Jessica Ip

www.jessicaip.ca
jessica_ip@brown.edu

Education

Brown University — Providence, RI, USA
Ph.D. in Cognitive Science — 08/2021 – 05/2026
Advisors: Dr. William Heindel, Dr. Elena Festa

University of British Columbia (UBC) — Vancouver, Canada
B.A. with Class 1 Standing in Cognitive Systems — 05/2020
Advisors: Dr. Ronald A. Rensink, Dr. Karon E. MacLean

Research Experience

Aging and Cognition Lab, Brown CLPS — Providence, RI, USA
PhD Researcher with Dr. William Heindel and Dr. Elena Festa — 05/2022 – Present
Topics: Aging Neuroscience, Perception, Cognition

Perception, Action, and Cognition Lab, Brown CLPS — Providence, RI, USA
PhD Researcher with Dr. Joo-Hyun Song — 08/2021 – 05/2022
Topics: Perception, Action, Cognition

Visual Cognition Lab, UBC Psychology — Vancouver, Canada
Project Leader and Research Assistant with Dr. Ronald A. Rensink — 09/2016 – 04/2021

- Investigated human perception of correlation in data visualizations using applied research methods from psychophysics. Studied feature and conjunction search and the role of attention in visual search. Led and managed a team of undergraduate researchers for nine academic terms.

Topics: Information Visualization, Perceptual Processing, Psychophysics, Vision Science

Max Planck Institute for Intelligent Systems & UBC — Vancouver, Canada
Research Assistant with Dr. Karon E. MacLean and Dr. Hasti Seifi — 04/2018 – 08/2019

- Designed and conducted a user study on a novel haptic device library (Haptipedia), leading to an ACM CHI '19 publication. Co-led a study on crowdsourcing incentives on Haptipedia.

Topics: Human-Computer Interaction, Haptics, Crowdsourcing

Sensory Perception & Interaction Lab, UBC Computer Science — Vancouver, Canada
Research Assistant with Dr. Karon E. MacLean and Paul Bucci — 01/2018 – 04/2018

- Investigated the display and recognition of emotion in low fidelity robot designs. Constructed simple robotic behaviors using low-cost and rapid prototyping techniques with audio and graphical interfaces.

Topics: Robotics, Low-fidelity Prototyping

Laboratory for Computational Intelligence, UBC Computer Science — Vancouver, Canada
Research Assistant with Dr. Giuseppe Carenini and Emily Hindalong — 09/2017 – 04/2018

- Studied multi-attribute utility theory (MAUT) and its employment in quantitative presentations of subjective preferences in decision-making models. Designed a usability test for the ValueCharts web application.

Topics: Web-based Interactive Visualizations, Multi-Attribute Utility Theory, Decision-Making

Moritz Lab, UBC Ophthalmology & Visual Sciences — Vancouver, Canada
Laboratory Intern with Dr. Orson Moritz — 04/2014
Topics: Visual Science, Neuro-Ophthalmology, Retinitis Pigmentosa, Macular Degeneration

Publications

Peer-Reviewed Papers

1. Seifi H., Fazlollahi, F., Oppermann, M., Sastrillo, J.A., **Ip, J.**, Agrawal, A., Park, G., Kuchenbecker, K.J., & MacLean, K.E. (2019). Haptipedia: Accelerating Haptic Device Discovery to Support Interaction and Engineering Design. Conference on Human Factors in Computing Systems (CHI'19), 1-12.

Non-Refereed Papers

1. Seifi, H., **Ip, J.**, Agrawal, A., Kuchenbecker, K. J., & MacLean, K. E. (2019). Toward Expert-Sourcing of a Haptic Device Repository. CHI Workshop on Crowds and Creativity, 1-4.

Poster Presentations and Talks

Poster Presentations

1. **Ip, J.**, Chin, N., & Rensink, R. (2021, May. 24). Correlation perception is invariant to dot size [Poster presentation]. Vision Sciences Society Symposium. Virtual.

2. **Ip, J.**, Pertels, Y., Chai, W., & Thongprasert, S. (2017, Mar. 23). Image Transitions: Visual Search in the Dynamic World. [Poster presentation]. UBC Multidisciplinary Undergraduate Research Conference. Vancouver, Canada.

3. **Ip, J.**, Tembo, T., Seifi, H., Fazlollahi, F., Oppermann, M., Sastrillo, J. A., Agrawal, A., Park, G., Kuchenbecker, K. J., & MacLean, K. M. (2019, May 1). Haptipedia: A Haptic Device Library to Support Interaction and Engineering Design. [Poster presentation]. DFP Design Showcase. Vancouver, Canada.

Talks

1. **Ip, J.**, Pertels, Y., Chai, W., & Thongprasert, S. (2017, Apr. 1). Image Transitions: Visual Search in the Dynamic World. [Oral presentation]. UBC Psychology Undergraduate Research Conference. Vancouver, Canada.

Selected Awards

Elsevier/Vision Research Virtual Travel Award 2021
NSERC Undergraduate Student Research Award ($4,500) 2019

Teaching Experience

Graduate Teaching Assistant at Brown University Providence, RI, USA
Mind, Brain and Behavior: An Interdisciplinary Approach (CLPS 0010) 09/2022 – 12/2022

- Taught a weekly section of 18 undergraduate students and graded research papers.

Directed Studies Supervisor at UBC Vancouver, Canada
Research in Cognitive Systems (COGS 402) 01/2020 – 04/2020

- Supervised a senior thesis project in vision science. Mentored and monitored student progress on experimental design, coding, analysis, and paper writing.

Workshop Instructor at UBC Visual Cognition Lab Vancouver, Canada
Workshop Series in Psychophysics and Data Analysis Methods 03/2019

Undergraduate Teaching Assistant at UBC Vancouver, Canada
Research Methods in Cognitive Systems (COGS 303) 09/2018 – 12/2018

- Graded weekly written assignments, quizzes, in-class activities, and final research reports while providing academic support for 39 students through email, weekly office hours, and exam review sessions.

Work Experience

Advesa Digital Solutions Inc. Burnaby, Canada
Technical Writer 06/2020 – Present
Wrote REST API and GUI documentation for e-commerce software.
Technology: Confluence, Postman, Swagger, JIRA

Emerging Media Lab, UBC Vancouver, Canada
Academic Assistant 11/2017 – 04/2018
Created and facilitated Virtual Reality and Brain-Computer Interface demos and workshops.
Technology: Virtual Reality (HTC ViveTM), Brain-Computer Interface (MuseTM Headband)

Volunteer Experience

Student Volunteer at ACM SIGGRAPH 08/2018
Volunteered as a docent for the CAVE project by the NYU Future Reality Lab.

Course Collaborator for Stanford Scholar 05/2016 – 08/2016
Helped produce and edit content for crowdsourced research talks.

Communications Director at Social Diversity for Children Foundation 01/2014 – 07/ 2016
Served on the executive team of a charity that empowers children with disabilities.

Technical Skills

Languages: MATLAB, R, Java, C/C++, JavaScript, HTML/CSS
Toolkit & Environments: Psychtoolbox, Excel, Git, Tableau, IntelliJ, MAXQDA, LaTeX, Arduino, Unity3D, Blender (3D Modeling), Adobe Photoshop, Adobe Illustrator, jamovi, JASP, SPSS
Research: Movement Analysis, Psychophysics, Diary Studies, User Interviews, Qualitative & Thematic Analysis, Human Data Collection