

Walker S. Pedersen

Curriculum Vitae

Contact Information

University of Wisconsin – Milwaukee
Department of Psychology
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Education

A.S., Salt Lake Community College, April 2007
B.S., Brigham Young University, August, 2009
M.S., University of Wisconsin – Milwaukee, May, 2013

Publications

Published

Pedersen, W. S., Balderston, N. L., Miskovich, T. A., Belleau, E. L., Schultz, D. H., Helmstetter, F. J., & Larson, C. L. (in press). Disentangling the effects of stimulus novelty and affective valence in the amygdala, hippocampus, and bed nucleus of the stria terminalis. *Social, Cognitive and Affective Neuroscience*.

Pedersen, W. S., & Larson, C. L. (2016). State anxiety carried over from prior threat increases LPP amplitude during an instructed emotion regulation task. *Emotion* 16(5), 719-729.

Miskovich T.A., **Pedersen, W.S.**, Belleau, E. L., Shollenbarger, S., Lisdahl, K. M. & Larson, C. L. (2016). Cortical gyrification patterns associated with trait anxiety. *PLoS ONE*, 11(2): e0149434.

Taubitz, L.E., **Pedersen, W.S.**, & Larson, C.L. (2015). BAS reward responsiveness: A unique predictor of positive psychological functioning. *Personality and Individual Differences*, 80, 107-112.

Pedersen, W. S. (2013). Using BIS and BAS sensitivity to predict psychopathology, emotion regulation and well-being. *Theses and Dissertations*, 145.

Under Review

Belleau, E.L., **Pedersen, W.S.**, Miskovich, T., & Larson, C.L. (under review at *Neuropsychopharmacology*). Fear extinction-related neural plasticity in cortico-limbic pathways and relationships with trait anxiety.

Pedersen, W. S., Muftuler, L. T. & Larson, C. L. (under review at *Neuroimage*).

Disentangling the effects of novelty, valence and trait anxiety in the bed nucleus of the stria terminalis, amygdala and hippocampus with high resolution 7T fMRI.

Stout, D.M., Shackman, A.J., **Pedersen, W.S.**, Miskovich, T., & Larson, C.L. (under review at *Neuropsychopharmacology*). Neural circuitry governing anxious individuals' mis-allocation of working memory to threat.

In Preparation

Pedersen, W. S. & Larson, C. L. (in prep.). Resting state connectivity of the bed nucleus of the stria terminalis while under threat of unpredictable shock and while safe: a high resolution 7T fMRI study.

Pedersen, W. S. & Larson, C. L. (in prep.). Negative slow wave ERP amplitude altered by threat of unpredictable shock during the suppression of implicit race bias.

Presentations

Pedersen, W. S., Balderston, N. L., Miskovich, T. A., Belleau, E. L., Schultz, D. H., Helmstetter, F. J. & Larson, C. L. (2016). Disentangling the effects of stimulus novelty and affective valence in the amygdala, hippocampus, and bed nucleus of the stria terminalis. Presented at the Annual Society for Psychophysiological Research Conference, Minneapolis, MN.

Pedersen, W. S. & Larson, C. L. (2016). State anxiety carried over from prior threat increases LPP amplitude during an instructed emotion regulation task. Presented at The Society of Affective Science Conference, Chicago, IL.

Wenner, L. J., **Pedersen, W. S.** & Larson, C. L. (2016). The effects of state anxiety on race bias and brain activity related to cognitive control. Presented at the UW-System Symposium for Undergraduate Research and Creative Activity, Milwaukee, WI.

Danzzynger, B. S., **Pedersen, W. S.**, & Larson C. L. (2015). Regulating under stress: The impact of state anxiety on instructed emotion regulation. Presented at the UWM Association of Graduate Students in Psychology Conference, Milwaukee, WI.

Jeske, A. R., **Pedersen, W. S.**, Tadych, A. S. & Larson, C. L. (2014). Too anxious to regulate: The effect of an ongoing stressor on instructed emotion regulation. Presented at the UW-System Symposium for Undergraduate Research and Creative Activity, Milwaukee, WI.

Miskovich T. A., **Pedersen W. S.**, Belleau E. L., & Larson, C. L. (2014). Decreased cortical gyrification associated with trait anxiety. Presented at The Society of Affective Science Inaugural Conference, Bethesda, MD.

Pedersen, W. S., Balderston, N. L., Miskovich, T. A., Belleau, E. L., Schultz, D. H.,

Helmstetter, F. J., Larson, C. L. (2014). Independent effects of novelty and valence on the amygdala bold response. Presented at the Annual Society for Affective Science Conference, Bethesda, MD.

Pedersen, W. S., Shackman, A. J., Blaisdell, J. A., Belleau E. L., Stout D. M. & Larson C. L. (2013). Posterior parietal cortex activation predicts working memory capacity for faces. Presented at the Annual Society for Cognitive Neuroscience Conference, San Fransisco, CA.

Tadych, A. S., Larson, C. L., **Pedersen, W. S.** (2013) The effect of mental fatigue on emotion regulation: An ERP study. Presented at the UW-System Symposium for Undergraduate Research and Creative Activity, Milwaukee, WI.

Grants

2015 MCW Imaging Center Daniel M. Soref Charitable Trust Grant, with Christine Larson, Ph.D.

Research Skills

fMRI

- Analysis of task-based and resting state data in AFNI
- Collection and analysis at 3T and 7T
- Event-related and block designs
- AFNI volume-based and SUMA surface-based analysis
- Non-linear registration in FSL and AFNI
- Freesurfer anatomical structural analysis and ROI identification
- Definition of the bed nucleus of the stria terminalis by hand
- ANTs N4 bias field correction
- Blip-up blip-down distortion correction in AFNI
- Automated fMRI analysis via C shell scripts
- Scripting for parallel processing on super computer in SLURM

ERP, SCR & EMG

- Data collection
- Analysis in the matlab toolboxes, EEGLAB and ERPLAB
- Automated analysis via scripting in EEGLAB and ERPLAB
- Skin-conductance collection and analysis

- EMG collection and analysis

Experimental Design

- Designing cognitive and affective tasks in e-prime
- Event-related, block design, and resting state fMRI
- fMRI stimulus timing optimization using AFNI's RSFgen and 3dDeconvolve
- ERP and behavioral (accuracy and RT) task design
- Use of multiple paradigms including: Instructed emotion regulation, implicit association, joystick approach/avoidance, affective priming, change detection, attentional blink, go/no go, threat of shock, N-back, mental fatigue induction, novel image task, temporal uncertainty task
- Implementation of automated randomization and counter-balancing in e-prime

Statistical Analysis

- SPSS, R, SAS and Mplus
- Mixed linear modelling
- Between-subjects, repeated measures and mixed ANOVA
- Regression
- Structural equation modelling
- Correction for multiple comparison in AFNI, SPSS, R and SAS

Manuscript Preparation

- Compiling literature reviews and references
- Writing manuscripts and grant proposals
- Creation of effective, high-resolution graphics using excel, GIMP and adobe illustrator

Data Management

- Design and implementation of data backup strategy for ~20 TB of data involving RAID storage and computer networking
- C shell programming for automated fMRI and EEG data backup

Awards

2015 Department of Psychology Summer Graduate Research Fellowship

- 2010-2011 UWM Chancellor's Graduate Student Award, Glenn E. and Olive W. Nielson Academic Scholarship
- 2007-2009 BYU Spring/Summer Academic Scholarship
- 2007-2009 BYU Dean's List
- 2006-2007 SLCC Dean's List

Ad Hoc Reviewer

Psychophysiology, Cognition and Emotion

Teaching Experience

- Fall 2010 Teaching Assistant, Research Methods in Psychology
- Spring 2011 Teaching Assistant, Research Methods in Psychology
- Fall 2011 Teaching Assistant, Research Methods in Psychology
- Spring 2012 Coordinating Teaching Assistant, Research Methods in Psychology
- Fall 2013 Teaching Assistant, Research Methods in Psychology
- Spring 2014 Teaching Assistant, Research Methods in Psychology
- Fall 2014 Teaching Assistant, Research Methods in Psychology
- Spring 2015 Coordinating Teaching Assistant, Cognitive Processes
- Fall 2015 Coordinating Teaching Assistant, Research Methods in Psychology
- Spring 2016 Teaching Assistant, Research Methods in Psychology
- Fall 2016 Teaching Assistant, Research Methods in Psychology

Professional Organizations

- 2016-Present Society for Psychophysiological Research
- 2014-Present American Psychological Society
- 2014-Present Society for Affective Sciences
- 2013-Present Cognitive Neuroscience Society