

Curriculum Vitae
Daniel Feldman

daniel.a.feldman@utah.edu | (512) 689-7607

Last Updated: May, 2024

Education

- 2023-Present **University of Utah**
Doctor of Philosophy in Biomedical Engineering (Neural Engineering Track)
- **Cumulative GPA: 4.00/4.00**
- 2017- 2021 **Vanderbilt University**
Bachelor of Arts in Neuroscience and Psychology (Double Major)
- **Cumulative GPA: 3.79/4.00**
Honors & Awards: Dean's List 2018-2021 | Neuroscience Department Award 2021
- 2016 **Rice University**
- **Cumulative GPA: 3.93/4.00**
Honors: President's Honor Roll 2016

Funding

- 2024-Present **NSF Graduate Research Fellowship**
National Science Foundation
- Annual: \$53,000 | Total: \$159,000

Research Positions

- 2023-Present **Graduate Research Assistant: Brain Network Lab**
University of Utah
Principle Investigator: Jace King, PhD.
- Lab Overview:**
The Brain Networks Laboratory uses multimodal neuroimaging methods and in-depth neuropsychological assessments to understand how cognition, brain structure, and brain function are affected by psychiatric and neurological disorders.
- Lab Projects:**
- Exploring unsupervised machine learning to characterize functional brain connectivity patterns between cannabinoid drug states
 - Developing data fusion methods to biotype Autistic brain aging pathways with multimodal MRI
 - Understanding predictive models of aging with explainable artificial intelligence
- 2021-2023 **Research Associate: Mickey Lab**
University of Utah
Principal Investigator: Brian Mickey, MD-PhD.
- Lab Overview:**

The Mickey research group aims to understand the neurobiological causes of depression and related diseases, to discern the mechanisms of effective antidepressant interventions, and to develop novel therapies for treatment-resistant depression in adults.

Lab Projects:

- Research Associate for Ultrasonic Brain Stimulation for Depression Pilot Study
 - Designed and automated task-based BOLD pre-processing and analysis pipelines
 - Conducted resting-state connectome analysis of ultrasonic stimulation impact on neural connectivity
- Analyzed and visualized data for Neural and Antidepressant Effects of Propofol Study
- Site Coordinator for LivaNova RECOVER Vagus Nerve Stimulation Industry Clinical Trial
- Contributed to all stages of literature production, including data analysis, neural analysis, and writing

2021-2023

Research Associate: MEND2 Lab

University of Utah

Principal Investigators: Scott Langenecker, PhD. & Mindy Westlund-Schreiner, PhD.

Lab Overview:

The MEND2 laboratory uses biopsychosocial tools, including neuroimaging, performance, self-report and other-report, and blood and saliva assays in adolescent mood disorders. We use these tools to identify biomarkers to inform precision medicine, including diagnosis, risk, prevention/treatment selection, treatment effectiveness, and course modification.

Lab Projects:

- Analyzed task-based and resting state fMRI neuroimaging data
- Designed digital neuropsychological evaluation paradigms
- Wrote data analysis and visualization scripts for neuropsychological evaluations
- Contributed to all stages of literature production, including data analysis, neural analysis, and writing

2019-2021

Undergraduate Research Assistant: Herculano Comparative Neuroanatomy Lab

Vanderbilt University

Principal Investigator: Suzana Herculano, PhD.

Lab Overview:

The Herculano Comparative Neuroanatomy Lab uses quantitative morphological approaches including isotropic fractionation, immunohistochemistry, tissue clearing processes, and light-sheet microscopy to explore the diversity of nervous system across animals, nervous system evolution, and nervous system developmental origins.

Lab Projects:

- Conducted light-sheet microscopy study of neural decay patterns in Moon Jellyfish
- Conducted meta-analysis of genome size, red blood cell size, and neuronal density trends across vertebrates

Teaching

2023

Utah Research Mentorship Certificate Program

University of Utah

- Completed the Utah Research Mentorship Certificate Program to gain knowledge in best teaching practices, inclusivity, and equity in research mentorship.

2020-2021

Teaching Assistant: Multiple Courses

Vanderbilt University

Professor: Meredyth Wegener, Ph.D.

NSC-3891-02; Neurological Disease

NSC-3630; Drugs and Behavior

- Collaborated on course content and research discussions
- Presented ad hoc class lectures
- Scored weekly written assignments, exams, and papers
- Co-developed “Understanding Checkpoints,” a metacognitive evaluation exam structure
 - Presenting panelist at annual Neuroscience Teaching Conference

2018-2021

Student Lecturer and Instructor: Wilderness Skills 101

Vanderbilt University

- Helped teach a semester long outdoor and environmental lecture series and practicum at Vanderbilt University
- Guided weekend-long climbing, white water paddling, and caving outdoor trips for students and faculty to develop outdoor skills first-hand

Community Involvement

2023-Present

EDI Graduate Student Committee Co-Chair

University of Utah

- I serve as an equity, diversity, and inclusion (EDI) co-chair for the University of Utah Biomedical Engineering Graduate Student Advisory Committee. In this role, I promote EDI in STEM through internal and external events and seminars. Likewise, I sit as a student representative on the broader Price College of Engineering faculty, student, and staff EDI committee.

2024-Present

NSF GRFP Workshop Co-Chair

University of Utah

- I co-lead the University of Utah Biomedical Engineering NSF Graduate Research Fellowship Workshop. The GRFP workshop provides free educational, grant writing, and peer-review services to undergraduate and graduate applicants to the NSF GRFP. In this role, I annually mentor over a dozen applicants, organize informational workshops, and curate high-quality peer-review and mentorship relationships between current NSF Fellows and applicants.

2024

Retention, Promotion, and Tenure Student Advisory Committee Member

University of Utah

- Graduate student representative on the 2024-2025 University of Utah Biomedical Engineering tenure-line faculty RPT committee.

Mentorship

Undergraduate

2023-2024	Co-mentor, Mikayla Anderson, University of Utah, Atypical Brain Aging in Autism
2022	Mentor, Rachel Archibald, University of Utah, Socioeconomic Barriers in Mental Health Research
2021-2022	Mentor, Malika Moeinvazir, University of Utah, Socioeconomic Barriers in Mental Health Research

High School

2024	Mentor, Bb Earl Comeros, Rowland Hall High School, Atypical Brain Aging in Autism
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Peer Reviewed Publications

1. Riis T.R., **Feldman D. A.**, Okifuji, A., & Kubanek J. (In Press). Noninvasive targeted modulation of pain circuits with focused ultrasonic waves. *PAIN*.
2. Riis, T., **Feldman, D.**, Mickey, B., & Kubanek, J. (2024). Controlled noninvasive modulation of deep brain regions in humans. *Communications Engineering*, 3(1), 13. <https://doi.org/10.1038/s44172-023-00146-4>.
3. Roberts, H., Schreiner, M. W., Pocius, S., Dillahun, A. K., Farstead, B., **Feldman, D.**, ... & Langenecker, S. A. (2024). State rumination predicts inhibitory control failures and dysregulation of default, salience, and cognitive control networks in youth at risk of depressive relapse: Findings from the RuMeChange trial. *Journal of Affective Disorders Reports*, 100729. <https://doi.org/10.1016/j.jadr.2024.100729>.
4. Langenecker, S. A., Westlund Schreiner, MBessette, K. L., Roberts, H., Thomas, L., Dillahun, A., Pocius, S. L., **Feldman, D. A.**, Jago, D., Farstead, B., Pazdera, M., Kaufman, E., Galloway, J. A., Kerig, P. K., Bakian, A., Welsh, R. C., Crowell, S. E., & Watkins, E. R. (2024). Rumination Focused CBT reduces rumination and targeted cross-network connectivity in youth with a history of depression: replication in a registered clinical trial. *Biological Psychiatry Open Access*, 4(1), 1-10. <https://doi.org/10.1016/j.bpsgos.2023.08.012>.
5. Riis T.R., **Feldman D. A.**, Losser, A., Mickey B.J., & Kubanek J. (2023). Device for multifocal delivery of ultrasound into deep brain regions in humans. *IEEE Transactions on Biomedical Engineering*. <https://doi.org/10.1109/TBME.2023.3313987>
6. Riis T.R., **Feldman D. A.**, Vonesh, L. C., Brown, J. R., Solzbacher, J., Kubanek, J., & Mickey B. J. (2023). Durable effects of deep brain ultrasonic neuromodulation on major depression. *Journal of Medical Case Reports*, 17(1), 1-6. <https://doi.org/10.1186/s13256-023-04194-4>.
7. Jacobson, M. M., Jenkins, L. M., **Feldman, D. A.**, Crane, N. A., & Langenecker, S. A. (2023). Reduced connectivity of the cognitive control neural network at rest in young adults who had their first drink of alcohol prior to age 18. *Psychiatry Research: Neuroimaging*, 111642. <https://doi.org/10.1016/j.psychresns.2023.111642>
8. Westlund Schreiner, M., Roberts, H., Dillahun, A. K., Farstead, B., **Feldman, D. A.**, Thomas, L., Jacobs, R. H., Bessette, K. L., Welsh, R. C., Watkins, E. R., Langenecker, S. A., & Crowell, S. E. (2023). Negative association between non-suicidal self-injury in adolescents and default mode network activation during the distraction blocks of a rumination task. *Suicide & Life-Threatening Behavior*. <https://doi.org/10.1111/sltb.12960>
9. Dillahun, A. K., **Feldman, D.A.**, Thomas, L. R., Farstead, B. W., Frandsen, S. B., Lee, S., Pazdera, M., Galloway, J., Bessette, K. L., Roberts, H., Crowell, S. E., Watkins, E. R., Langenecker, S. A., & Westlund Schreiner, M. (2022). Self-Injury in Adolescence Is Associated with Greater Behavioral Risk Avoidance, Not Risk-Taking. *Journal of Clinical Medicine*, 11(5), 1288. <https://doi.org/10.3390/jcm11051288>

Preprint Publications

10. Schreiner, M.W., Miller R.H., Jacobsen, A. M., Crowell S. E., Kaufman E., Farstead B., **Feldman, D. A.**, Welsh, R.C., Watkins, E.R., & Langenecker, S.A. (Preprint). Rumination Induction Task in fMRI: Test-Retest Reliability in Youth and Potential Mechanisms of Change with Intervention. *medRxiv*. <https://doi.org/10.1101/2023.10.09.23296759>
11. Tadler, S. C., Jones, K. G., Lybbert, C., ... **Feldman, D. A.**, Larson, C., Hoffman, N., Taylor, N. E. Jessop, J. E., Larson, A. L., Taylor, N. E., Odell D. H., Kuck, K., Mickey, B. J. (Preprint). Propofol for treatment-resistant depression: A randomized controlled trial . *medRxiv*. <https://doi.org/10.1101/2023.09.12.23294678>

Manuscripts Under Review (Or Revision)

12. **Feldman, D.A.**, Jones, K. G., Vonesh, L. C., Jacobs, R., Hoffman, N., Lybbert, C., Huang, J, Light, A., Kuck, K. Jessop, J. Larson, A., Odell, D., Tadler, S. C., & Mickey, B. J. (Under Review). Immediate Effects of Propofol on Mood: A Randomized Comparison of Two Doses in a Cohort with Depression. *Psychopharmacology*.
13. *Riis T.R., ***Feldman, D. A.**, Kwon, S. S., Vonesh, L. C., Koppelmans, V., Brown, J., Solzbacher, D., *Kubaneck J., & *Mickey B. J. (Under Review). Noninvasive targeted modulation of deep brain circuits involved in depression. *Biological Psychiatry*. (*Equal Contribution)
14. Schreiner, M.W., Jacobsen, A. M., Farstead, B., Miller, R.H., Jacobs, R.H., Thomas, L.R., Crowell S. E., Bessette, K.L., Pazdera, M., Crowell, S., Kaufman E., **Feldman, D. A.**, Welsh, R.C., Watkins, E.R., & Langenecker, S.A. (Under Review). Rumination Induction Task in fMRI: Effects of Rumination Focused Cognitive Behavioral Therapy and Stability in Youth. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*.
15. Schreiner, M. W., Thomas, L., Le, H., Pazdera, M., **Feldman, D. A.**, Farstead, B., Bessette, K. L., Welsh, R., Crowell, S., Kaufman, E. A., Klump, H., & Langenecker, S. (Under Review). Identifying Features of Resilience to Childhood Maltreatment in Resting-State Connectivity Data from Adults with and without a History of Mood Disorder. *Neuropsychopharmacology*.

Manuscripts In Preparation

16. **Feldman D. A.**, Prigge, M., Lange, N., Dean, D., Morgan, J., King, C., Anderson, J., Bigler, E., Alexander, A., Zelinski, B., Lainhart, J., & King, J. B. A 11-Year Longitudinal Study of Functional Brain Network Development in Males With Autism. [*Manuscript in Preparation*].
17. Bessette, K.L., Jacobsen, A., **Feldman, D.A.**, Dillahun, A., Westlund-Schreiner, M., Burkhouse, K., & Langenecker, S.A. Neural Recruitment During Inhibition as a Weakness in High-Risk Daughters. [*Manuscript in Preparation*].
18. Jacobsen, A., Farstead, B., Frandsen, S., **Feldman, D. A.**, Kaufman, E., & Schreiner, M. W. Executive function metrics anti-correlated with left angular gyrus activation in adolescents with remitted depression. [*Manuscript in Preparation*].

Posters & Presentations

1. **Feldman, D. A.**, Prigge, M., Morgan, J., King, C., Shah, L., Anderson, J., & King, J. B. (2024). A Tensor Decomposition Approach to fMRI Group Analysis: Detecting Resting State Brain Patterns in Cannabinoid Drug States. *Society for Neuroscience*.
2. **Feldman, D. A.**, Prigge, M., Morgan, J., King, C., Shah, L., Anderson, J., & King, J. B. (2023). Unsupervised High Order Tensor Decomposition Distinguishes Resting State Connectivity Brain Patterns Between Cannabinoid Drug States. *Utah Center for Advanced Imaging Research Symposium*.
3. **Feldman, D. A.**, Jones, K., Jacobs, R., Vonesh, L., Hoffman, N., Lybbert, C., ... & Mickey, B. J. (2023). 18. Short-Term Mood Effects of Repeated Propofol Infusions for Depression. *Biological Psychiatry*, 93(9), S101. <https://doi.org/10.1016/j.biopsych.2023.02.258>.
4. **Feldman, D.A.**, Jones, K., Jacobs, R., Vonesh, L., Hoffman, N., Lybbert, C., Huang, J., Light, A., Kuck, K., Jessop, J., Larson, A., Odell, D., Tadler, S. C., & Mickey, B. J. (2022). Acute Dose-Dependent Mood Effects of Propofol. *Snowbird Neuroscience Symposium*.
5. **Feldman, D.A.** & Wegener, M. (2021). Understanding checkpoints: A summative assessment tool for metacognition, application of neuroscience concepts, and data figure interpretation. *Annual Neuroscience Teaching Conference*.