

Theodore P. Imhoff-Smith

Research Specialist
Center for Healthy Minds
University of Wisconsin-Madison

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EDUCATION

University of Wisconsin - Madison B.A. in Psychology and Computer Science Certificate	August 2011
University of Wisconsin - Milwaukee (Special Student Coursework) Cognitive Neuroscience Cellular and Molecular Neuroscience	Fall 2014 Spring 2015
University of Illinois at Urbana-Champaign Master of Computer Science (emphasis in machine learning and statistics)	Expected 2021

PUBLICATIONS

Goldberg, S., **Imhoff-Smith, T.P.**, Bolt, D.M., Wilson-Mendenhall, C.D., Dahl, C.J., Davidson, R.J., and Rosenkranz, M.A. (2020), Awareness, Connection, and Insight: Testing a multi-component, self-guided, smartphone-based meditation app in a three-armed randomized controlled trial. *Journal of Medical Internet Research Mental Health*.

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)

Kral, T.R.A., **Imhoff-Smith, T.P.**, Lapate, R., Patsenko, E., Grupe, D.W., Goldman, R.I., Rosenkranz, M.A., & Davidson, R.J. (in prep). Long-term meditation training is associated with enhanced attention and stronger posterior cingulate — lateral prefrontal cortex resting connectivity.

Imhoff-Smith, T.P., Busse, W., & Rosenkranz, M.A. (in prep). Inflammatory provocation is associated with stress and mood-related changes in salience network resting connectivity.

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

Kral, T.R.A., **Imhoff-Smith, T.P.**, Lapate, R., Patsenko, E., Grupe, D.W., Goldman, R.I., Rosenkranz, M.A., & Davidson, R.J. (2020, November). Long-term meditation training is associated with stronger posterior cingulate — lateral prefrontal cortex resting connectivity and enhanced attention. Poster presented at the annual meeting of the Mind & Life Institute Contemplative Research Conference, Online.

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 and task fMRI, heart rate, respiration, and skin conductance analysis
- 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, EMA, 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

- 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 and process heart rate and sleep measures from Fitbit field data
- Analyze impact of mindfulness training on PTSD symptoms and sleep quality

Veterans' Wellness Study

Principal Investigator: Dan Grupe, PhD

- Extract and preprocess dynamic heart rate from BIOPAC data during threat-of-shock task
- Conduct heart rate variability analysis in CMetX and Bash
- Analyze cardiac response to threat of shock in combat-exposed veterans

Well-Being and the Healthy Minds App

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

- Co-author 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, collect, and preprocess data, guide participants through app-based intervention

Facets of Mind

Principal Investigator: Christy Wilson-Mendenhall, PhD

- Analyze data quality from Amazon Mechanical Turk studies
- Assist PI with preregistrations and preparations for manuscripts and grant submissions

Epic, Madison, WI

June 2012 - June 2015

Quality Assurance Specialist and Pod Lead

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

- Analyzed social and individual differences in affective response to interpersonal threat
- Designed, collected, analyzed data, and produced manuscript

FELLOWSHIPS, HONORS, AND AWARDS

Honorable Mention - National Science Foundation Graduate Research Fellowship

March 2020

Nominated to Sigma Xi, scientific research honor society

June 2020

Nominated to Tau Beta Pi, engineering honor society

August 2020

TECHNICAL SKILLS AND EXPERIENCE

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

PROFESSIONAL AND NON-PROFIT AFFILIATIONS

<i>Social and Affective Neuroscience Society</i>	May 2015 - Present
<i>Intentional Mentoring Madison (Board and Leadership Team)</i>	January 2019 - Present