

EDUCATION

Brown University

Ph.D. in Cognitive Science

Advisors: Dr. William Heindel, Dr. Elena Festa

Providence, RI, USA

08/2021 – 05/2026

University of British Columbia (UBC)

B.A. with Class 1 Standing in Cognitive Systems

Advisors: Dr. Ronald A. Rensink, Dr. Karon E. MacLean

Vancouver, Canada

05/2020

RESEARCH EXPERIENCE

Aging and Cognition Lab, Brown CLPS

PhD Researcher with Dr. William Heindel and Dr. Elena Festa

Topics: Aging Neuroscience, Perception, Cognition

Providence, RI, USA

05/2022 – Present

Perception, Action, and Cognition Lab, Brown CLPS

PhD Researcher with Dr. Joo-Hyun Song

Topics: Perception, Action, Cognition

Providence, RI, USA

08/2021 – 05/2022

Visual Cognition Lab, UBC Psychology

Project Leader and Research Assistant with Dr. Ronald A. Rensink

- 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

Vancouver, Canada

09/2016 – 04/2021

Max Planck Institute for Intelligent Systems & UBC

Research Assistant with Dr. Karon E. MacLean and Dr. Hasti Seifi

- 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

Vancouver, Canada

04/2018 – 08/2019

Sensory Perception & Interaction Lab, UBC Computer Science

Research Assistant with Dr. Karon E. MacLean and Paul Bucci

- 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

Vancouver, Canada

01/2018 – 04/2018

Laboratory for Computational Intelligence, UBC Computer Science

Research Assistant with Dr. Giuseppe Carenini and Emily Hindalong

- 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

Vancouver, Canada

09/2017 – 04/2018

Moritz Lab, UBC Ophthalmology & Visual Sciences

Laboratory Intern with Dr. Orson Moritz

Topics: Visual Science, Neuro-Ophthalmology, Retinitis Pigmentosa, Macular Degeneration

Vancouver, Canada

04/2014

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 Mind, Brain and Behavior: An Interdisciplinary Approach (CLPS 0010) – Taught a weekly section of 18 undergraduate students and graded research papers.	Providence, RI, USA 09/2022 – 12/2022
Directed Studies Supervisor at UBC Research in Cognitive Systems (COGS 402) – Supervised a senior thesis project in vision science. Mentored and monitored student progress on experimental design, coding, analysis, and paper writing.	Vancouver, Canada 01/2020 – 04/2020
Workshop Instructor at UBC Visual Cognition Lab Workshop Series in Psychophysics and Data Analysis Methods	Vancouver, Canada 03/2019
Undergraduate Teaching Assistant at UBC Research Methods in Cognitive Systems (COGS 303) – 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.	Vancouver, Canada 09/2018 – 12/2018

WORK EXPERIENCE

Advesa Digital Solutions Inc.

Technical Writer

Wrote REST API and GUI documentation for e-commerce software.

Technology: Confluence, Postman, Swagger, JIRA

Burnaby, Canada

06/2020 – 06/2021

Emerging Media Lab, UBC

Academic Assistant

Created and facilitated Virtual Reality and Brain-Computer Interface demos and workshops.

Technology: Virtual Reality (HTC Vive™), Brain-Computer Interface (Muse™ Headband)

Vancouver, Canada

11/2017 – 04/2018

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, L^AT_EX, 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