takeoffs & The Interface of Art and Science" <a href="https://www.kjbmercurio.com/episode26">https://www.kjbmercurio.com/episode26</a>	Apr. 2021
<b>Microsoft Research (blog)</b> "VROOM: Giving body to telepresence" <a href="https://aka.ms/AA8bj56">https://aka.ms/AA8bj56</a>	May 2020
<b>Microsoft Vancouver (blog)</b> "Connection is everything" <a href="https://mcec.microsoft.ca/blog/connection-is-everything/">https://mcec.microsoft.ca/blog/connection-is-everything/</a>	Feb. 2020
<b>CBC Spark (radio)</b> "It's a bird, it's a plane, it's...a drone video conferencing system!" <a href="http://www.cbc.ca/1.3270846">http://www.cbc.ca/1.3270846</a>	Oct. 2015
<b>CBC News (article)</b> "Drone study looks to revolutionize video-conferencing" <a href="http://www.cbc.ca/1.3209183">http://www.cbc.ca/1.3209183</a>	Aug. 2015

## SELECTED SKILLS AND QUALIFICATIONS

### Human-Computer Interaction:

User Experience (UX) Research, UX Design, Prototyping, Lab Experiments, Field Studies, Observation Studies, Interview Studies, Survey Research, Ethnographic Methods, Qualitative Methods, Quantitative Methods, Mixed Methods

### Programming languages, tools, platforms, and environments:

Unity, JavaScript, Node.js, C#, .NET, Visual Studio, Expression Blend, Objective-C, Swift, iOS, PHP, MySQL, HTML, HTML5, CSS, Java, Python, C, C++, Assembly

### Technologies:

Extended Reality (XR/AR/VR/MR) Development (HoloLens, Windows Mixed Reality VR, Oculus Quest), WebRTC Development, Robotics Programming, Hardware Prototyping, 3D Printing, Physical Prototyping, Arduino, VICON Motion Capture, Microsoft Kinect

### Computing Science:

Computer Graphics, Algorithms, Computer Vision

### Software Engineering:

UML, Object-Oriented Design, Git

### Other:

Teaching, Supervision, Technical Communication, Video Editing, Photo Editing, Oral Communication