

# Katherine E. (Mussell) Tregillus

## *Curriculum Vitae*

The Smith-Kettlewell Eye Research Institute  
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## Education

2017	<b>Ph.D. Psychology, Cognitive and Brain Sciences</b> Dissertation: <i>Color perception in anomalous trichromats: Neuroimaging investigations of neural compensation for losses in spectral sensitivity</i> Advisor: Michael A. Webster, Ph.D. University of Nevada, Reno, NV
2015	<b>M.A. Psychology, Cognitive and Brain Sciences</b> Thesis: <i>Neural coding of image blur assessed by fMRI</i> Advisor: Michael A. Webster, Ph.D. University of Nevada, Reno, NV
2011	<b>B.S. Psychology</b> Concentration: Mind, Brain, and Behavior Colorado State University, Fort Collins, CO

## Research Experience

### **The Smith-Kettlewell Eye Research Institute, San Francisco**

2017 – Present      Postdoctoral Researcher, Brain Plasticity, Learning, and Neurorehabilitation Lab:  
Lora Likova, Ph.D.

### **University of Nevada, Reno**

2012 – 2017      Graduate Researcher, Visual Perception Lab: Michael A. Webster, Ph.D.

### **Nanyang Technological University, Singapore**

Summer 2016      Fellowship, Visual Perception & Cognitive Neuroscience Lab: Gerrit Maus, Ph.D.

### **Colorado State University, Fort Collins**

2011 – 2012      Research Assistant, Cognitive Neuroscience Lab: Carol Seger, Ph.D.

2011      Research Assistant, Color Vision Lab: Vicki Volbrecht, Ph.D.

2008 – 2010      Research Assistant, Human Perception Lab: Patrick Monnier, Ph.D.

## Publications

Webster, M.A. & **Tregillus, K.** (2017) Visualizing visual adaptation. *Journal of Visualized Experiments*. (In Press)

**Tregillus, K.** & Webster, M.A. (2016) Swapping swatches: Adapting to and from an artist's palette. *Proc. Electronic Imaging*, 2016(16), 1-8.

**Tregillus, K.**, Werner, J.S., & Webster, M.A. (2016) Adjusting to a sudden “aging” of the lens. *Journal of the Optical Society of America A* 33, A129-A136.

**Tregillus, K.** & Webster, M.A. (2014) Dynamics of color contrast adaptation. *Journal of the Optical Society of America. A* 31(4).

## Presentations

### Talks:

**Tregillus, K.** Vanston, J.E., Macleod, D., Kuriki, D., Engel, S., & Webster, M.A. (2017) Color Compensation in anomalous trichromats assessed with fMRI. International Colour Vision Society, Erlangen, Germany.

**Tregillus, K.** (2016) Investigating neural coding of spatiotemporal events using visual adaptation. The Integrative Neuroscience Core's Brown Bag Series, University of Nevada, Reno.

**Tregillus, K.** (2016) Adapting over space and time. East Asia and Pacific Summer Institute Closing Ceremony, Nanyang Technological University, Singapore.

**Tregillus, K.** & Webster, M.A. (2016) Swapping swatches: Adapting to and from an artist's palette. International Symposium on Electronic Imaging in Human Vision and Electronic Imaging Conference, San Francisco, CA. **(Invited)**

**Mussell, K.**, Lujan, J., Edler, J. & Monnier, P. (2010). The effects of grouping on configural asymmetry. Rocky Mountain Psychological Association, Denver, CO.

### Posters:

Vanston, J.E., **Tregillus, K.**, & Cognale, M.A. (2017) Threshold detection and suprathreshold perception in anomalous trichromats. Sierra Nevada Chapter of the Society for Neuroscience symposium, Reno, NV.

Vanston, J.E., **Tregillus, K.**, & Cognale, M.A. (2017) Threshold detection and suprathreshold perception in anomalous trichromats. International Colour Vision Society, Erlangen, Germany.

Vanston, J.E., **Tregillus, K.**, & Cognale, M.A. (2017) Suprathreshold contrast matching in anomalous trichromats. Vision Sciences Society, St. Petersburg, FL. *Journal of Vision*. 17(10): 653-653.

**Tregillus, K.** & Webster, M.A. (2016) Swapping swatches: Adapting to and from an artist's palette. Color in Mind, Tübingen, Germany.

**Tregillus, K.** & Webster, M.A. (2016) Swapping swatches: Adapting to and from an artist's palette. Seeing Colors: International Symposium on Color Vision, Regensburg, Germany.

**Tregillus, K.**, Winkler, A. D., & Jiang, F. (2016) Cross-modal motion aftereffects induced by complex auditory stimuli. Vision Sciences Society, St. Petersburg, FL. *Journal of Vision*. 16(12): 863-863.

**Tregillus, K.** Werner, J.S. & Webster, M.A. (2015) Adapting to an aging lens. International Colour Vision Society, Sendai, Japan. **(Winner of Student Merit Award)**

**Tregillus, K.** Werner, J.S. & Webster, M.A. (2015) Adapting to an “aged” lens. Vision Sciences Society, St. Petersburg, FL. *Journal of Vision*. 15(12): 399-399.

**Tregillus, K.**, Strother, L., Caplovitz, G. & Webster, M.A. (2014) Neural coding of image blur assessed by fMRI. Vision Sciences Society, St. Petersburg, FL. *Journal of Vision*. 14(10):1090-1090.

Mac, A., **Tregillus, K.** Kingdom, F.A.A. & Webster, M.A. (2014) Painted faces: Misperceiving shading as Pigmentation. Vision Sciences Society, St. Petersburg, FL. *Journal of Vision*. 14(10):825-825.

Sternberg, H., Mednicoff, S., Goto, K., Mac, A., **Tregillus, K.**, Kingdom F.A.A. & Webster, M.A. (2014) Painted faces: Misperceiving shading as pigmentation. Psi Chi, Undergraduate Research Fair, Reno, NV. (**1<sup>st</sup> Place in Poster Competition**)

**Mussell, K.**, Sweet, S., Violago, C., & Webster, M.A. (2013) Dynamics of color contrast adaptation. International Colour Vision Society, Winchester, England.

**Mussell, K.**, Violago, C., & Webster, M.A. (2013) Stable short-term dynamics of color contrast adaptation. Vision Sciences Society, Naples, FL. *Journal of Vision*. 13(9): 1019-1019.

Sweet, S., Violago, C., Bello, D., Anderson, D., **Mussell, K.** & Webster, M.A. (2013) Stable dynamics of color contrast adaptation. Psi Chi, Undergraduate Research Fair, Reno, NV.

Douda, N. D., **Mussell, K.**, Volbrecht, V. J. & Nerger, J. (2011). Color appearance of monochromatic test stimuli: An analysis of unique hue loci in the vertical and horizontal meridians. Optical Society of America: Fall Vision Meeting, Seattle, WA. *Journal of Vision*. 11(15): 36-36.

Lujan, J., **Mussell, K.**, Edler, J. & Monnier, P. (2010) Elemental components and visual search. Rocky Mountain Psychological Association, Denver, CO.

## Funding and Awards

2017	Ruth L. Kirschstein NRSA Institutional Training Grant Fellowship, the Smith-Kettlewell Eye Research Institute
2017	Robert L. Solso Research Award, Western Psychological Foundation
2015 & 2017	Student Travel Award: International Colour Vision Society
2016	NSF Fellowship: East Asia and Pacific Summer Institutes for U.S. Graduate Students
2015 – 2016	Jerry & Betty Wilson Scholarship
2015	Student Merit Award: International Colour Vision Society
2014	<b>1<sup>st</sup> Place - Psi Chi Undergraduate Poster Competition, Reno, NV</b>
2007 – 2011	Williams Family Foundation Scholarship

## Professional Development

### Training:

2014	fMRI Image Acquisition and Analysis Course: The MIND Research Network at University of New Mexico
2013	MRI Safety Training: UC Davis Imaging Research Center
2012	CITI Training

### Developed Skills:

Proficient in programming languages: Matlab (with Psychtoolbox) and Visual Basic. Proficient in statistical analysis software: SigmaStat, SigmaPlot, and SPSS. Proficient in psychophysical and psychophysiological experimental design. Experience with fMRI analysis software: AFNI, SPM, and Brain Voyager.

### Mentoring Experience:

Mentored several exceptional undergraduates and incoming graduate students. Amy Mac, Holly Sternberg, Kiwi Goto, and Solena Mednicoff, first place in undergraduate Psi Chi poster competition.

### Professional Memberships:

2013 – Present	Vision Sciences Society
2013 – Present	International Colour Vision Society

2016	Society for Imaging Science and Technology
2015 – 2016	Optical Society of America
2007 – 2011	Psi Chi, Colorado State University Chapter
2010	Rocky Mountain Psychological Association

## Teaching Experience

### Primary Instructor:

Summer 2015	Introduction to Research Methods
Spring 2015	Introduction to Research Methods
Summer 2013	Introduction to Research Methods

### Teaching Assistant:

2016	Introduction to Research Methods (Jeffrey Hutsler, Ph.D.)
2014 & 2015	Computer Applications for Behavioral Science (Michael A. Webster, Ph.D.)
2012 & 2014	Perception (Michael A. Webster, Ph.D.)
2013	Introduction to Research Methods (Jacqueline Snow, Ph.D.)
2012 & 2013	General Psychology (Dean Hinitz, Ph.D.)
2011	Sensation and Perception (Vicki Volbrecht, Ph.D.)

## University Service

### Organization Positions:

2015 – 2017	Student-Faculty Liaison, Cognitive and Brain Sciences Graduate Program
2013 – 2014	President, Cognitive and Brain Sciences Graduate Student Organization
2008 – 2011	Officer, Creating Respect and Educating Wellness for and by Students (CREWS)

### Volunteer and Student Organizations:

2017	Organizer and Leader: Retinotopic Mapping for BrainVoyager, UNR
2014 – 2017	Co-organizer of UNR's Color Vision Journal Club
2012 – 2017	Cognitive and Brain Sciences Graduate Student Organization
2012 – 2017	Graduate Students for the Advancement of Neuroscience
2014, 2016, & 2017	Brain Awareness Week, University of Nevada, Reno
2007 – 2011	Creating Respect and Educating Wellness for and by Students (CREWS)
2011	Psychology Major Peer Mentor, Colorado State University
2008	Northern Colorado AIDS Project (NCAP)
2007 – 2008	Key Service Living, Learning Community

## References

**Michael Crognale, Ph.D.** – (775) 682-8690, mcrogna@unr.edu

Relationship: Collaborator, Dissertation committee member

Position: Professor, Chair, Department of Psychology

Institution: University of Nevada, Reno, NV

**Fang Jiang, Ph.D.** – (775) 784-6828, fang.jiang99@gmail.com

Relationship: Collaborator, Dissertation committee member

Position: Assistant Professor

Institution: University of Nevada, Reno, NV

**Gerrit W. Maus, Ph.D.** – (65) 6592-3533, maus@ntu.edu.sg

Relationship: Collaborator, Fellowship advisor

Position: Assistant Professor

Institution: Nanyang Technological University, Singapore

**Lars Strother, Ph.D.** – (775) 682-8678, lars@unr.edu

Relationship: Collaborator

Position: Assistant Professor

Institution: University of Nevada, Reno

**Michael A. Webster, Ph.D.** – (775) 682-8691, mwebster@unr.edu

Relationship: Graduate research advisor

Position: Foundation Professor, Director, Center for Integrative Neuroscience (NIH COBRE)

Institution: University of Nevada, Reno, NV