

Theodore P. Imhoff-Smith

Research Specialist
Center for Healthy Minds
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EDUCATION

University of Wisconsin - Madison B.A. in Psychology and Computer Science Certificate	August 2011
University of Wisconsin - Milwaukee (<i>Special Student Coursework</i>) Cognitive Neuroscience Cellular and Molecular Neuroscience	Fall 2014 Spring 2015

PUBLICATIONS

Grupe, D.W., **Imhoff-Smith, T.P.**, Wielgosz, J., Nitschke, J.B., & Davidson, R.J. (2019). A common neural substrate for elevated PTSD symptoms and reduced pulse rate variability in combat-exposed veterans. *Psychophysiology*. doi: <http://doi.org/10.1101/364455>

Kral, T.R.A., **Imhoff-Smith, T.P.**, Dean III, D.C., Grupe, D.W., Adluru, N., Patsenko, E.G., Mumford, J.A., Goldman, R.I., Rosenkranz, M.A., Davidson, R.J. (2019). Mindfulness-Based Stress Reduction-related changes in posterior cingulate resting brain connectivity. *Social Cognitive and Affective Neuroscience*. doi: <https://doi.org/10.1093/scan/nsz050>

PUBLICATIONS (UNDER REVIEW OR IN PREP)

Patsenko, E.G. Kral, T.R.A., **Imhoff-Smith, T.P.**, Adluru, N., Dean, D.C., Goldman, R.I., Rosenkranz, M.A., Davidson, R.J. (under review), Mindfulness-Based Stress Reduction (MBSR) training improves intrinsic alertness and connectivity within cingulo-insula-thalamic network: A DTI and rs-fMRI study. *Journal of Cognitive Neuroscience*.

Imhoff-Smith, T.P., Grupe, D.W., & Davidson, R.J. (in prep). Cardiac response to threat and safety: Balance, flexibility, and state dysregulation of the autonomic nervous system in posttraumatic stress.

CONFERENCE PRESENTATIONS

Imhoff-Smith, T.P., Kral, T.R.A., Grupe, D.W., & Davidson, R.J. (2018, May). MBSR increases PCC-DLPFC resting state functional connectivity relative to active control. Poster presented at the 11th annual meeting of the Social Affective Neuroscience Society, Brooklyn, NY.

Kral, T.R.A., **Imhoff-Smith, T.P.**, Grupe, D.W., & Davidson, R.J. (2018, May). Reduced anxiety and amygdala-sgACC resting state functional connectivity following MBSR. Poster presented at the 11th annual meeting of the Social Affective Neuroscience Society, Brooklyn, NY.

Grupe, D.W., Wielgosz, J., **Imhoff-Smith, T.P.**, Nitschke, J.N., & Davidson, R.J. (2017, May). Respiratory sinus arrhythmia and ventromedial prefrontal function in veterans with posttraumatic stress symptoms. Oral presentation at the 72nd annual convention of the Society of Biological Psychiatry, San Diego, CA.

Imhoff-Smith, T.P., Grupe, D.W., & Davidson, R.J. (2017, March). Parasympathetic tone, PTSD symptom profiles, and phasic heart rate during threat anticipation. Poster presented at the 10th annual meeting of the Social Affective Neuroscience Society, Los Angeles, CA.

Imhoff-Smith, T.P., & Rozek, C.S. (2015, May). The role of emotion regulation in student achievement. Poster presented at the 87th annual meeting of the Midwestern Psychological Association, Chicago, IL.

RESEARCH AND PROFESSIONAL EXPERIENCE

Center for Healthy Minds, University of Wisconsin - Madison
Research Specialist

June 2015 - Present

Wisconsin Center for the Neuroscience & Psychophysiology of Meditation

Principal Investigators: Richard Davidson, PhD; Melissa Rosenkranz, PhD; Giulio Tonio, PhD

- Conduct resting state fMRI, heart rate, respiration, and skin conductance analysis in R
- Develop and manage psychophysiology data pipelines in bash, Python, Matlab
- Co-develop processing pipeline for resting state fMRI using bash, FSL, AFNI
- Clean and preprocess MRI, psychophysiology, behavioral, and self report data
- Collect imaging, psychophysiology, behavioral, and self-report measures
- Implement and supervise day-to-day procedures, screening, data collection, and data quality
- Co-manage training for team of nine full time core staff and 20+ undergraduate assistants
- Assist research program manager with regulatory and budgetary tasks

Asthmatic Inflammation and Neurocircuitry Activation and Patterns of Neurocircuitry Activation In Severe Asthma

Principal Investigator: William Busse, MD; Mentor: Melissa Rosenkranz, PhD

- Implement pipeline for resting state fMRI using bash, FSL, AFNI
- Develop, preregister, and test hypotheses on resting state fMRI in asthma and inflammation
- Preprocess PET data

The Impact of Mindfulness-Based Resilience Training on Stress-Related Biological, Behavioral, and Health-Related Outcomes in Law Enforcement Officers

Principal Investigator: Dan Grupe, PhD

- Collect inflammatory, neuroendocrine, physiology, behavioral, and self-report measures
- Clean and preprocess self report data
- Extract cardiovascular response from heart rate field data and tie to public calls for service

Veterans' Wellness Study

Principal Investigator: Dan Grupe, PhD

- Develop custom Python code to extract dynamic heart rate during threat-of-shock task
- Conduct heart rate variability analysis in CMetX and Bash
- Analyze physiological response to threat of shock in combat-exposed veterans

Well-Being and the Healthy Minds App

Principal Investigators: Melissa Rosenkranz, PhD; Simon Goldberg, PhD

- Create clinicaltrials.gov and OSF registrations on the effectiveness of targeted mental exercises on measures of awareness, connection, and insight
- Test feasibility of large-scale app-based interventions
- Recruit and collect data, guide participants through app-based intervention

EpicCare Inpatient - Medication Administration Record

- Managed and improved quality and process for a team of 17
- Coordinated investigations for patient safety escalation across six clinical applications
- Conducted usability research and designed usability curriculum for new employees
- Led and coordinated cross-team testing on multiple development projects.

Psychology Department, University of Wisconsin - Madison

Undergraduate Researcher

Harackiewicz Social Psychology Lab

January 2009 - December 2010

- Recruited, collected data, coded and entered self-report data
- Mentored and trained student peers

Independent Research Project

September 2009 - December 2009

- Tested effects of social and individual differences on affective response to interpersonal threat as part of coursework on experimental design and analysis
- Designed, collected, analyzed data, and produced manuscript

FELLOWSHIPS, HONORS, AND AWARDS

(Submitted) National Science Foundation Graduate Research Fellowship (NSF GRFP)

TECHNICAL SKILLS AND EXPERIENCE

<i>Programming:</i>	Python, R, Bash, MATLAB, Java, C++, HTML, CSS
<i>Statistical Software:</i>	RStudio, MATLAB, SPSS
<i>Image Processing:</i>	FSL, AFNI, FreeSurfer, ANTS
<i>Psychophysiology:</i>	BIOPAC, CMetX, Ledalab
<i>Data Management:</i>	REDCap, Qualtrics, COINS

PROFESSIONAL AND NON-PROFIT AFFILIATIONS

<i>American Psychological Association, Division 12</i>	October 2013 - Present
<i>Social and Affective Neuroscience Society</i>	May 2015 - Present
<i>Intentional Mentoring Madison</i>	January 2019 - Present