

Kassandra R. Lee, Ph.D.

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ACADEMIC TRAINING

University of Colorado Boulder	2024-2025
<ul style="list-style-type: none">• Research Scientist/Postdoctoral Research Fellow• Primary research: Eye selective voxels in early visual cortex	
University of Nevada, Reno	2018-2024
<ul style="list-style-type: none">• Ph.D Integrative Neuroscience• Dissertation: <i>Individual differences in face perception</i>	
Illinois State University	2014-2016
<ul style="list-style-type: none">• M.S. Cognitive and Behavioral Sciences• Thesis: <i>Ensemble Coding of Semantic Information: Are Numerical Averages Generated in Parallel?</i>	
Lycoming College	2010-2014
<ul style="list-style-type: none">• B.A. Psychology, with Honors, Dean's List, Biology Minor• Thesis: <i>Alcohol Consumption and College Adjustment among College Students by Generational Status</i>	

PUBLICATIONS AND PROCEEDINGS

1. **Lee, K.R.**, Seemiller, Eric S., Marc Winterbottom (2025). Modeling Color Vision Deficiency with Cone Contrast Triplets: Direct Scaling vs. Heuristic Remapping. *In progress*.
2. Crognale, M. A., **Lee, K.R.**, Richardson, A., Webster, M.A. (2023). The physiology and management of individual differences in color vision. *Color and Colorimetry Multidisciplinary Contributions*, GDC/AIC.
3. Richardson, A. J., **Lee, K. R.**, Crognale, M. A., & Webster, M. A. (2022). Using equiluminance settings to determine the cardinal chromatic directions for individuals. *Journal of the Optical Society of America A*, Special Issue
4. Ilic, I., **Lee, K.R.**, Mizokami, Y., Whitehead, L., & Webster, M.A. (2022). Adapting to an enhanced color gamut- implications for color vision and color deficiencies. *Optics Express*, 30(12).
5. **Lee, K.R.**, Groesbeck, E., Gwinn, O.S., Webster, M.A., & Jiang, F. (2021). Enhanced Peripheral face processing in deaf individuals. *Journal of Perceptual Imaging*, Special Issue.
6. **Lee, K.R.**, Dague, T. D., Sobel, K.V., Paternoster, N.J., & Puri, A.P. (2021). Set size and ensemble perception of numerical value. *Journal of Attention, Perception, & Psychophysics*, Special Issue.
7. **Lee, K. R.**, Webster, M.A. (2020). Environmental influences on color vision. *Encyclopedia of Color Science and Technology*, Overview Essay.
8. **Lee, K. R.**, Richardson, A. J., Walowit, E., Crognale, M. A., & Webster, M. A. (2020). Predicting color matches from luminance matches. *Journal of the Optical Society of America A*, Special Issue.

9. Qiu, C.*, Lee, K. R.* , Goldstein, R., Jung, J. H., & Peli, E. (2018). De-cluttering using motion parallax improves recognition of new objects in simulated prosthetic vision. *Translational Vision Science and Technology*. *equal contribution first author
10. Lee, K. R., Sobel, K.V., York, A.K., & Puri, A. M. (2018). Dissociating parallel and serial processing of numerical value. *Journal of Numerical Cognition*, Special Issue.
11. Han, S., Qiu, C., Lee, K. R., Jung, J. H., & Peli, E. (2018). Word recognition: Re-thinking prosthetic vision evaluation. *Journal of Neural Engineering*, Special Issue. doi: 10.1088/1741-2552/aac663
12. Gilbertson, R., Norton, T. R., Beery, S., & Lee, K. R. (2018). Web-based alcohol intervention in first-year college students: Efficacy of full-program administration prior to second semester. *Substance Use and Misuse*, doi: 10.1080/10826084.2017.1392979

IN PREPARATION

1. Lee, K.R., Webster, M. A. (2024). *Color Vision*. Elsevier Handbook of Clinical Neurology.

RESEARCH EXPERIENCE

<i>Color Vision Scientist–Operational Based Vision Assessment Laboratory</i> KBR, Inc.	May 2025-present
<i>Research Scientist–Comp. Memory and Perception, Cognitive Models and Neuro Labs</i> University of Colorado, Boulder; Advisers: Drs. Rosie Cowell and David Huber	July 2024-July 2025
<i>Vision Scientist Intern-Snap Inc.</i> Snap Inc. Boulder, Colorado; Adviser: Dr. Katie Tregillus	June 2023-Sept. 2023
<i>Graduate Research Assistant/PhD Candidate–Visual Perception Lab</i> University of Nevada, Reno; PI: Michael A. Webster, Ph.D	July 2018-May 2024
<i>Graduate Research Assistant–Plasticity Lab</i> University of Nevada, Reno; PI: Fang Jiang, Ph.D	July 2018-Oct. 2019
<i>Research Assistant- Active Confocal Imaging for Visual Prostheses</i> Schepens Eye Research Institute, Mass Eye and Ear, Harvard Medical School; PIs: Eli Peli, M.Sc., O.D., Jae-Hyun Jung, Ph.D	May 2016- May 2018
<i>Graduate Research Assistant – Understanding Suspicion in Cyber Environments</i> Illinois State University funded by Air Force Research Laboratory; PI: Eric Wesselmann, Ph.D	Sept. 2015- May 2016
<i>Graduate Research Assistant – Cognitive and Perceptual Neuroscience Lab</i> Illinois State University; PI: Amrita Puri, Ph.D	Aug. 2014- May 2016
<i>Graduate Research Assistant – Production is Prediction Study</i> Illinois State University, Psycholinguistics Lab; PI: John Cooper Cutting, Ph.D	Aug. 2014- Dec. 2014
<i>Project Coordinator – Health Behavior Research</i> Lycoming College Psychology Department; PIs: Rebecca Gilbertson, Ph.D; Tina Norton, Ph.D	Aug. 2011-Apr. 2014

INVITED TALKS

1. **Lee, K.R.**, Individual differences in color and face perception (2025). *CU Boulder, Cognitive Group Brownbag*
2. **Lee, K.R.**, Using individual differences to optimize and understand visual processing (2024). *Rochester Institute for Technology*
3. **Lee, K.R.**, Improving recognition of cluttered objects using motion parallax in simulated prosthetic vision (2023).
Smith-Kettlewell Eye Research Institute
4. **Lee, K.R.**, Predicting color matches from luminance matches (2020).
University of Central Arkansas Neural Network
5. **Lee, K.R.**, Predicting color vision from luminance matches (2020).
Virtual OSA Vision and Color Data Blitz: New findings in Color Perception The Optical Society
6. **Lee, K.R.**. Does Holistic Crowding of Faces Depend on Task Demands? (2016).
Schepens Eye Research Institute, Mass Eye and Ear, Harvard Medical School

RESEARCH PRESENTATIONS

Lee, K.R. Human Image Understanding. (July 2024). Dagstuhl Seminar on Art, Illusions, and Data Visualization, [Illusion demo/talk].

Lee, K.R., Webster, M.A. Individual differences in judging facial categories. (May 2023). *Vision Sciences Society*, [Poster].

Parthasarathy, M.K., **Lee, K.R.**, Abbey, C. K., Webster, M.A. A direct measure of adaptation and visual salience. (Oct. 2022) *Optica Fall Vision Meeting*, [Poster].

Cognale, M. A., Richardson, A., **Lee, K.R.**, Webster, M.A. Using equiluminance to characterize individual differences in color vision. (July 2022). *International Color Vision Society*, [Poster].

Lee, K.R., Meza, R., Webster, M.A. Color similarities assessed by phase matching. (May 2021). *Vision Sciences Society (V-VSS)*, [Virtual Poster].

Richardson, A., **Lee, K.R.**, Webster, M.A., Cognale, M. A. Can variations in luminance sensitivity predict variations in the cardinal color directions? (May 2021). *Vision Sciences Society (V-VSS)*, [Virtual Poster].

Lee, K.R., Nakamura, K., Nakashima, Y., Yamaguchi, M. Y., Watanabe, K., Webster, M.A. Individual and population differences in face categories. (May 2020). *Vision Sciences Society (V-VSS)*, [Virtual Poster].

Richardson, A., **Lee, K.R.**, Cognale, M.A., Webster, M.A. How to find a tritan line, without actually trying. (May 2020). *Vision Sciences Society (V-VSS)*, [Virtual Poster].

Lee, K.R., Richardson, A., Walowit, E., Cognale, M.A., Webster, M.A. Predicting color matches from luminance matches. (July 2019). *International Color Vision Society*, [Poster].

Lee, K.R., Groesbeck, E., Gwinn, O. S., Jiang, F. Deaf individuals show enhanced face processing in the periphery. (May 2019). *Vision Sciences Society*, [Poster].

Richardson, A., **Lee, K.R.**, Walowit, E., Cognale, M.A., Webster, M.A. Minimum (motion) measurements of human color matching functions. (May 2019). *Vision Sciences Society*, [Poster].

Lee, K.R., Qiu, C., Jung, J.H., & Peli, E. Motion parallax improves recognition of new objects presented in clutter in simulated prosthetic vision. (Sept. 2018). *OSA Vision Meeting*, [Poster].

Lee, K.R., Sobel, K. V., York, A., K., & Puri, A. M. Parallel and serial processing of numerical value in digit ensembles. (May 2018). *Vision Sciences Society*, [Poster].

Lee, K.R., Qiu, C., Jung, J.H., & Peli, E. Motion parallax improves recognition of stabilized object with cluttered background in simulated prosthetic vision. (May 2018). *The Association for Research in Vision and Ophthalmology (ARVO)*, [Poster].

Puri, A., & **Lee, K.R.** Estimating Numerical Averages: Ensemble Coding at the Semantic Level. (March 2017). *Southwestern Psychological Association*, [Conference Talk].

Lee, K.R., Sobel, K., Cody, O., Puri, A. Ensemble Representations of Semantic Meaning: Are Numerical Averages Generated in Parallel? (Nov. 2016). *OPAM*, [Poster].

Dayer, A., * **Lee, K.R.**, * Chow, S., Flynn, E., & Puri, A. Does holistic face crowding depend on task demands? (May 2016). *Vision Sciences Society*, [Poster].

*equal contribution first author and co-presenter

Puri, A., Halladay, T., **Lee, K.R.**, Romager, J. & Casalman, E. Anxiety and Accuracy of Ensemble Representations of Emotion in a Crowd. (Nov. 2015). *Psychonomic Society's Annual Meeting*, [Poster].

Lee, K.R., & Puri, A. Characteristics of Visual Crowding of Faces versus Non-Face Objects. (May 2015). *Association for Psychological Science Convention*, [Poster].

Gilbertson, R., Norton, T., **Lee, K.R.**, Watsula, A., & Beery, S. The Effectiveness of Personalized Web-Based Alcohol Prevention: A Longitudinal Perspective. (June 2013). *Research Society on Alcoholism National Conference*, [Poster].

Zaman, A., **Lee, K.R.**, & Gilbertson, R. Predictors of At-Risk Drinking. (April 2012). *Eastern Colleges Science Conference*, [Poster].

PROFESSIONAL DEVELOPMENT

<i>Guest Editor</i>	Jan. 2025-present
Journal of Perceptual Imaging Special Issue	
<i>Reviewer</i>	Aug. 2024-present
Journal of Perceptual Imaging	
<i>Reviewer</i>	July 2022-present
Optics Express	
<i>Nevada Bioinformatics Center's Machine Learning Bootcamp</i>	Jan. 2023
Covering fundamentals of Python for data science and supervised learning	
University of Nevada, Reno	
<i>Neuroscience Student Committee</i>	Aug. 2019-Aug. 2020
University of Nevada, Reno	

<i>Planning Committee Integrative Neuro Symposium</i>	March 2019
University of Nevada, Reno	
<i>Planning Committee OSA Fall Vision Meeting</i>	Sept. 2018
University of Nevada, Reno	
<i>Frontiers for Young Minds Review Editor</i>	Oct. 2018-2020
University of Nevada, Reno	
<i>Workshop in EEG Frequency-tagging in Visual Neuroscience</i>	Sept. 24-27, 2018
University of Nevada, Reno	
<i>International Colour Vision Society Summer School 2018</i>	July 30-Aug. 3, 2018
Pembroke College, Oxford, UK	
TEACHING EXPERIENCE	
Teacher PSY/NS Perception 405	July-Aug. 2020
University of Nevada, Reno	
Teaching Assistant PSY/NS Perception 405	Aug. 2019-present
University of Nevada, Reno	
Research Mentor PSY 395	Jan. 2019-May 2023
University of Nevada, Reno	
Teacher PSY 392 Senior Seminar	Jan. 2016-May 2016
Illinois State University	
1. Topic: Unique psychological disorders: Ramachandran's <i>Phantoms in the Brain</i>	
2. Topic: Perception of morality in media: Marvel's <i>Civil War</i> , Sebald's <i>The Rings of Saturn</i>	
Teaching Assistant PSY 331 Research Methods	Jan. 2015- May 2016
Illinois State University	
Teaching Assistant PSY 101 intro	Aug. 2011-Apr. 2014
Lycoming College	
TECHNICAL PROFICIENCY	
<i>Programming</i>	Matlab, Python, R, Overleaf
<i>fMRI</i>	Siemens Prismafit 3 Tesla MR scanner
<i>EEG</i>	Biosemi activeTwo, BrainVision actiCHamp
<i>Psychophysics</i>	Psychophysical methodology
<i>Virtual Reality</i>	Oculus Rift
<i>Eye Tracking</i>	Eyelink 1,000, Tobii

<i>Camera Systems</i>	Lytro Illum Light Field, Wicab's BrainPort V100, V200, VisionPro, and Workstation Systems
<i>Survey design</i>	Qualtrics, SurveyMonkey

LEADERSHIP AND SCHOLASTIC HONORS

Rick M. Gardner Scholarship University of Nevada, Reno Psychology Department	2021
Elsevier/Vision Research Virtual Travel Award for VSS Vision Sciences Society	2021
Big sister volunteer Big Brothers Big Sisters of Northern Nevada	2019-2022
ICVS Student Travel Award International Colour Vision Society	2019
Graduate Dean's Merit Scholarship University of Nevada, Reno	2018-2019
Massachusetts State Science Olympiad Framingham State University	2017, 2018
J. Milton Skeath Award in Psychology Lycoming College	2014

REFERENCES

Michael A. Webster, Ph.D.

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Psychology Department
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Eli Peli, MSc, OD

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