Brennan Jones

https://brennanjones.com/
bdgjones@ucalgary.ca

User experience (UX) researcher passionate about designing and evaluating technologies for people, for the future, and for the greater good. Experienced in running user studies, conducting empirical research, analyzing data, and prototyping. Trained as a computer scientist, developer, designer, researcher, and communicator. Blowing minds and warming hearts.

EDUCATION

Ph.D. in Computer Science (HCI), University of Calgary, Canada (GPA: 4.00/4.00) **2017.4 – 2021.6**
*Supervisory Committee: Dr. Anthony Tang (University of Toronto), Dr. Carman Neustaedter (Simon Fraser University), Dr. Ehud Sharlin, Dr. Wesley Willett; **Thesis:** Designing Remote Collaboration Technologies for Wilderness Search and Rescue*

M.Sc. in Computer Science (HCI), University of Calgary, Canada (GPA: 3.85/4.00) **2014.9 – 2016.12**
*Thesis Advisor: Dr. Anthony Tang; **Thesis:** Elevating Communication, Collaboration, and Shared Experiences between Peers in Mobile Video Communication using Drones*

B.Sc. in Computer Science (with First-Class Honours), University of Calgary, Canada (GPA: 3.75/4.00) **2011.9 – 2014.4**
*Concentration: Human-Computer Interaction; **Courses:** HCI, HRI, Computer Graphics, Software Engineering; **Extracurricular Activities:** RezNet, UCalgaryCares; **Honours Thesis:** Improving Collaboration in Online Group Art Therapy*

WORK EXPERIENCE

UX Researcher III (Contractor via Adecco), *Stadia Team, Google* **Starting 2021.11**
Will be working to support developer-facing UX research work on the cloud-gaming service.

JEM Research Intern, *Microsoft Research (MSR) Redmond* **2021.6 – 2021.10**
Working 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.

Research Intern, *Microsoft Research (MSR) Cambridge* **2019.7 – 2019.9**
Built a research prototype titled "VROOM" (Virtual Robot Overlay for Online Meetings): a two-way **XR** robotic telepresence prototype. Conducted a **mixed-methods study** to understand how pairs of users adapt to different styles of remote collaboration and 'belonging to a space'.

Visiting PhD Scholar, *School of Interactive Arts + Technology (SIAT), Simon Fraser University* **2017.4 – 2021.6**
Collaborated with PhD co-supervisor and colleagues on telepresence and remote collaboration research.

Research Intern, *Inria Saclay* **2016.4 – 2016.9**
Built a prototype of a remote-collaboration platform for distributed workrooms with large wall-size displays, using motion-capture cameras, video communication, and telepresence robots. Helped prototype input devices and run a user study on remote collaboration through large wall-size displays.

Teaching Assistant, *Dept. of Computer Science, University of Calgary* **2015.9 – 2015.12**
Taught student labs and tutorials for CPSC 481 (Introduction to **Human-Computer Interaction**); assisted students with their project work; taught UI/UX programming and development.

Researcher (HCI/CSCW), *Interactions Lab (iLab), Dept. of Computer Science, University of Calgary* **2012.11 – 2021.6**
Worked on research related to remote collaboration, robotics, and emergency response; designed, built, and evaluated research prototypes; published at top-tier venues (e.g., ACM CHI, CSCW).

SELECTED RESEARCH HIGHLIGHTS

Designing Remote Collaboration Technologies for Wilderness Search and Rescue (WSAR) **2017.4 – 2021.6**

Lead Researcher, Lead Designer, Lead Developer; `Qualitative Research`, **Interviews**, `Contextual Inquiry`, `WebGL`, `Unity 3D (C#)`

For my PhD thesis, I focused on advancing understanding of how to design technologies to better support **remote collaboration** between WSAR responders. I conducted **interviews** with WSAR workers and an **observation study** of WSAR training to better understand WSAR workers' needs and challenges. Following this, I **designed**, **prototyped**, and **evaluated** an interface that aims to enhance WSAR commanders' awareness of search operations through body-camera footage.
*Project Page:* **https://tinyurl.com/wsar-collab**

Publication: **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 *PACMHCI, 4 (GROUP)*, ACM.

VROOM: Virtual Robot Overlay for Online Meetings (Microsoft Research Cambridge)   2019.7 – 2021.4

Lead Researcher, Designer, Developer; Mixed-Methods Research, Interviews, XR, Telepresence, HoloLens, WMR, Unity 3D (C#)
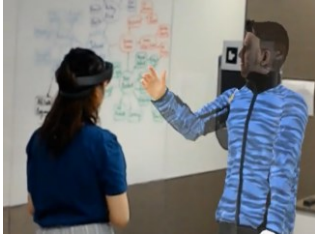
A two-way **XR** robotic telepresence technology probe, and subsequent **mixed-methods study** to understand its use by local and remote users working together on dynamic collaborative activities. By attaching a 360° camera to a telepresence robot, we provide the remote user with **enhanced vision** of the local environment, through which they can freely explore in **VR**. We also superimpose an avatar of the remote user into the local space over the robot, which the local user can see in **AR** through a HoloLens, allowing the remote user to be more expressive in the local environment.

Video Demo: **https://youtu.be/9ZZ-YdUU01w** | *Project Page:* **https://aka.ms/vroom-mrp**

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

FeetBack: Augmenting Robotic Telepresence with Haptic Feedback on the Feet   2017.11 – 2020.10

Researcher; Quantitative Research, Telepresence, Sensor Technologies, Robotics, Hardware Design and Prototyping

A foot-based **haptic-feedback** system for use when operating a telepresence robot. Users place their feet inside a platform that provides awareness of nearby obstacles through vibration and collision feedback on their feet. The purpose is to enhance **spatial presence** and **awareness** of obstacles when operating a telepresence robot in a crowded environment. Ran a **mixed-methods study** to understand this system's impacts on navigation and presence.

Project Page: **https://tinyurl.com/feetbacktp**

Publication: **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 *Proc. ICMI '20*, ACM.

Emergency Video Calling   2017.5 – 2017.12

Researcher; Qualitative Research, Interviews, Contextual Inquiry

A contextual-interview study of emergency call takers and dispatchers. We spent time at three 9-1-1 call centres in western Canada to observe the work of call-takers and dispatchers, and to conduct in-situ interviews with them, in order to explore the potential benefits and challenges of introducing video to emergency calls. This study primarily focused on the perspective of those at the call centre, while future studies looked into the additional perspective of the caller.

Publication: Neustaedter, C., **Jones, B.**, O'Hara, K., and Sellen, A. (2018). The Benefits and Challenges of Video Calling for Emergency Situations. In *Proc. CHI 2018*, ACM.

Drone-Supported Video Conferencing   2015.1 – 2016.12

Lead Researcher, Lead Designer, Lead Developer; Qualitative Research, Telepresence, Video Communication, Drones, Robotics, iOS Mobile Development (Objective-C, Swift, C), Web App Development (JavaScript, HTML5, CSS)

This project studied the use of semi-autonomous drones for video conferencing, where an outdoor user (using a smartphone) is connected to a desktop user (e.g., who is at home or in an office) who can explore the environment from the drone's perspective. The purpose is to support serious collaborative activities where an outdoor user could benefit from a remote expert's assistance (e.g., worksite inspection, search and rescue), as well as outdoor leisurely activities (e.g., hiking) between a local user and a remote friend or family member. Ran a **qualitative study** to evaluate this system's use by friends and family members in remote outdoor activities.

Video Demo: **https://youtu.be/CejNLVO53lc** | *Project Page:* **https://tinyurl.com/dronevc**

Publication: **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 *Proc. DIS 2016*, ACM.

SELECTED SKILLS AND QUALIFICATIONS

Human-Computer Interaction:
UX Research, UX Design, Prototyping, Lab Experiments, Field Studies, Observation Studies, Interviews, Contextual Inquiry, Ethnographic Methods, Qualitative Methods, Quantitative Methods, Mixed Methods, Data Analysis, Statistical Analysis, Thematic Analysis

Programming languages, tools, platforms, and environments:
Unity, JavaScript, Node.js, C#, .NET, Visual Studio, Objective-C, Swift, iOS, PHP, MySQL, HTML, HTML5, CSS, Java, C, C++, Python

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