

**Education**

Ph.D., Psychology (Clinical)	University of New Mexico	2010
Clinical Internship	Southwest Consortium Predoctoral Psychology Internship	2010
M.S., Psychology	University of New Mexico	2007
B.A., Psychology, Philosophy	New Mexico State University	2003

**Licensure**

Utah Psychology License: 8474474-2501	2012-Present
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**Professional Positions**

Adjunct Associate Professor, Physical Medicine and Rehabilitation, University of Utah	2023-Present
Associate Professor, Psychology, University of Utah	2020-Present
Assistant Professor, Psychology, University of Utah	2012-2020
Postdoctoral Fellowship, Adult Neuropsychology, Medical College of Wisconsin	2010-2012

**Honors and Awards**

2021	Richard J. Haier Prize for Neuroscience Studies of Intelligence
2018	Recognition for Contributions in Supervising Honors Theses, University of Utah College of Social and Behavioral Sciences and Honors College
2012	Resident Scholar Award, Medical College of Wisconsin, Department of Neurology
2009	Quad-L Foundation Research Award, University of New Mexico, Department of Psychology

**Peer-Reviewed Publications** (\*mentee lead-author; † equal contributions)

31. Troxel, W.M., Baucom, B.R.W., **Euler, M.J.**, Bermudez, B., & Baron, K. G. (in press). The CHARMS study: Rationale and study protocol for an observational study of sleep and biobehavioral rhythms in older adult couples. *SLEEP Advances*.
30. **Euler, M.J.**, Guevara, J.E., Vehar, J.V., Geiger, A.R., McKinney, T.L., & Butner, J.E. (2025). Psychometric and signal processing considerations in individual differences studies of EEG mid-frontal theta power. *International Journal of Psychophysiology*.  
<https://doi.org/10.1016/j.ijpsycho.2025.112555>
29. \*Geiger, A.R., **Euler, M.J.**, Guevara, J.E., Vehar, J.V., King, J., Duff, K., & Hoffman, J.M. (2025). Biomarker and neuropsychological correlates of the N400 event-related potential in Alzheimer's disease. *International Journal of Psychophysiology*, 207, 112464.  
<https://doi.org/10.1016/j.ijpsycho.2024.112464>
28. \*Guevara, J.E., **Euler, M.J.**, DesRuisseaux, L., Gereau-Mora, M., & Suchy, Y. (2024). A potential measure of premorbid functioning: Evaluating the construct validity of the Author and Magazine Recognition Tests. *Archives of Clinical Neuropsychology*.  
<https://doi.org/10.1093/arclin/aca038>

27. **Euler, M.J.**, Vehar, J.V., Guevara, J.E., Geiger, A.R., Deboeck, P.R., & Lohse, K.R. (2024). Associations between the resting EEG aperiodic slope and broad domains of cognitive ability. *Psychophysiology*, 00, e14543. <https://doi.org/10.1111/psyp.14543>
26. \*Curtis, B.J., McKinney, T.L., **Euler, M.J.**, Anderson, J., Baron, K.G., Smith, T.W., & Williams, P.W. (2024). Sleepy without stimulation: Examining subjective and objective sleepiness in actigraphy-verified habitual short sleepers not reporting daytime dysfunction. *Journal of Sleep Research*, e14170. <https://doi.org/10.1111/jsr.14170>
25. \*Clark, M., **Euler, M.J.**, King, B.R., Williams, A. M., & Lohse, K.R. (2024). Associations between age-related differences in occipital alpha power and the broadband parameters of the EEG power spectrum: A cross-sectional cohort study. *International Journal of Psychophysiology* (195), 112272. <https://doi.org/10.1016/j.ijpsycho.2023.112272>
24. \*Wellen, B., Ramanujam, K., Lavelle, M., Capriotti, M.R., Butner, J., **Euler, M.J.**, & Himle, M.B. (2023). A test of the behavioral model of tic disorders using a dynamical systems framework. *Behavior Therapy*. <https://doi.org/10.1016/j.beth.2023.08.010>
23. \*Jones, K.G., Lybbert, C., **Euler, M.J.**, Huang, J., Light, A.R., Jessop, J.E., Larsson A., Odell, D.H., Tadler, S.C., Mickey, B.J. (2023). Diversity of electroencephalographic patterns during propofol-induced burst suppression. *Frontiers in Systems Neuroscience*. <https://doi.org/10.3389/fnsys.2023.1172856>
22. Hilger, K., & **Euler, M.J.**, (2023). Intelligence and visual mismatch negativity: Is pre-attentive visual discrimination related to general cognitive ability? *Journal of Cognitive Neuroscience*. [https://doi.org/10.1162/jocn\\_a\\_01946](https://doi.org/10.1162/jocn_a_01946)
21. **Euler, M.J.**, Duff, K., King, J.B., Hoffman, J.M. (2022). Recall and recognition subtests of the Repeatable Battery for the Assessment of Neuropsychological Status and their relationship to biomarkers of Alzheimer's disease. *Aging, Neuropsychology, & Cognition*. <https://doi.org/10.1080/13825585.2022.2124229>
20. Wang, P., Pathania, A., **Euler, M.J.**, Duff, K., Schaefer, S. (2022). Investigating the relationship between resting-state EEG frontoparietal coherence, visuospatial ability, and motor skill acquisition—a retrospective analysis. *NeuroRegulation*, 9(2). <https://doi.org/10.15540/nr.9.2.82>
19. \*Pathania, A., **Euler, M.J.**, Clark, M., Duff, K, & Lohse, K.R. (2022). Resting EEG spectral slopes are associated with age-related differences in information processing speed. *Biological Psychology*. <https://doi.org/10.1016/j.biopsycho.2022.108261>
18. †**Euler, M. J.**, & †Schubert, A. L. (2021). Recent developments, current challenges, and future directions in electrophysiological approaches to studying intelligence. *Intelligence*, 88, 101569. <https://doi.org/10.1016/j.intell.2021.101569>
17. \*Pathania, A., Schreiber, M., Miller, M., **Euler, M.J.**, & Lohse, K.R. (2021). Exploring the reliability and sensitivity of the EEG power spectrum as a biomarker. *International Journal of Psychophysiology*, <https://doi.org/10.1016/j.ijpsycho.2020.12.002>

16. \*McKinney, T.L., **Euler, M.J.**, & Butner, J.E. (2020). It's about time: The role of temporal variability in improving assessment of executive functioning. *The Clinical Neuropsychologist*. <https://www.tandfonline.com/doi/full/10.1080/13854046.2019.1704434>
15. \*McKinney, T.L., & **Euler, M.J.** (2019). Neural anticipatory mechanisms predict faster reaction times and higher fluid intelligence. *Psychophysiology*. 2019;00: e13426. <https://doi.org/10.1111/psyp.13426>
14. \*Pathania, A., Leiker, A.M., **Euler, M.J.**, Miller, M.W., & Lohse, K.R. (2019). Challenge, motivation, and effort: Neural and behavioral correlates of self-control of difficulty during practice. *Biological Psychology*, 141, 52-63. <https://doi.org/10.1016/j.biopsycho.2019.01.001>
13. **Euler, M.J.** (2018). Intelligence and uncertainty: Implications of hierarchical predictive processing for the neuroscience of cognitive ability. *Neuroscience and Biobehavioral Reviews*, 94, 93-112. <https://doi.org/10.1016/j.neubiorev.2018.08.013>
12. **Euler, M.J.**, \*McKinney, T.L., \*Schryver, H.M., & \*Okabe, H. (2017). ERP correlates of the decision time-IQ relationship: The role of complexity in task- and brain-IQ effects. *Intelligence*, 65, 1-10. <https://doi.org/10.1016/j.intell.2017.08.003>
11. Wiltshire, T.J., **Euler, M.J.**, \*McKinney, T.L., & Butner, J.E., (2017). Changes in dimensionality and fractal scaling suggest soft-assembled dynamics in human EEG. *Frontiers in Physiology*, 8:633. <https://doi.org/10.3389/fphys.2017.00633>
10. **Euler, M. J.**, Wiltshire, T., \*Niermeyer, M. A., & Butner, J. E. (2016). Working memory performance inversely predicts spontaneous delta and theta-band scaling relations. *Brain Research*, 1637, 22-33. <http://dx.doi.org/10.1016/j.brainres.2016.02.008>
9. **Euler, M. J.**, \*Niermeyer, M. A., & Suchy, Y. (2016). Neurocognitive and neurophysiological correlates of motor planning during familiar and novel contexts. *Neuropsychology*, 30(1), 109-119. <http://dx.doi.org/10.1037/neu0000219>
8. **Euler, M. J.**, Weisend, M. P, Jung, R. E., Thoma, R. J., & Yeo, R. A. (2015). Reliable activation to novel stimuli predicts higher fluid intelligence. *NeuroImage*, 114, 311 – 319. <https://doi.org/10.1016/j.neuroimage.2015.03.078>
7. Suchy, Y., **Euler, M. J.**, & Eastvold, A. (2014). Exaggerated reaction to novelty as a subclinical consequence of mild traumatic brain injury. *Brain Injury*, 28 (7). 972-979. <https://doi.org/10.3109/02699052.2014.888766>
6. Hanlon, F. M., Houck, J. M., Pyeatt, C. J., Lundy, S. L., **Euler, M. J.**, Weisend, M. P., Thoma, R. J., Bustillo, J. R., Miller, G. A., & Tesche, C. D. (2011). Bilateral hippocampal dysfunction in schizophrenia. *NeuroImage*, 58, 1158-68.
5. **Euler, M.J.**, Thoma, R. J. Gangestad, S. W., Cañive, J. M., & Yeo, R. A. (2009). The impact of developmental instability on voxel-based morphometric analyses of neuroanatomical abnormalities in schizophrenia. *Schizophrenia Research*, 115, 1-7.

4. Parks, L. K., Hill, D. E., Thoma, R. J., **Euler, M.J.**, Lewine, J. D., & Yeo, R. A. (2009). Neural correlates of communication skill and symptom severity in autism: A voxel-based morphometry study. *Research in Autism Spectrum Disorders*, 3, 444-454.
3. Thoma, R. J., Monnig, M., Hanlon, F. M., Miller, G. A., Petropoulos, H., Mayer, A. R., Yeo, R. A., **Euler, M.J.**, Lysne, P., Moses, S. N., & Cañive, J. M. (2009). Hippocampus volume and episodic memory in schizophrenia. *Journal of the International Neuropsychological Society*, 15, 182-195.
2. **Euler, M.J.**, Thoma, R. J., Parks, L., Gangestad, S. W., & Yeo, R. A. (2008). Fluctuating asymmetry and individual variation in regional gray and white matter volumes: A voxel based morphometry study. *Evolutionary Psychology*, 6, 613-627.
1. Thoma, R. J., Gangestad, S. W., **Euler, M.J.**, Lysne, P., Monnig, M., & Yeo, R. A. (2008). Developmental instability and markers of schizotypy in university students. *Evolutionary Psychology*, 6, 586-594.

#### Pre-registrations and Open Datasets

4. The P300 event-related potential and general cognitive ability: A systematic review and quantitative meta-analysis. *Pre-registered Systematic Review and Meta-Analysis* (**Euler**, Hilger; last updated 2024; *in progress*). <https://osf.io/j9g7q/>
3. Psychometric and signal processing considerations in research on mid-frontal theta activity (**Euler**; last updated 2024). *Study databases, MATLAB, and R code*: <https://osf.io/nydqf/>
2. Resting EEG aperiodic slope and broad domains of cognitive ability (**Euler**, Lohse, Vehar; 2024). *Parameterized EEG spectral data, MATLAB, Python, R code, Study Databases*: [https://osf.io/mdw32/?view\\_only=f9c284fbd55e40fcb43a37ca30fda640](https://osf.io/mdw32/?view_only=f9c284fbd55e40fcb43a37ca30fda640)
1. Concurrent EEG slope during cognitive testing (Vehar, **Euler**; last updated 2023). *Study database, MATLAB, Python, and R code*. <https://osf.io/ft234/>

#### Book Chapters

6. **Euler, M.J.**, Vehar, J.V., & Guevara, J.E., (2023). Theories of intelligence. In: *Handbook of Clinical Child Psychology: Theory to Practice*. J. Matson (Ed.). Springer.
5. **Euler, M.J.**, & McKinney, T.L. Evaluating the Weight of the Evidence: Cognitive Neuroscience Theories of Intelligence. (2021). In: A. K. Barbey, S. Karama, & R.J. Haier (Eds.). *The Cambridge Handbook of Intelligence and Cognitive Neuroscience*. Cambridge University Press.
4. Suchy, Y., **Euler, M.J.** (2021). Finding a Job: Research careers in Neuropsychology. To Appear In: Block, C. (Ed.). *The Neuropsychologist's Roadmap: A Training and Career Guide*. American Psychological Association.

3. **Euler, M.J.**, & McKinney, T.L. (2019). Theories of Intelligence: Historical and Contemporary Models and Implications for Intellectual Disability. In J. Matson (Ed.), *Handbook of Intellectual Disabilities –Integrating Theory, Research, and Practice*. Springer.
2. **Euler, M.J.**, Baillet, S., & Swanson, S. J. (2015). MEG in the Presurgical Epilepsy Evaluation. In W. Barr, C. Morrison (Eds.), *Handbook on the Neuropsychology of Epilepsy* (pp. 195-212). New York: Springer.
1. Swanson, S. J., Binder, J. R., Raghavan, M., & **Euler, M.J.** (2015). Functional MRI in the Presurgical Epilepsy Evaluation. In W. Barr, C. Morrison (Eds.), *Handbook on the Neuropsychology of Epilepsy* (pp. 169-194). New York: Springer.

#### Submitted Manuscripts

- \*Vehar, J.V., **Euler, M.J.**, Pathania, A., Clark, M., Duff, K., & Lohse, K.R., (*under review*). Examining the clinical potential of the concurrent EEG aperiodic slope in cognitive testing.
- \*LoTempio, S., McKinney, T.M., McDonnell, A., Castro, S., McNay, G., Greenberg, K., **Euler, M.J.**, Payne, B., & Strayer, D., (*under review*). A natural boost to cognitive control: nature exposure as a potential modulator of the anterior N2 component and medial frontal theta.
- Albertson, A.J., Landsness, E.C., Eisfelder, M., Young, B.M., Judge, B., Brier, M.R., **Euler, M.J.**, Cramer, S.C., Lee, J-M., & Lohse, J.R., (*under review*). Stroke is associated with regional and age-specific changes in periodic and aperiodic cortical activity.

#### Conference Presentations

- \*Cassim, T. Z., Vehar, J., Guevara, J. E., Geiger, A., Armknecht, C., Williams, P., Suchy, Y., **Euler, M. J.** (2025, February). Associations between cognition, self-reported sleep quality, and EEG spectral characteristics. [Poster Presentation]. The International Neuropsychological Society 2025 Annual Meeting, New Orleans, LA.
- \*Geiger, A. R., Guevara, G. E., DesRuisseaux, L. A., Gereau Mora, M., Mahtta, N., **Euler, M.J.**, Suchy, Y. (2025, February). The Error-Related Negativity as a Vulnerability for Depletion of Executive Functioning in the Context of Expressive Suppression. [Poster Presentation]. The International Neuropsychological Society 2025 Annual Meeting, New Orleans, LA, United States.
- \*Geiger, A. R., Guevara, J., Vehar, J., Suhrie, K., Dixon, A., Duff, K., & **Euler, M.J.** (2024, February). Evaluating the N4 effect event-related potential as an electrophysiological marker in Alzheimer's disease. [Poster Presentation]. The International Neuropsychological Society 2024 Annual Meeting, New York City, NY, United States.
- \*Guevara, J. E., Cassim, T., Geiger, A.R., **Euler, M. J.**, & Suchy, Y. (2024, February). The Relationship Between Neural and Behavioral Indices of Cognitive Control: EEG N2 Amplitude Predicts Executive Functioning in a Nonclinical Sample of Older Adults. [Poster Presentation]. The International Neuropsychological Society 2024 Annual Meeting, New York, NY, United States.
- \*Guevara, J. E., Carlson, S., Cassim, T., Suchy, Y., **Euler, M. J.** & Williams, P. (2023, February).

Examining the relationships between physiological, cognitive, and self-report indices of self-regulation. [Poster Presentation]. The International Neuropsychological Society 2023 Annual Meeting, San Diego, CA, United States.

- \*Vehar, J., Pathania, A., Clark, M., Lohse, K., & **Euler, M.J.** (2023, February). Effects of age and task difficulty on the presence of EEG midline-frontal theta power during administration of the Repeatable Battery for the Assessment of Neuropsychological Status-Update (RBANS) [Poster Presentation]. The International Neuropsychological Society 2023 Annual Meeting, San Diego, CA, United States.
- \*Geiger, A.R., Guevara, J., Vehar, J., Suhrie, K., Dixon, A., Duff, K., & **Euler, M.J.** (2023, February). Investigating the relationship between neuropsychological test performance and electrophysiological measures of semantic functioning in Alzheimer's disease [Poster Presentation]. The International Neuropsychological Society 2023 Annual Meeting, San Diego, CA, United States.
- Williams, P.G., Curtis, B.J., McKinney, T.L., **Euler, M.J.**, Anderson, J., Baron, K.G., & Smith, T.W. (2022, June). Sleepy without stimulation: Examining subjective and objective sleepiness in actigraphy-verified habitual short sleepers not reporting daytime dysfunction. Poster presented at SLEEP: Annual meeting of the Associated Professional Sleep Societies. Charlotte, NC.
- \*Guevara, J.E., Vehar, J.V., Geiger, A.R., **Euler, M.J.** (February 2022). Investigating the Relationship Between Physiological and Self-Report Measures of Mental Effort During Cognitive Demand. Poster presented at the 50<sup>th</sup> Annual Meeting of the International Neuropsychological Society. New Orleans, LA. (virtual meeting).
- \*Vehar, J.V., Guevara, J.E., Pathania, A., Clark, M., Geiger, A.R., Lohse, K.R., **Euler, M.J.**, (February 2022). Sensitivity of the EEG Aperiodic Slope and Offset to Age and Task Demand During Neuropsychological Task Performance. Poster presented at the 50<sup>th</sup> Annual Meeting of the International Neuropsychological Society. New Orleans, LA. (virtual meeting).
- \*McKinney, T.L., \*Vehar, \*Guevara, J., & **Euler, M.J.**, Acculturation, but not ethnicity, relates to test taking approach on Raven's matrices (February 2020). Poster presented at the 48<sup>th</sup> Annual Meeting of the International Neuropsychological Society. Denver, CO.
- \*McKinney, T.L., \*Vehar, \*Guevara, J., & **Euler, M.J.** Higher fluid intelligence is related to higher task engagement, but not task effort. (February 2020). Poster presented at the 48<sup>th</sup> Annual Meeting of the International Neuropsychological Society. Denver, CO.
- \*McKinney, T.L., \*Carlson, R., \*Vaccariello, E., & **Euler, M.J.** Novelty effects: Personality trait or indicator of cognitive dysfunction? (February 2019). Poster presented at the 47<sup>th</sup> Annual Meeting of the International Neuropsychological Society. New York, NY.
- \*McKinney, T.L., \*Carlson, R., \*Culbertson, H., \*Lin, K. & **Euler, M.J.** Mindfulness and aerobic physical activity promote sustained attention and reduced neural correlates of mind-wandering. (February 2019). Poster presented at the 47<sup>th</sup> Annual Meeting of the International Neuropsychological Society. New York, NY.

**Euler, M.J.** Uncertainty and intelligence: Relevance of predictive processing theories to the neuroscience of intelligence. (July 2018). Paper presented at the 19<sup>th</sup> Annual Meeting of the International Society for Intelligence Research. Edinburgh, U.K.

\*McKinney, T.L., \*Okabe, H., & **Euler, M.J.** The moderating role of uncertainty in fluid intelligence and neural activity. (February 2018). Paper presented at the 46<sup>th</sup> Annual Meeting of the International Neuropsychological Society. Washington D.C.

\*Okabe, H., \*McKinney, T.L., \*Vaccariello, E., & **Euler, M.J.** EEG correlates of mental exertion during sustained reaction time performance. (February 2018). Paper presented at the 46<sup>th</sup> Annual Meeting of the International Neuropsychological Society. Washington D.C.

\*Vaccariello, E., \*McKinney, T.L., \*Okabe, H., & **Euler, M.J.** Behavioral and EEG correlates of mental effort and mind-wandering. (February 2018). Poster presented at the 46<sup>th</sup> Annual Meeting of the International Neuropsychological Society. Washington D.C.

**Euler, M.J.**, Haier, R.J., Jung, R.E., Genc, E., & Colom, R., Ten years of the P-FIT model: Replications, refinements, and future directions. (July 2017). Symposium presented at the 17<sup>th</sup> annual meeting of the International Society for Intelligence Research. Montreal, Canada.

**Euler, M.J.** Clarifying the role of P-FIT in intelligence: Key questions and emerging hypotheses. (July 2017). Paper presented at the 17<sup>th</sup> annual meeting of the International Society for Intelligence Research. Montreal, Canada.

\*Halverson, M., **Euler, M.**, \*Niermeyer, M.A., & Suchy, Y. The effect of novelty on motor control in healthy participants (February 2017). Poster presented at the 45<sup>th</sup> Annual Meeting of the International Neuropsychological Society. New Orleans, Louisiana.

\*McKinney, T.L., \*Vaccariello, E., **Euler, M.J.**, & Suchy, Y.S., Medial frontal theta dynamics predict temperamental self-regulation but not executive response inhibition (February 2017). Poster presented at the 45<sup>th</sup> Annual Meeting of the International Neuropsychological Society. New Orleans, Louisiana.

Wiltshire, T., **Euler, M.J.**, Butner, J.E., \*McKinney, T.L., & \*Munion, A.L. Changes in dimensionality and fractal scaling as evidence for softly-assembled dynamics in human EEG (July 2016). Talk presented at the 26<sup>th</sup> Annual Meeting of the Society for Chaos Theory in Psychology & Life Sciences. Salt Lake City, UT.

\*Munion, A.K., Butner, J., **Euler, M.J.**, & \*McKinney, T.H. ERP Analysis: Using a third order coupled oscillator model. (July 2016). Talk presented at the 26<sup>th</sup> Annual Meeting of the Society for Chaos Theory in Psychology & Life Sciences. Salt Lake City, UT.

**Euler, M.J.**, \*Halverson, M., \*McKinney, T., \*Niermeyer, M.A., & Suchy, Y. Distinct Effects of Neural Activation and Consistency in Novelty Processing and Relations with IQ (February 2016). Poster presented at the 44<sup>th</sup> Annual Meeting of the International Neuropsychological Society. Boston, Massachusetts.

\*Ramanujam, K., **Euler, M.**, Himle, M.B. Spectral Analysis of Premonitory Urge Ratings During Habit Reversal Therapy in Children and Adolescents with Chronic Tic Disorders (2015, November). Poster presented at the 49th Annual Convention of the Association for Behavioral and Cognitive Therapies, Chicago, Illinois.

**Euler, M.J.**, \*Schryver, H.M., \*Chon, D., & \*Vaccariello, E. Effects of response alternatives on CNV amplitudes in the Hick paradigm: Relations to reaction time and fluid Intelligence (August 2015). Lightning talk presented at the International Society for Intelligence Research. Albuquerque, New Mexico.

\*Niermeyer, M.A., **Euler, M.J.**, \*Schryver, H., \*Chon, D., \*Reddy, V.R., \*Vaccariello, E., & Suchy, Y. Effects of task novelty on cognitive contributions to planning times and EEG activity during complex motor sequencing (February 2015). Poster presented at the 43<sup>rd</sup> Annual Meeting of the International Neuropsychological Society. Denver, Colorado.

\*Niermeyer, M.A., **Euler, M.J.**, Suchy, Y., \*Matyi, J., \*Schryver, H., \*Chon, D., \*Reddy, V.R., \*Gibbs, P., & \*Vaccariello, E., EEG correlates of individual differences in motor sequence planning and accuracy. (November 2014). Poster presented at Neuroscience 2014. Washington, D.C.

\*Matyi, J. M., **Euler, M. J.**, Weisend, M. P., Jung, R. E., & Yeo, R. A. Intellectual ability predicts faster peak theta responses following repeat stimulus exposure. (February 2014). Poster presented at the 2014 Utah Conference on Undergraduate research. Provo, Utah.

Sabsevitz, D. S., **Euler M.**, Stewart, C. C., Binder, J. R., & Swanson, S. J. Co-lateralization of Wada language and memory performance is associated with better verbal memory encoding in left temporal lobe epilepsy patients (February 2011). Paper presented at the 39th Annual Meeting of the International Neuropsychological Society. Boston, Massachusetts.

Pommy, J., Hampton, D., **Euler, M.**, Ruhl, D., Monnig, M., & Thoma, R. J. Voxel-based morphometry reveals specific regional gray matter reduction in alcohol-use disorders (November 2008). Poster presented at the Annual Biomedical Research Conference for Minority Students. Orlando, Florida.

Schendel, M., **Euler, M.**, Lysne, P., & Weisend, M. P. An ensemble averaging method for artifact rejection in noisy MEG Data (November 2008). Poster presented at Neuroscience 2008. Washington, D.C.

Weisend, M. P., Lysne, P., **Euler, M.**, Schendel, M., Edgar, J. C., Clark, V. P., Mosher, J. C., Ahlfors, S. P., & Hamalainen, M. S. Interpreting trial-to-trial variability in time-frequency analyses of MEG/EEG data (August 2008). Poster presented at the International Conference on Biomagnetism. Sapporo, Japan.

**Euler, M.**, Yeo, R. A., Hamilton, D. A., Parks, L. K., Monnig, M., & Thoma, R. J. Neural correlates of developmental instability in healthy adults and patients with schizophrenia (February 2008). Poster presented at the 36<sup>th</sup> Meeting of the International Neuropsychological Society. Waikoloa, Hawaii.

Hanlon, F., **Euler, M.**, Lundy, S., Thoma, R. J., Weisend, M. P., Mayer, A. R., Bustillo, J. R., Miller, G. A., &

Tesche, C. D. Assessment of lateralized hippocampal function in schizophrenia (March 2007). Poster presented at the International Congress on Schizophrenia Research. Colorado Springs, Colorado.

Parks, L., Hill, D., Thoma, R. J., **Euler, M.**, & Yeo, R. A. Neural correlates of communication and symptom severity in autism: A voxel-based morphometry study (February 2007). Poster presented at the 35<sup>th</sup> Meeting of the International Neuropsychological Society. Portland, Oregon.

Lundy, S., Hanlon, F. M., Shih, J., Hart, B., **Euler, M.**, Lysne, P., Jones, A., Bantz, R., & Thoma, R. J. Impaired memory function in schizophrenia and temporal lobe epilepsy (February 2007). Poster presented at the 35<sup>th</sup> Meeting of the International Neuropsychological Society. Portland, Oregon.

Lysne, P., Montano, R., Hanlon, F., Bantz, R., Lundy, S. L., **Euler, M.**, Weisend, M. P. Clark, V., Hart, B., & Thoma, R. J. Intra-run stability of the M50 auditory gating response in a paired-click paradigm (August 2006). Poster presented at the International Conference on Biomagnetism. Vancouver, British Columbia.

#### Grant Experience

##### **Active**

National Institute on Aging (R33): “Nuestro Sueno: Cultural adaptation of a couples’ intervention to improve PAP adherence and sleep health among Latino couples.”

(September 2023-Present)      MPIs: Baron, Alcantara, Troxel; **Euler**: Co-Investigator

Total Costs: \$3,173,400

National Institute on Aging (R01): “Dyadic sleep, biobehavioral rhythms and cognitive function in older adults: Implications for Alzheimer’s disease.”

(April 2023-Present)      MPIs: Baron, Troxel; **Euler**: Co-Investigator

Total Costs: \$5,002,730

##### **Completed**

National Institute on Aging Small Grant (R03): “Task-related EEG activation as a biomarker for early Alzheimer’s disease.”

(June 2019-July 2023)      PI: **Euler**

Total Costs: \$305,000

University of Utah Funding Incentive Seed Grant: “A causal test of neural predictive coding in language comprehension: Insights from simultaneous electrophysiology and navigated transcranial magnetic stimulation.”

(June 2018- June 2019)      PI: Payne; **Euler**: Co-Investigator

Total Costs: \$20,000

University of Utah Research Instrumentation Fund: “Request to support the purchase of a high-density, high-impedance EEG system.”

(January 2018 – June 2019)      Co-PIs: **Euler**, Drew, Payne

Total Costs: \$107,720

University of Utah Neuroscience Initiative Pilot Collaborative Project: "Examination of Neurobehavioral and Neurophysiological Mechanisms Underlying Habitual Short Sleep Duration."  
(June 2015)                      PIs: Williams, Jones, Anderson; **Euler**: Co-Investigator    Total Costs: \$49,966

**Unfunded**

National Heart, Lung, and Blood Institute (R01): "Habitual short sleep duration: Neurobehavioral mechanisms and cardio metabolic risk"  
(June 2021)                      PI: Williams; **Euler**, Co-Investigator                                      Total Costs: \$1,922,297

National Institute on Aging Research Grant (R01): "A digital tool to identify risks for functional lapses in older adults."  
(June 2020, Feb 2021)    Co-PIs: Suchy, **Euler**                                                                                      Total Costs: \$794,949

University of Utah Neuroscience Initiative Pilot Seed Grant: "EEG Biomarkers of Mental Exertion: Validation and Implications for Personalized Medicine."  
(May 2018)                      PIs: **Euler**, Lohse, Davis                                                                                      Total Costs: \$49,900

National Institute on Aging Research Project Grant (R01): "Reaction to novelty as a marker for intermittent functional lapses among older adults"  
(June 2016, March 2017)                      PI, Suchy; Co-PI: **Euler**                                                                                      Total Costs: \$1,441,977

David Wechsler Early Career Grant for Innovative Work in Cognition: "Role of response uncertainty and neural synchrony in fluid intelligence: Implications for theory and clinical applications"  
(June 2016)                      PI: **Euler**                                                                                                                                      Total Costs: \$25,000

University of Utah Funding Incentive Seed Grant: "Role of response uncertainty and neural synchrony in fluid intelligence: Implications for theory and clinical applications."  
(August 2015)                      PI: **Euler**                                                                                                                                      Total Costs: \$32,160

University of Utah Funding Incentive Seed Grant: "Contribution of cortical oscillatory networks to anatomic and functional correlates of fluid intelligence."  
(February 2015)                      PI: **Euler**                                                                                                                                      Total Costs: \$30,080

Epilepsy Foundation of America. Postdoctoral Research Training Fellowship: "Development of Magnetoencephalography for Language Mapping."  
(August 2011)                      PI: **Euler**                                                                                                                                      Total Costs: \$35,000

**Keynotes and Invited Presentations**

2021                      *Intelligence, EEG, and Uncertainty: A framework for linking cognitive ability to momentary neural activity.* Invited Keynote, 2021 meeting of the International Society for Intelligence Research.

2018                      *Uncertainty, Prediction, and the Neuroscience of Intelligence: Behavioral and EEG Evidence.* Invited Colloquium, Utah Valley University.

**Guest Lectures and Community Events**

2025                      *Introduction to Neuroradiology.* Guest lecture in Physical Medicine and Rehabilitation Didactic Series, University of Utah

2024	<i>The Visual System</i> . Guest lecture in Physical Medicine and Rehabilitation Didactic Series, University of Utah.
2024	<i>The Thalamus</i> . Guest lecture in Physical Medicine and Rehabilitation Didactic Series, University of Utah.
2023	<i>The Cerebellum</i> . Guest Lecture in Physical Medicine and Rehabilitation Didactic Series, University of Utah.
2023	<i>Brain and Environs: Meninges and the Ventricular System</i> . Guest Lecture in Physical Medicine and Rehabilitation Didactic Series, University of Utah.
2022	Invited Speaker. <i>Careers in Neuropsychology and Related Fields</i> . Itineris Early College High School, West Jordan, UT.
2021	Licensed Psychologist Overseeing Cognitive Screenings for Older Adults. <i>Cache County Senior Center</i> , Logan Utah.
2019, 2023	Licensed Psychologist Overseeing Cognitive Screenings for Older Adults. <i>Salt Lake City Senior Expo</i> , Sandy Utah.
2019	<i>Introduction to Spectral and Time-Frequency Analysis</i> , Guest Lecture in Advanced Cognitive Electrophysiology, University of Utah.
2017, 2018, 2021	<i>Introduction to Spectral and Time-Frequency Analysis</i> , Guest Lecture in CNS Methods Graduate Seminar, University of Utah.
2016	<i>The Integration Challenge, Hierarchical Predictive Processing, and Cognitive Individual Differences</i> , Guest Lecture in Philosophy 3440, University of Utah
2016	<i>The Role of Uncertainty in Task-Ability Relationships: An Organizing Framework for EEG-Intelligence Research</i> , Guest Lecture in NEUSC 6010, University of Utah.
2015	Discussion Panelist, Preview Screening of The PBS Series, <i>The Brain with David Eagleman</i> , Hosted by the University of Utah Neuroscience Initiative.
2012	<i>Magnetoencephalography Language Mapping</i> . Invited Presentation to Neurology Department Grand Rounds, Medical College of Wisconsin, Milwaukee, WI.
2012	<i>The Role of Neuropsychological Assessment in Diagnosis and Care Management of Dementia</i> . Invited Presentation to the Froedtert Memorial Lutheran Hospital Dementia Caregiver Support Group, Milwaukee, WI.
2011	<i>The Role of Neuropsychology in the Management of Mild Traumatic Brain Injury</i> . Invited Presentation to the Medical College of Wisconsin Physical Medicine and Rehabilitation Residents, Milwaukee, WI.

## Courses Taught

### Undergraduate:

- Brain and Behavior
- Foundations and Frontiers of Clinical Neuroscience (Independent Study)

### Graduate:

- Biological Bases of Cognitive and Affective Processes
- Foundational Clinical Skills
- Functional Neuroanatomy
- Neuropsychological Assessment: Observation, Pre-practicum, Practicum, and Supervision
- Principles and Techniques of Psychological Assessment I
- Principles and Techniques of Psychological Assessment II
- Psychological Assessment Practicum

## Student Research Supervised

### Undergraduate Honors Theses/Senior Projects

Bae, S. (December 2022). Analysis of reaction time data in a modified Sternberg paradigm.

**Independent research project.**

Gwak, S. (December 2022). Testing the association between performance on the Word Pair Judgement test and Independent Living Scale in older adults with and without Alzheimer's Disease. ***UROP-funded project.***

Anderson, A. (May 2021). Intracranial electrophysiological measures of several neural networks.

**Outstanding Psychology Honors Thesis Award, Department of Psychology.**

Carlson, R. (April 2019). Understanding The role of top-down and bottom-up neural interactions in intelligence. ***UROP-funded project.***

Lavelle, M. (May 2017). EEG correlates of the urge to blink: Implications for understanding premonitory urges in Tourette Syndrome. Honors Thesis, ***UROP-funded project. Best Honors Thesis, University of Utah, Department of Psychology.***

Schryver, H. (May 2015). An investigation of the relation between intelligence, the Hick paradigm, and EEG contingent negative variation. Honors Thesis, University of Utah. ***UROP-funded project, First Place, Undergraduate Division: CSBS Student Research Day.***

Reddy, V. (May 2015). Relations between individual alpha frequency, power, and long-range temporal correlations in resting EEG data. (Senior Project, Dept. of Biomedical Engineering) University of Utah. ***UROP-funded project.***

Matyi, J. (May 2014). Intelligence and neural activation: A model of the neural efficiency hypothesis and repetition suppression. Honors Thesis, University of Utah. ***UROP-funded project.***

### Graduate Student Committees (\*committee chair)

Master's Theses: Priya Ramanujam, Madison Niermeyer, Brian Curtis, Rosemary Ziemnik, \*Ty McKinney, Stacey Brothers, \*Jasmin Guevara, \*Julia Vehar, Emily Braley, Libby DesRuisseaux, Michelle-Gereau Mora, \*Allie Geiger, \*Zanoos Tuan Cassim (co-chair), Anisha Marion, Kelly Kudryk

Preliminary Examinations: Emilie Franchow, David Lessard, Chloe Skidmore, Loran Hayes, Priya Ramanujam, Brendan Ostlund, Danielle Giangrosso (Inter-departmental Program in Neuroscience), \*Ty McKinney, Anupriya Pathania (Health, Kinesiology, and Recreation), Sara LoTempio, Mindie Clark (Health, Kinesiology, and Recreation), Julia Vehar\*, Jasmin Guevara\*, Libby DesRuisseaux, Michelle Gereau Mora, Allie Geiger

Dissertations: Sommer Thorgusen, Emilie Franchow, Loran Hayes, James Coleman, Andrea Wolfe-Clark, Priya Ramanujam, Madison Niermeyer, Ruben Tinajero, Brian Curtis, Jenna Alley, \*Ty McKinney, Anupriya Pathania, Mindie Clark, Stacey Brothers, Kirsten Bootes, \*Jasmin Guevara, \*Julia Vehar, Libby DesRuisseaux

### **Professional Service**

#### Professional Societies

2020	Early Career and Professional Development Subcommittee: International Neuropsychological Society
2019	Membership Committee: International Neuropsychological Society
2018	Program Committee: International Neuropsychological Society Mid-year Meeting
2015	Abstract reviewer: International Society for Intelligence Research

Editorial Board: *The Clinical Neuropsychologist* 2023 - present  
*Intelligence and Cognitive Abilities* 2025 -  
*Intelligence* 2019-2024

Ad hoc Reviewing: *Behavioral Brain Research, Biological Psychiatry, Biological Psychology, Brain Structure and Function, Cognitive Neurodynamics, eNeuro, Evolution and Human Behavior, Evolutionary Psychology, Frontiers in Cognitive Neuroscience, International Journal of Environmental Research and Public Health, International Journal of Psychophysiology, Journal of Experimental Psychology: General, Journal of Intelligence, Intelligence, Mindfulness, Neurobiology of Aging, NeuroImage, Neuropsychologia, Neuropsychology, Psychonomic Bulletin and Review, Psychophysiology, Research Quarterly for Exercise and Sport, Scientific Reports, The Clinical Neuropsychologist*

#### Ad hoc Grant Reviews:

12/2021, 3/2022	NIH, <i>Brain Disorders and Clinical Neuroscience Integrated Review Group</i>
2022, 2023	University of Utah Clinical and Translational Science Institute <i>Peer Reviewer</i>

#### Departmental Service

2013-2020, 2021-2024	Dept. of Psychology Clinical Neuropsychology Program Coordinator
2024	Clinical Psychology Faculty Search Committee
2024	Cognitive Neuroscience Faculty Search Committee

2023	Clinical Psychology Faculty Diversity Scholar Search Committee
2022-Present	Professional Ethics and Issues Committee
2021-2023	Personnel Committee
2021-2022	Undergraduate Committee
2015-2020	Research Participation Committee
2012-2014	Graduate Committee
2012-Present	Clinical Training Committee (CTC)
2016	Cognitive Neuroscience Faculty Search Committee
2019	Cognitive Neuroscience Faculty Search Committee
2012-2014	Developmental Neuroscience Faculty Search Committees

#### University Committees

2019-2021	University of Utah VPR Research Instrumentation Fund Committee
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### Clinical Experience

2023-Present	<b>Clinical Neuropsychologist (.03 FTE)</b> Dept. of Physical Medicine and Rehabilitation, University of Utah.
2012-Present	<b>Clinical Neuropsychology Practicum Supervisor</b> Dept. of Psychology, University of Utah.
2010-2012	<b>Postdoctoral Fellowship in Adult Clinical Neuropsychology</b> Dept. of Neurology, Medical College of Wisconsin.
2009-2010	<b>Southwest Consortium Predoctoral Psychology Internship</b> New Mexico VA Health Care System and University of New Mexico Hospital
2008-2009	<b>Practicum in Adult Neuropsychology</b> New Mexico VA Health Care System.
2006-2008	<b>Practicum in Adult Neuropsychology</b> Dept. of Psychiatry, Center for Neuropsychological Services, University of New Mexico.
2005-2009	<b>Practicum in Adult Psychotherapy</b> Psychology Department Clinic, University of New Mexico.

### Professional Affiliations

International Neuropsychological Society  
Society for Clinical Neuropsychology (APA Div. 40)  
International Society for Intelligence Research  
Utah Psychological Association