

Katherine E. (Mussell) Tregillus

Curriculum Vitae

The Smith-Kettlewell Eye Research Institute
2318 Fillmore Street, San Francisco, CA 94115
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Education

- 2017 **Ph.D. Psychology, Cognitive and Brain Sciences**
Dissertation: *Color perception in anomalous trichromats: Neuroimaging investigations of neural compensation for losses in spectral sensitivity*
Advisor: Michael A. Webster, Ph.D.
University of Nevada, Reno, NV
- 2015 **M.A. Psychology, Cognitive and Brain Sciences**
Thesis: *Neural coding of image blur assessed by fMRI*
Advisor: Michael A. Webster, Ph.D.
University of Nevada, Reno, NV
- 2011 **B.S. Psychology**
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.**, & Crognale, 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.**, & Crognale, M.A. (2017) Threshold detection and suprathreshold perception in anomalous trichromats. International Colour Vision Society, Erlangen, Germany.

Vanston, J.E., **Tregillus, K.**, & Crognale, 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. (**1st 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	1 st Place - Psi Chi Undergraduate Poster Competition, Reno, NV
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: Sigmatstat, 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, mcrognale@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