Megan Catherine McMahon

Department of Psychology
The University of Texas at Austin
108 E Dean Keeton A8000
Austin, TX, 78712

Education

PhD Experimental Psychology, The University of Texas at Austin expected 2022
Portfolio in Aging and Health
Dissertation: "Rest-Activity Rhythms and Cognitive Aging"
Advisor: David Schnyer, PhD

MA Clinical Psychology, The University of Texas at Austin 2020

BS Neuroscience, *cum laude*, College of William and Mary 2015

Research Experience

Interests: episodic memory, cognitive aging, reproducible neuroimaging, sleep and circadian science, digital health, network analysis, machine learning

Graduate Student Researcher, The University of Texas at Austin 2018-Present
Department of Psychology
Advisor: David Schnyer, PhD

- Spearheaded five and collaborated on two research projects investigating the neuropsychological correlates of circadian rhythm stability and wearable technology for circadian assessment through literature review, study design, data collection, and statistical analysis
- Completed one first-author peer-reviewed published manuscript and collaborated on two additional peer-reviewed publications
- Used R, Python, and Matlab for statistical analysis of behavioral, actigraphy, and neuroimaging data
- Communicated research findings through presentations in academic and community settings

Clinical Study Coordinator, Virginia Commonwealth University 2016-2018
Department of Physical Medicine and Rehabilitation
Supervisors: Randall Merchant, PhD, Suzanne Taylor, PhD

- Collaborated with Rehabilitation Counseling faculty to produce four peer-reviewed published manuscripts related to disability and stigma
- Administered cognitive assessments and recruited eligible patients for Transforming Research and Clinical Knowledge in Traumatic Brain Injury (TRACK-TBI) study
- Maintained accurate records of source documents, adverse event reports, protocol deviations, subject screening and enrollment reports, and personnel training logs for SanBio Study of Modified Stem Cells in Traumatic Brain Injury

Research Assistant, Virginia Commonwealth University 2016
Department of Mechanical and Nuclear Engineering
Supervisors: W. Hong Yeo, PhD, Seth Weinberg, PhD

- Modified a computational cardiac tissue model that incorporated voltage-gated gap junctions and ephaptic coupling to predict conditions for conduction failure in weakly coupled tissue
- Implemented signal processing techniques to optimize EEG brain-computer interface for use with skin-like electronic devices

Publications

Mentored undergraduate co-authors underlined

Peer Reviewed Research Articles – Accepted and In Press

1. Don, H., Davis, T., Ray, K. L., **McMahon, M.,** Cornwall, A., Schnyer, D. M., & Worthy, D. A. (Accepted). Neural Representations of Gain-Loss Frequency in Older and Younger Adults. *Neurobiology of Aging*.
2. **McMahon, M.,** Malneedi, Y., Worthy, D. A., & Schnyer, D. (2020). Rest-Activity Rhythms and White Matter Microstructure Across the Lifespan. *Sleep 44*(6).
3. McMahon, B. T., Grover, J. M., **McMahon, M. C**., & Kim, J. H. (2020). Workplace discrimination for persons with hearing loss: Before and after the 2008 ADA Amendments Act. *Work*, 65(1), 39-51.
4. Graham, K. M., McMahon, B. T., Simpson, P., Kim, J. H., **McMahon, M. C.** (2019). Patterns of workplace discrimination across broad categories of disability. *Rehabilitation Psychology.*
5. Kim, J. H., Keck, P., **McMahon, M. C.**, Vo, A., Gonzalez, R., Lee, D. H., Barbir, L., & Maree, K. (2018). Strengths based rehabilitation assessment: Adapted Inventory of Virtues and Strengths. *Work: Journal of Prevention, Assessment & Rehabilitation*.
6. Feuerstein, M., Gehrke, A. K., McMahon, B. T., & **McMahon, M. C.** (2017). Challenges persist under Americans with Disabilities Act Amendments Act: How can oncology providers help? *Journal of Oncology Practice, JOP-2016.*
7. **McMahon, M.**, McMahon, B. T., West, S. L., Conway, J. P., & Lemieux, M. (2017). Actual vs. perceived workplace discrimination involving charging parties with learning disabilities: The National EEOC ADA Research Project. *Journal of Vocational Rehabilitation, 46*(2), 203-208.
8. McMahon, B. T., **McMahon, M. C.**, West, S. L., Conway, J. P., & Lemieux, M. (2017). The nature of allegations of workplace discrimination for Americans with learning disabilities. *Journal of Vocational Rehabilitation, 46*(1), 31-37.
9. **McMahon, M. C.**, McMahon, B. T., West, S. L., & Conway, J. P. (2016). Workplace discrimination and learning disabilities in America: Characteristics of charging parties and employers. *Journal of Vocational Rehabilitation, 45*(3), 295-300.
10. **McMahon, M. C.**, & McMahon, B. T. (2016). The National EEOC ADA Research Project: History, available data, and basic findings. *Journal of Vocational Rehabilitation, 44*(3), 333-342.

Submitted Research Articles

11. Wu, C., **McMahon, M.,** Fritz, H., & Schnyer, D. M. (Under Review). Circadian Rhythms are Not Captured Equal: Exploring Circadian Metrics Extracted by Different Computational Methods from Smartphone Accelerometer and GPS Sensors in Daily Life Tracking. arXiv:2107.04135

Presentations

Oral Presentations

1. **McMahon, M. C.**, Wu, Peter, & Schnyer, D. (2021). *Circadian rhythm assessment.* Oral presentation at the Dallas and Austin Area Memory Meeting.
2. **McMahon, M. C.**, Malneedi, Y., Worthy, D., & Schnyer, D. (2020). *Rest-activity rhythms and white matter microstructure across the lifespan.* Oral presentation at the Dallas and Austin Area Memory Meeting.
3. **McMahon, M. C.** (2020). *Rest-activity rhythms and the aging brain.* Oral presentation at PsychFest, The University of Texas at Austin, Austin, TX.
4. Rosen, M., Seaman, K., Nair, A., **McMahon, M.,** Yoon, L., & Benson, N. (2019). *Neuropythy for dev*. Hackathon project presented at Neurohackademy, University of Washington eScience Institute, Seattle, WA.

Poster Presentations

Mentored undergraduate co-authors underlined

5. McConley, M. I., **McMahon, M. C.,** and Schnyer, D. M. (2021). *Wearable technology for sleep and circadian rhythm assessment.* Poster presented virtually at the Cellular to Clinically Applied Rehabilitation Research and Engineering Research Day.
6. **McMahon, M. C.**, Malneedi, Y., Worthy, D., & Schnyer, D. M. (2020). *Rest-activity rhythms and white matter differences in aging.* Poster presented virtually at the Organization for Human Brain Mapping.
7. **McMahon, M. C.**, Ray, K., Pisner, D. P., Gandy, L., & Schnyer, D. M. (2019). *Age-related differences in brain functional connectivity and associations with sleep-activity cycles.* Poster presented at the Organization for Human Brain Mapping, Rome, Italy.
8. Malneedi, Y., **McMahon, M. C.,** & Schnyer, D. M. (2019). *Age-Related Differences in Circadian Rhythm Measures and Time of Testing Affects Associative Memory Performance.* Poster presented at Longhorn Research Day.
9. **McMahon, M. C.,** Gandy, L., Pudhiyidath, A., Preston, A. R., & Schnyer, D. M. (2019). *Age-related changes in aspects of the sleep-activity cycle and their relationship to associative memory performance*. Poster presented at the Dallas Aging and Cognition Conference, Dallas, TX.

Awards

Departmental Service Award UT Austin Department of Psychology ($200) Dec 2020
Love of Learning Award Phi Kappa Phi Honor Society ($500) Aug 2019
Sallie Asche Travel Award UT Dallas Center for Vital Longevity ($500) Jan 2019
Professional Development Award UT Austin Graduate School ($500) Jan 2019

Academic Service

Ad Hoc Reviewer Psychosomatic Medicine, Chronobiology International 2019-Present
Vice President Psychology Graduate Student Association, UT Austin 2019-2020

Mentorship

Undergraduate Research Assistants – Supervised

Isabella McConley, Undergraduate, UT Austin 2019-Present
Annesley Pulse, Undergraduate, UT Austin 2019-2021
Chand Hashim, Undergraduate, UT Austin 2019-2020
Atharva Kulkarni, Undergraduate, UT Austin 2019-2020
Jiayue Zhang, Undergraduate, Hong Kong University of Science and Technology Spring 2019
Yoshita Malneedi, Undergraduate, UT Austin 2018-2020
Pauline Do, Undergraduate, UT Austin 2018-2020
Nicholas Agee, Undergraduate, Virginia Commonwealth University Spring 2016

Summer Research Interns - Supervised

Juo-Lin Tsai, Summer of Data Program, UT Austin Summer 2021
Jelilat Solabi, Summer Undergraduate Research Program, UT San Antonio Summer 2021
Mimi Osheyack, McNair Scholar Program, St. Edward's University 2019-2020

Teaching Experience

Teaching Assistant, Virginia Commonwealth University Spring 2016
Vertically Integrated Projects: Skintronics EEG and Brain Computer Interface
Department of Mechanical and Nuclear Engineering | Supervisor: W. Hong Yeo, PhD

- Mentored and evaluated undergraduate research assistants working on a project designed to assess use of different LEDs as stimuli for steady state visually-evoked potential (SSVEP)-based brain-computer interface wheelchair navigation

Pedagogical Training

Teaching Preparation Certificate, Faculty Innovation Center, UT Austin Fall 2021

- Completed a series of three sessions on developing teaching skills, including pedagogical theory, cognitive learning theories, inclusive teaching practices, working with students with disabilities, structuring lesson plans, fostering student participation, and assessment.

Clinical Experience

Practicum Student Austin Neuropsychology Clinic 2020-2021
Supervisor: David Tucker, PhD

Therapist UT Austin Psychology Training Clinic 2018-2019
Supervisor: Catherine Panzarella-Tse, PhD

Extended Assessment Program UT Austin Department of Psychology Summer 2018
Supervisor: Jennifer Maedgen, PhD

Professional Experience

Director of Operations Virginia Catalyst 2017-2018

- Managed grants program for over $10 million in funds awarded to 33 projects, including initiation of new grant rounds, execution of contracts, and milestone tracking
- Supported business development and marketing efforts for the Virginia Neuroscience Initiative, including the Clinical Trials and Research Network

Professional Affiliations

International Neuropsychological Society, Associate Member
American Psychological Association, Division 40, Student Member
Texas Aging and Longevity Center Graduate Student Council Member

Specialized Education & Training

Certified Level 2 Skyra 3T Operator 2019-Present
Biomedical Imaging Center, UT Austin

FSL Course Oct 2021
FMRIB Analysis Group, University of Oxford

Scientific Visualization Summer Institute Sep 2021
Texas Advanced Computing Systems, UT Austin

Neurohackademy Aug 2019
eScience Institute, University of Washington

Responsible Conduct of Research Apr 2019
Office of Sponsored Projects, UT Austin

Coastal Coding for Reproducible Neuroimaging Jan 2019
ReproNim+Nipype 2.0 / NiMARE, Florida International University