Jessica Ip

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Education

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

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

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 — 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

Teaching Experience

Graduate Teaching Assistant at Brown University Providence, RI, USA
Cognitive Neuropsychology (CLPS 1420) 01/2023 – 05/2023

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 – 06/2021
Wrote REST API and GUI documentation for e-commerce software.
Technology: Confluence, Postman, Swagger, JIRA

UBC Emerging Media Lab 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)

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, Pupillometry, Visuomotor Analysis, Diary Studies, User Interviews, Qualitative and Thematic Analysis

Service

CLPS Twitter Manager, IT/Communications Committee 10/2022 – 07/2023
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