

Education

Brown University

Ph.D., Cognitive Science

Advisors: Dr. William C. Heindel, Dr. Elena K. Festa

Providence, RI, USA

08/2021 – 05/2026

University of British Columbia (UBC)

B.A., Cognitive Systems (Class 1 Standing)

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

Vancouver, Canada

05/2020

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

1. **Ip, J.**, Heindel, W.C., & Festa, E.K. (2023). Age-Related Effects of Audiovisual Semantic Congruency on Living and Nonliving Object Perception [Conference Poster]. Cognitive Neuroscience Society (CNS) 30th Annual Meeting. San Francisco, California.
2. **Ip, J.**, Chin, N., & Rensink, R. (2021). Correlation Perception is Invariant to Dot Size [Conference Poster]. Vision Sciences Society Symposium. Virtual.
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). Haptipedia: A Haptic Device Library to Support Interaction and Engineering Design [Conference Poster]. DFP Design Showcase. Vancouver, Canada.
4. **Ip, J.**, Pertels, Y., Chai, W., & Thongprasert, S. (2017). Image Transitions: Visual Search in the Dynamic World [Conference Poster]. UBC Multidisciplinary Undergraduate Research Conference. Vancouver, Canada.
5. **Ip, J.**, Pertels, Y., Chai, W., & Thongprasert, S. (2017). Image Transitions: Visual Search in the Dynamic World [Conference Presentation]. UBC Psychology Undergraduate Research Conference. Vancouver, Canada.

Selected Awards

Manning Graduate Fellowship IV, Brown University

2022–2023

Elsevier/Vision Research Virtual Travel Award, Vision Sciences Society

2021

Undergraduate Student Research Award, NSERC (\$4,500)

2019

Research Experience

Aging and Cognition Lab, Brown CLPS

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

Providence, RI, USA

05/2022 – Present

Topics: Aging Neuroscience, Perception, Cognition

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

Vancouver, Canada

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**

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

Vancouver, Canada

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**

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

Vancouver, Canada

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**

Research Assistant with Dr. Giuseppe Carenini and Emily Hindalong

Vancouver, Canada

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**

Laboratory Intern with Dr. Orson Moritz

Vancouver, Canada

04/2014

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

Teaching Experience

Graduate Teaching Assistant at Brown University

Cognitive Neuropsychology (CLPS 1420)

Providence, RI, USA

01/2023 – 05/2023

Graduate Teaching Assistant at Brown University

Mind, Brain and Behavior: An Interdisciplinary Approach (CLPS 0010)

Providence, RI, USA

09/2022 – 12/2022

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

Directed Studies Supervisor at UBC

Research in Cognitive Systems (COGS 402)

Vancouver, Canada

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

Workshop Series in Psychophysics and Data Analysis Methods

Vancouver, Canada

03/2019

Undergraduate Teaching Assistant at UBC

Research Methods in Cognitive Systems (COGS 303)

Vancouver, Canada

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.

Technical Writer

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

Technology: Confluence, Postman, Swagger, JIRA

Burnaby, Canada

06/2020 – 06/2021

UBC Emerging Media Lab

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

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: Electroencephalography (EEG), Event-Related Potential (ERP) Analysis, Visuomotor Analysis, Psychophysics, Diary Studies, User Interviews, Qualitative and Thematic Analysis, Human Data Collection

Service

CLPS Twitter Manager, IT/Communications Committee

10/2022 – Present

Student Docent (NYU Future Reality Lab), ACM SIGGRAPH

08/2018

Course Collaborator, Stanford Scholar

05/2016 – 08/2016

Communications Director, Social Diversity for Children Foundation

01/2014– 07/2016