

# Kassandra R. Lee

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## Education

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### Graduate

University of Nevada, Reno

2018-present

- Ph.D Neuroscience
- PIs: Michael Webster, Ph.D, Fang Jiang, Ph.D.

Illinois State University

2014-2016

- M.S. Cognitive and Behavioral Sciences
- PI: Amrita Puri, Ph.D
- Thesis: *Ensemble Coding of Semantic Information: Are Numerical Averages Generated in Parallel?*

### Undergraduate

Lycoming College

2010-2014

- B.A. Psychology, with Honors, Dean's List
- PI: Rebecca Gilbertson, Ph.D.
- Thesis: *Alcohol Consumption and College Adjustment among College Students by Generational Status*
- Biology Minor

## Published Manuscripts

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- **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.
- **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.
- **Lee, K. R.**, Webster, M.A. (2020). Environmental influences on color vision. *Encyclopedia of Color Science and Technology*, Overview Essay.
- **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.
- 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
- **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.
- 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
- 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

## Research Positions

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Graduate Research Assistant—Visual Perception Lab

July 2018-present

University of Nevada, Reno  
PI: Michael A. Webster, Ph.D

**Aim** 1) To better understand individual differences in the processing of color to find the most efficient ways to categorize an individual's color percepts. 2) To investigate the role of individual and cultural differences in face perception through the use of visual adaptation paradigms.

*Graduate Research Assistant–Plasticity Lab*

July 2018-Oct. 2019

University of Nevada, Reno

PI: Fang Jiang, Ph.D

**Aim:** 1) To utilize EEG with fast periodic stimulation to assist in investigation of differences in frequency-tagged response amplitude and topography between early deaf individuals and hearing controls when presented with visual and/or tactile stimuli 2) To utilize modern technological approaches, such as VR to understand multisensory integration for individuals with normal sensory processing vs. those with deficits

*Research Assistant- Active Confocal Imaging for Visual Prostheses*

May 2016- May 2018

Schepens Eye Research Institute, Mass Eye and Ear, Harvard Medical School

PIs: Eli Peli, M.Sc., O.D., Jae-Hyun Jung, Ph.D

**Aim:** To improve the quality of imaging presented through visual prostheses using image processing methods such as confocal light-field imaging and edge enhancement, and simulated prosthesis to test motion parallax for background de-cluttering

- Training of blind individuals with sensory substitution device
- Simulated visual prosthesis via Oculus Rift HMD

*Graduate Research Assistant – Understanding Suspicion in Cyber Environments*

Sept. 2015- May 2016

Illinois State University funded by Air Force Research Laboratory

Supervisor: Eric Wesselmann, Ph.D

**Aim:** To investigate the psychological aspects of suspicion about social interactions online

*Graduate Research Assistant – Cognitive and Perceptual Neuroscience Lab*

Aug. 2014- May 2016

Illinois State University

Supervisor: Amrita Puri, Ph.D

**Aim:** To evaluate mechanisms underlying our ability to gather visual information from crowded scenes

- Assisting in set-up and training with BrainVision actiCHamp EEG
- Assisting in set-up and training with Tobii eye tracker

*Graduate Research Assistant – Production is Prediction Study*

Aug. 2014- Dec. 2014

Illinois State University, Psycholinguistics Lab

Supervisor: John Cooper Cutting, Ph.D

**Aim:** To assess the effects of unexpected words/phrases on subject response production, ultimately providing insight into their predictions about sentence structure

- Voice transcription

*Project Coordinator – Health Behavior Research*

Aug. 2011-Apr. 2014

Lycoming College Psychology Department

Supervisors: Rebecca Gilbertson, Ph.D; Tina Norton, Ph.D

**Aim:** To investigate the effectiveness of a web-based alcohol prevention program on first-year students' academic performance and health behaviors

**Aim:** To evaluate the effects of adolescent alcohol consumption on rodent's behavioral abilities in adulthood

## Research Presentations

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- Vision Sciences Society (V-VSS)* May 2021
- **Lee, K.R.**, Meza, R., Webster, M.A. Color similarities assessed by phase matching *Virtual Poster Presentation*
- Vision Sciences Society (V-VSS)* May 2021
- Richardson, A., **Lee, K.R.**, Webster, M.A., Crognale, M. A. Can variations in luminance sensitivity predict variations in the cardinal color directions? *Virtual Poster Presentation*
- University of Central Arkansas Neural Network* Dec. 3, 2020
- **Lee, K.R.**, Predicting color matches from luminance matches. *Invited Talk*
- The Optical Society* July 8, 2020
- **Lee, K.R.**, Predicting color vision from luminance matches. *Virtual Invited Talk OSA Vision and Color Data Blitz: New findings in Color Perception*
- Vision Sciences Society (V-VSS)* May 2020
- **Lee, K.R.**, Nakamura, K., Nakashima, Y., Yamaguchi, M. Y., Watanabe, K., Webster, M.A. Individual and population differences in face categories. *Virtual Poster Presentation*
- Vision Sciences Society (V-VSS)* May 2020
- Richardson, A., **Lee, K.R.**, Crognale, M.A., Webster, M.A. How to find a tritan line, without actually trying. *Virtual Poster Presentation*
- International Color Vision Society* July 2019
- **Lee, K.R.**, Richardson, A., Walowit, E., Crognale, M.A., Webster, M.A. Predicting color matches from luminance matches. *Poster Presentation*
- Vision Sciences Society* May 21, 2019
- **Lee, K.R.**, Groesbeck, E., Gwinn, O. S., Jiang, F. Deaf individuals show enhanced face processing in the periphery. *Poster Presentation*
- Vision Sciences Society* May 18, 2019
- Richardson, A., **Lee, K.R.**, Walowit, E., Crognale, M.A., Webster, M.A. Minimum (motion) measurements of human color matching functions. *Poster Presentation*
- University of Nevada, Reno Neuroscience Retreat* April 6, 2019
- **Lee, K.R.**, Groesbeck, E., Gwinn, O. S., Jiang, F. Enhanced peripheral face processing for deaf individuals. *Poster Presentation*
- OSA Vision Meeting* Sept. 23, 2018
- **Lee, K.R.**, Qiu, C., Jung, J.H., & Peli, E. Motion parallax improves recognition of new objects presented in clutter in simulated prosthetic vision. *Poster Presentation*
- Vision Sciences Society* May 19, 2018
- **Lee, K.R.**, Sobel, K. V., York, A., K., & Puri, A. M. Parallel and serial processing of numerical value in digit ensembles. *Poster Presentation.*
- The Association for Research in Vision and Ophthalmology* May 1, 2018

- **Lee, K.R.**, Qiu, C., Jung, J.H., & Peli, E. Motion parallax improves recognition of stabilized object with cluttered background in simulated prosthetic vision. *Poster Presentation*.

*Southwestern Psychological Association*

March 31, 2017

- Puri, A., & **Lee, K.R.** Estimating Numerical Averages: Ensemble Coding at the Semantic Level. *Conference Talk*.

*OPAM*

Nov. 17, 2016

- **Lee, K.R.**, Sobel, K., Cody, O., Puri, A. Ensemble Representations of Semantic Meaning: Are Numerical Averages Generated in Parallel? *Poster Presentation*.

*Vision Sciences Society*

May 13-18, 2016

- Dayer, A., \* **Lee, K.R.**, \* Chow, S., Flynn, E., & Puri, A. Does holistic face crowding depend on task demands? *Poster Presentation*.  
\*equal contribution first author and co-presenter

*Illinois State University Research Day Symposium*

Apr. 8, 2016

- **Lee, K.R.**, Puri, A., & Sobel, K. Ensemble Coding of Semantic Information: Are Numerical Averages Generated in Parallel? *Poster Presentation*.

*Schepens Eye Research Institute, Mass Eye and Ear, Harvard Medical School*

March 10, 2016

- **Lee, K.R.** Does Holistic Crowding of Faces Depend on Task Demands? *Invited Talk*.

*Psychonomic Society's Annual Meeting*

Nov. 19-22, 2015

- Puri, A., Halladay, T., **Lee, K.R.**, Romager, J. & Caselman, E. Anxiety and Accuracy of Ensemble Representations of Emotion in a Crowd. *Poster Presentation*.

*Association for Psychological Science Convention*

May 23, 2015

- **Lee, K.R.**, & Puri, A. Characteristics of Visual Crowding of Faces versus Non-Face Objects. *Poster Presentation*.

*Illinois State University Research Day Symposium*

Apr. 10, 2015

- **Lee, K.R.**, & Puri, A. Interference Between Part-Based and Holistic Representations In The Peripheral Visual Field. *Poster Presentation*.

*Illinois State University Psi Chi Research Colloquium*

Apr. 17, 2015

- **Lee, K.R.**, & Puri, A. The Role of Part-Based and Holistic Representations in Visual Crowding. *Colloquium Talk*.

*Illinois State University Phi Sigma Research Symposium*

Feb. 27, 2015

School of Biological Sciences

- **Lee, K.R.**, & Puri, A. Visual Crowding: Contributions of Part-Based vs. Holistic Representations. *Poster Presentation*.

*Lycoming College Independent Study/ Honors Project*

Aug. 2013-Apr. 2014

Psychology Department

- **Lee, K.R.** Alcohol Consumption and College Adjustment among College Students by Generational Status.
- Presented as research paper, oral proposal and defense

*Research Society on Alcoholism National Conference*

June 22-26, 2013

- Gilbertson, R., Norton, T., **Lee, K.R.**, Watsula, A., & Beery, S. The Effectiveness of Personalized Web-Based Alcohol Prevention: A Longitudinal Perspective. *Poster Presentation*.

*Eastern Colleges Science Conference*

Apr. 13-14, 2012

- Zaman, A., **Lee, K.R.**, & Gilbertson, R. Predictors of At-Risk Drinking. *Poster Presentation*.

*Lycoming College*

Fall 2012

- **Lee, K.R.,** Miller, K., & Poorman, J. Assessment of Group versus Individual Problem Completion: Effects of Cellphone Use and Social Loafing. *Poster Presentation.*

## Professional Development

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*Neuroscience Student Committee* Aug. 2019-present  
University of Nevada, Reno

*Frontiers for Young Minds Review Editor* Oct. 2018-present  
University of Nevada, Reno

*Workshop in EEG Frequency-tagging in Visual Neuroscience* Sept. 24-27, 2018  
University of Nevada, Reno

*International Colour Vision Society Summer School* 2018 July 30-Aug. 3, 2018  
Pembroke College, Oxford, UK

## Teaching Experience

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*Teacher-Summer session* July-Aug. 2020  
University of Nevada, Reno

- Perception (PSY/NS 405)
  - Plan and carry out instruction of summer course

*Teaching Assistant* Aug. 2019-present  
University of Nevada, Reno

- Perception (PSY/NS 405)
  - Lecture, grade

*Teaching Assistant* Jan. 2016-May 2016  
Illinois State University

- Senior Seminar (PSY 392)
  - Prepare and teach lesson plans
  - Edit and grade papers

*Teaching Assistant* Jan. 2015- May 2016  
Illinois State University

- Research Methods (PSY 331)
  - Aid in/lead class discussions
  - Edit and grade papers
  - Assist with online assignment setup
- Graduate Seminar in Neurobiology (BSC 420)
  - Attended classes, participated in discussions
  - Grade papers

*Teaching Assistant* Aug. 2011-Apr. 2014  
Lycoming College

- Edit and Grade papers for intro level classes
- Organize exam materials

## Leadership and Scholastic Honors

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*Elsevier/Vision Research Virtual Travel Award for VSS*  
Vision Sciences Society

2021

*Big sister volunteer*  
Big Brothers Big Sisters of Northern Nevada

2019-present

*ICVS Student Travel Award*  
International Colour Vision Society

2019

*Graduate Dean's Merit Scholarship, \$10,000*  
University of Nevada, Reno

2018-2019

*Massachusetts State Science Olympiad*  
Framingham State University  
• Volunteered preparation and at event

2017, 2018

*J. Milton Skeath Award in Psychology*  
Lycoming College

2014

- Presented for superior undergraduate achievement that shows the most potential for future work in psychology

*Gamma Sigma Alpha National Greek Academic Honor Society*  
Lycoming College

2013

*Sigma Tau Delta English Honor Society*  
Lycoming College

2012

## **Research Skills/Training**

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- SPSS
- R statistical programming (introductory-level experience)
- Presentation (Neurobehavioral Systems)
- MATLAB/PTB
- Oculus Rift
- Biosemi activeTwo EEG System
- BrainVision actiCHamp EEG
- Tobii eye tracker
- Eyelink 1,000 eye tracker (introductory-level experience)
- Lytro Illum Light Field Camera
- Minolta Luminance Meter LS100
- Wicab's BrainPort V100, V200, VisionPro, and Workstation systems
- Topcon CL-100 lensmeter
- Amazon Business Account creation and management
- Visual acuity measurement
- Designing and distributing online surveys (Qualtrics, SurveyMonkey)
- Overleaf

## **References**

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<i>Name</i>	<i>Institution, Position</i>	<i>Email</i>	<i>Phone</i>
<i>Michael Webster</i>	<i>University of Nevada, Reno, Foundation Prof.</i>	mwebster@unr.edu	(775) 682-8691
<i>Eli Peli</i>	<i>Schepens, Harvard Med. School, Senior Scientist</i>	<a href="mailto:eli_peli@meei.harvard.edu">eli_peli@meei.harvard.edu</a>	(617) 912-2597
<i>Amrita Puri</i>	<i>University of Central Arkansas, Assistant Prof.</i>	apuri@uca.edu	(530) 220-5038