Laura M. Herman

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EDUCATION

Princeton University, Princeton, NJ
A.B. Psychology; Certificates in Neuroscience, Cognitive Science, and Cultural Studies

SEPT 2014 - JUNE 2018 | **GPA: 3.8, Cum Laude**

Departmental Thesis Award: George A. Miller Prize in Cognitive Science
Relevant Coursework: (COS 436) Human-Computer Interface Technology; (ENE 475) Human Factors– Psychology for Engineering; (ENT 201) Creativity, Innovation, and Design; (PSY 251) Quantitative Research Methods; (COS 126) General Computer Science; (ART 252) Art as Science/Science as Art

University of California, Berkeley — *Fundamentals of Human Factors & Ergonomics*

FALL 2019 | **GPA: 4.0**

Certificate program for ergonomic engineering and technical human factors.

Duke University, Paris — *Neurohumanities Program*

SUMMER 2015 | **GPA: 4.0**

Neuroscience, psychology, art, and music seminar courses.

Harvard University, Cambridge — *Neuroscience & Psychology Coursework*

SUMMER 2012, SUMMER 2013 | **GPA: 4.0**

EXPERIENCE

Adobe, San Francisco — *Experience Researcher*

JULY 2018 - PRESENT

Research Lead, Photoshop on the iPad + Illustrator on the iPad

- Led, planned, and conducted dozens of concept tests, usability tests, and ethnographic research with over 215 participants.
- Organized and executed a month-long longitudinal study with two groups of target users, including ethnographic interviews, contextual inquiries, usage analytics, diary coding, and quantitative survey design.
- Presented a set of design recommendations for each research study; collaborated with designers to implement design changes.
- Integrated research findings into engineering tracking pipeline and company-wide product feature prioritization roadmap.
- Presented research findings to Adobe's CTO, CPO, and CEO.

Experience Researcher

- Led user-centered research for company-wide VR creativity tool efforts.

- Executed benchmark tests, ethnographic research, concept tests, and usability tests for Project Aero, a design-oriented AR authoring tool.
- Developed a human-centered design pattern, informed by several research studies, that forms a framework for multisensory spatial computing.
- Ongoing HCI research collaborations with academic affiliates at Harvard, MIT, Boston University, Stanford, and University of British Columbia.

Intel, Portland — *User Experience Research Intern*

JUNE 2017 - SEPT 2017

- Completed rigorous quantitative and qualitative analyses of user biases in diversity-centric VR environments; project exhibited at SXSW and the Sundance Film Festival.
- Ideated, planned, and fully executed a VR study; evaluated using controlled biometric, qual, and quant analyses.
- Performed multiple heuristic and usability tests for smart home technologies, reporting directly to principal project engineers.
- Provided landscaping and segmentation for current and emerging social VR capabilities.
- Created a multi-pronged heuristic evaluation template for use in all internal VR studies.
- Produced latency and accuracy KPIs to inform technical decompositions for over a dozen AI and machine learning use cases.

Princeton University Psychology and Neuroscience Departments, Princeton — *Undergraduate Researcher*

SEPT 2015 - JUNE 2018

- Developed experimental design, directed trials (psychophysics, fMRI, EEG, etc.) of human subjects, and analyzed data, resulting in advances for neuropsychological cognitive research and computer vision techniques.

Université Paris Descartes Laboratoire Psychologie de Perception, Paris — *Streicker Fellow*

JUNE 2016 - SEPT 2016

- Formulated hypotheses, assisted in data collection, and performed analyses for three ongoing sub-projects within an international collaboration on visual attention research.
- Collaborated with Paris-based artists to create head-mounted displays that alter motion perception by creating equiluminance, which were subsequently exhibited at the Tate Gallery.

Harvard University Vision Sciences Laboratory, Cambridge — *Research Assistant & Data Analyst*

MAY 2012 - SEPT 2014

- Assisted in data collection and experimental procedure for ongoing psycho-physical projects.
- Independently developed a novel multisensory experiment with significant results; published and presented at numerous conferences on behalf of the laboratory.

AWARDS & FELLOWSHIPS

George A. Miller Thesis Prize in Cognitive Science

Princeton Department of Psychology Cum Laude

Streicker International Fellowship

Innovation Magazine's 25 Under 25

American Academy of Neurology Neuroscience Research Prize

Princeton's Office of the Dean of the College Undergraduate Research Award

Intel Science Talent Search Semifinalist

Art & Design of Science Award

American Synesthesia Association Student Award

Miami Herald Silver Knight Award Honorable Mention

DuPont Science Writing Prize

Junior Science, Engineering, and Humanities Symposium 1st Place

Junior Academy of Science 1st Place

PUBLICATIONS

Zhao, N., Bylinskii, Z., Kim, N. W., Pfister, H., Lau, R., **Herman, L. M.**, & Echevarria, J. (2020). ICONATE: An Automated Approach for Compound Icon Generation and Ideation. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems.* ACM. [Accepted.]

Malpica, S., **Herman, L.M.**, Wetzstein, G., Bylinskii, Z., Masia, B., Eagleman, D. Sun, Q. (2020). Has half the time passed? Investigating time perception at long time scales in Virtual Reality. *Journal of Vision*. [Accepted.]

Chen, J., Sin, F., **Herman, L. M.**, Nguyen, C., & Yoon, D. (2020). Developing Design Guidelines for AR-based Assembly Instructions: Addressing the Information Scarcity of Cutting-Edge Technology. In *Proceedings of the Designing Interactive Systems Conference.* ACM. [Under review.]

Herman, L. M., & Sherman, J. (2019). Virtual Nature: a Psychologically Beneficial Experience. In *Proceedings of the 2019 Human-Computer Interaction International Conference.*

Herman, L. M., & Hutka, S. (2019). Virtual Artistry: Virtual Reality Translations of Two-Dimensional Creativity. In *Proceedings of the 2019 on Creativity and Cognition* (pp. 612-618). ACM.

Epstein, M., & **Herman, L. M.** (2019) Location-Based Augmented Reality Journalism and Civic Participation, In *Proceedings of the 10th Media in Transition Conference*.

Herman, L. M., & Spratt, E. (2019). *The Sensus Comunis and the Eye: Reexaminations of Visual Perception and Artistic Practice*, Kunsttexte. [In press.]

Herman, L. M., Spratt, E., & Todorov, A. (2019). Art and Visual Perception: Artistic Practice Linked to Improvements in Perceptual Reorganization, *Leonardo*. [Under review.]

Connolly, S., Connolly, D., Cleary, A., **Herman, L. M.**, & Cavanagh, P. (2017). Build Your Own Equiluminance Helmet. *i-Perception*, 8(4), 2041669517716467.

Herman, L. M. (2013). "Synesthesia" Definition, *Encyclopedia Britannica*.

Herman, L. M., Suchow, J., & Alvarez, G. (2013). Frequency-based synesthetic associations between letters and colors. *Journal of Vision*, 13(9), 880.

INVITED TALKS & WORKSHOPS

Augmented World Expo Invited Talk, *"Multisensory Perception in XR: Insights from Neuroscience and User Research,"* Speaker

MAY 2020

University of California, Berkeley's School of Information: Introduction to Human-Computer Interaction Course, Guest Lecturer

NOVEMBER 2019

OpenIDEO Design Research Workshop, Speaker & Workshop Lead

AUGUST 2019

99U Conference iPad Design Workshop, Workshop Lead

MAY 2019

Princeton Design Research Day, Panel Moderator

MAY 2019

Adobe Photoshop Design Research Workshop, Speaker & Workshop Lead

JANUARY 2019

Design Thinking Workshop with Pop! Design, Facilitator

JUNE 2017

White House Women in STEM Roundtable, Speaker

MAY 2014

CONFERENCE PRESENTATIONS

Human-Computer Interaction International Conference JULY 2019
Orlando, FL

ACM Creativity & Cognition Conference — JUNE 2019
San Diego, CA

Massachusetts Institute of Technology Media in Transition Conference — MAY 2019
Cambridge, MA

Renaissance Society of America Annual Meeting — MARCH 2019
Toronto, ON

NSF Awareness to Action: Science, Art, and Sustainability — FEB 2018
Princeton, NJ

New Social Entanglements: Mixed Reality — JUNE 2017
Portland, OR

Vision Sciences Society Annual Meeting — MAY 2017
St. Pete Beach, FL

Synesthesia and Cross-Modal Perception: an International Conference — APRIL 2016
Dublin, IE

Sorbonne Neurohumanities Conference — JUNE 2015
Paris, FR

American Academy of Neurology Conference — OCT 2014
Columbus, OH

International Conference on Cognitive and Neural Systems — JUNE 2013
Boston, MA

American Synesthesia Association Annual Meeting — MAY 2013
Toronto, ON

Vision Sciences Society Annual Meeting — MAY 2013
Naples, FL

SERVICE & LEADERSHIP

Technical Paper Reviewer – *IEEE Conference on Virtual Reality and 3D User Interfaces (IEEE VR)*

Young Alumni Committee Chair – *Princeton Club of Northern California*

Regional Vice President – *Princeton Class of 2018, Bay Area*

Council Member – *Adobe Design Community Council*

Committee Member – *San Francisco ODC Dance Company*

Pro Bono Research Lead – *Walking Cinema (funded by the National Endowment for the Humanities)*

Interviewer – *Princeton Alumni Schools Committee*

Mentor – *Princeton Women in STEM*

Student Liaison – *Princeton Council for Science and Technology*

President – *Pi Beta Phi NJ Alpha Chapter*

Board Member – *Princeton Art Museum Student Advisory Board*

President – *Service in Style*

President & Co-Chair – *Fashion Speaks*

Leadership Committee Member – *Ivy Club*

Mentor - *Princeton Women's Mentorship Program*

Research Committee Member – *Princeton Neuroscience Network*

Committee Chair – *Wilson College Council*

Student Ambassador – *Princeton University Concerts*

Member – *Cognitive Science Society*

Editor-in-Chief – *Icon Magazine*

PRESS

"How Laura Herman is Addressing the Affordable Housing Crisis"
Adobe | JUNE 2019

"My Path to Human-Centered Design"
Princeton HCI Lab Blog | APRIL 2018

"Scientific Splendor: the Art of Science"
Wall Street Journal | MARCH 2018

"Fashion Speaks"
The Daily Princetonian | APRIL 2017

"25 Under 25"
Innovation Magazine | SEPTEMBER 2014

"Girls Rule at 2014 White House Science Fair"
Obama White House Archives | MAY 2014

"Fort Lauderdale Students Attend White House…"
CBS | MAY 2014

“Better than Tinted Shades: Why Some People See Time and Taste Music”
National Public Radio | SEPTEMBER 2013

“Tasting Words; DNA Art; Neuroscience on the Small Screen”
New York Times | MAY 2013

“Gifted DuPont Essay Winners Share Passions”
NASA.gov | MAY 2013

“Young Scientist has a Colorful ‘Superpower’ – and She Wants to Know Why”
Sun-Sentinel | MARCH 2013

REFERENCES

Dr. Sheryl Ehrlich
SENIOR DIRECTOR, ADOBE DESIGN RESEARCH & STRATEGY TEAM

Dr. Marshini Chetty
PROFESSOR, UNIVERSITY OF CHICAGO DEPARTMENT OF COMPUTER SCIENCE

Dr. George Alvarez
PROFESSOR, HARVARD UNIVERSITY DEPARTMENT OF PSYCHOLOGY

Dr. Alexander Todorov
ASSOCIATE CHAIR, PRINCETON UNIVERSITY DEPARTMENT OF PSYCHOLOGY

Dr. Jamie Sherman
UX RESEARCHER, INTEL CORPORATION

Dr. Zoya Bylinskii
RESEARCH AFFILIATE, MIT COMPUTER SCIENCE & ARTIFICIAL INTELLIGENCE LABORATORY
RESEARCH SCIENTIST, ADOBE

Dr. Wilmot Li
PRINCIPAL SCIENTIST, ADOBE