Jessica Ip

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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 — 09/2015 – 05/2020
Advisors: Dr. Ronald A. Rensink, Dr. Karon E. MacLean

Research Experience

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

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