CURRICULUM VITAE
Gracie J. Grimsrud
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Education

Stanford University School of Medicine 2025 - Present
Stanford Graduate Fellow in Science & Engineering – Stanford VPGE
Ph.D. Student – Neurosciences Interdepartmental Program
Activities: Neurosciences Mental Health Committee

University of Minnesota - Twin Cities Minneapolis, MN
Bachelor of Science, Major: Psychology, Minors: Neuroscience, Biology 2020-2023
GPA: 3.94
University Honors Program: Summa Cum Laude
Honors Thesis: Utilizing Precision Functional Mapping to Identify Functional Brain Biomarkers of Stimulant Use
Activities: DCAN Lab, University Honors Program Mentorship, CBS Youth Outreach, Surgical Interest Group

University of Minnesota Emergency Medical Services Minneapolis, MN
Initial Emergency Medical Technician Course 2021
Certified NREMT Medical Technician

Publications

First Author

1. Byington, N.*, **Grimsrud**, **G***.,Mooney, M., Cordova, M., Doyle, O., Hermosillo, R., Earl, E., Perrone, A., Moore, L., Graham, A., Nigg, J., Thompson, W., Nelson, S., Feczko, E., Fair, D., Miranda-Dominguez, O. (*Co-First Authors). Polyneuro Risk Scores Capture Widely Distributed Connectivity Patterns of Cognition. *Developmental Cognitive Neuroscience*. April 2023.
2. **Grimsrud, G.,** Hermosillo, R., Byington, N., Mitchell, M. E., Nugiel, T., Weldon, K. B., Feczko, E., Miranda-Dominguez, O., Saggar, M., Siegel, J., Kay, B., Larsen, B., Dosenbach, N., Cohen, J. R., Fair, D. A. The role of the somato-cognitive action network in positive response to methylphenidate intervention in individuals with ADHD. *In Prep for submission to Nature Neuroscience Brief Reports.*
3. **Grimsrud, G.,** Hufnagle, K., Koirala, S., Sjoberg, H., DuFauchard, J., Ojuri, B., Hansen, S., Byington, N., Dameh, A., Barth, N., Kern, K., Byington, N., Larsen, B., Feczko, E., Elison, J.T., Nelson, S.M., Tervo-Clemmens, B., Dosenbach, N.U.F., & Fair, D.A. The First Transdiagnostic Adolescent Precision Imaging Cohort. *In Prep.*

Co-Author

4. Koirala, S., **Grimsrud**, **G.**, Mooney, M.A., Larsen, B., Feczko, E., Elison, J.T., Nelson, S.M., Nigg, J.T., Tervo-Clemmens, B., & Fair, D.A. ADHD Neurobiology: Historical Challenges and Emerging Frontiers. *Nature Reviews Neuroscience*. October 2024.
5. Nahas, Z., Hermosillo, R. J. M., Eiting, S. H., Hattab, T., Hazimeh, M., Johnson, R. A., Koirala, S., Madison, T. J., Weldon, K. B., König, S. D., Differding, C., Sakr, A., Durrani, B., Chaikind, J., Waldron, E., Arnoudse, N. M., Miranda-Domínguez, Ó., Tervo-Clemmens, B., Larsen, B., Betzel, R., Feczko, E., Moore, L. A., Moser, J., Lundquist, J. T., **Grimsrud, G.**, Byington, N., Hufnagle, K., Marek, S., Gordon, E., Laumann, T., Herman, A. B., Widge, A. S., Park, M. C., Dosenbach, N. U. F., Nelson, S. M., Darrow, D. P., Netoff, T. I., Fair, D. A. Personalized Adaptive Cortical Electro-stimulation (PACE) in Treatment-Resistant Depression. *Under Review, Nature Medicine.* August 2025.
6. Darrow, D. P., MD*; Herman, A. B., MD*; Hattab, T., MD; König, S., PhD; Hermosillo, R., PhD; Moser, J., PhD; Koirala, S., BA; **Grimsrud**, **G**., BS; Krimmel, S. R., PhD; Nahas, Z., MD; Miranda-Dominguez, O., PhD; Nelson, S. M., PhD; Gordon, E. M., PhD; Dosenbach, N. U. F., MD, PhD; Fair, D. A., PhD. An action networks model for pain reveals cortical neuromodulation targets. *Under Review, Nature Neuroscience.* July 2025.
7. Moser, J., Nelson, S. M., Koirala, S., Madison, T. J., Labonte, A. K., Morales Carrasco, C., Feczko, E., Moore, L. A., Lundquist, J. T., Weldon, K. B., **Grimsrud, G**., Hufnagle, K., Ahmed,

W., Myers, M. J., Adeyemo, B., Snyder, A. Z., Gordon, E. M., Dosenbach, N. U. F., Tervo-Clemmens, B., Larsen, B., Moeller, S., Yacoub, E., Vizioli, L., Uğurbil, K., Laumann, T. O., Sylvester, C. M., Fair, D. A. Multi-echo Acquisition and Thermal Denoising Advances Precision Functional Imaging. *Imaging Neuroscience*. January 2025

8. Hermosillo, R., Moore, L., Feczko, E., Pines, A., Dworetsky, A., Conan, G., Mooney, M., Randolph, A., Graham, A., Adeyemo, B., Earl, E., Perrone, A., Carrasco, C., Uriarte-Lopez, J., Snider, K., Doyle, O., Cordova, M., Koirala, S., **Grimsrud, G.**, Byington, N., Nagel, B., Feldstein, S., Nelson, S., Satterthwaite, T. T., Dosenbach, N., Gratton, C., Petersen, S., Miranda-Domínguez, O., Fair, D. A. A Precision Functional Atlas of Network Probabilities and Individual-Specific Network Topography. *Nature Neuroscience*. August 2024.
9. Conelea, C., Feczko, E., Hendrickson, T., Houlihan, K., Corlett, A., Hodapp, S., **Grimsrud, G.**, Nelson, S. Precision Functional Mapping fMRI in Youth With Psychiatric Disorders. *Biological Psychiatry.* Volume 95, Issue 10, Supplement S218. May 2024.
10. Mooney, M., Hermosillo, R., Feczko, E., Miranda-Dominguez, O., Moore, L., Perrone, A., Byington, N., **Grimsrud, G**., Rueter, A., Nousen, E., Antovich, D., Feldstein Ewing, S., Nagel, B., Nigg, J., Fair, D. Cumulative Effects of Resting-State Connectivity Across All Brain Networks Significantly Correlate with ADHD Symptoms. *Journal of Neuroscience*. March 2024. https://doi.org/10.1101/2021.11.16.21266121.
11. Coffman, C., Koirala, S., Hermosillo, R., Lundquist, J., **Grimsrud, G.,** Miranda-Dominguez, O., Weldon, K., Anderson, M., Madison, T., Nelson, S., Elison, J., Wilson, S., Fair, D., Tervo-Clemmens, B., Basu, S., Feczko, E. Examining the heritability of functional brain networks in adolescence. *Under Review, Nature Communications.* August 2025.

Honors, Awards & Grants

University of Minnesota Iron Range Scholarship	May 2020
University of Minnesota Summer Undergraduate Research Opportunities Program Grant	May 2021
University of Minnesota – Dean's List	Fall 2020 - Spring 2023
University of Minnesota Bachelor of Science with High Distinction	May 2023
University of Minnesota Honors Program – Summa Cum Laude High Distinction	May 2023
Washington University St. Louis – Olin Chancellor's Fellowship	February 2025, *Declined*
Stanford VPGE Graduate Fellowship in Science & Engineering	2025-2028

Posters & Talks

Invited Talks

Grimsrud, G., Fair, D. A. When Ritalin Works: Shifts in Brain Communication Between Body Action and Reward Circuits. Invited Speaker: Precision Neuroscience Press Conference, Society for Neuroscience (San Diego, CA, November 2025).

Posters

Grimsrud, G., Hermosillo, R., Byington, N., Miranda-Dominguez, O., Mitchell, M., Nugiel, T., Weldon, B., Larsen, B., Cohen, J., Fair, D. A. Changes in connectivity between the Somato-Cognitive Action Network & Reward Circuitry in Response to Methylphenidate Intervention in Individuals with ADHD. Accepted to present at the Society for Neuroscience Conference (San Diego, CA, November 2025).

Grimsrud, G., Hermosillo, R., Byington, N., Miranda-Dominguez, O., Mitchell, M., Nugiel, T., Weldon, B., Larsen, B., Cohen, J., Fair, D. A. Investigating the Role of the Somato-Cognitive Action Network in Stimulant Treatment Response in Individuals with ADHD. Accepted to present at the Flux Society International Conference (Dublin, Ireland, September 2025). *Declined to present due to scheduling issues.*

Grimsrud, G., Hermosillo, R., Byington, N., Miranda-Dominguez, O., Mitchell, M., Nugiel, T., Fair, D., Cohen, J. Precision Functional Mapping to Identify Stimulant Treatment Response in Medication-Naive Children with ADHD. Poster presented at the Flux Society International Conference (Santa Rosa, CA, September 2023).

Grimsrud, G*., Byington, N*., Feczko, E., Mooney, M., Houghton, A., Rueter, A., Perrone, A., Moore, L., Nigg, J., Nelson, S., Miranda-Dominguez, O., Fair, D. (**Co-First Authors*). Utilizing Functional Connectivity to Identify Neuropsychological Subgroups in Typically Developing and

ADHD-Diagnosed Youth. Poster presented at the Flux Society International Conference (Paris, September 2022).

Byington, N*., **Grimsrud**, G*., Mooney, M., Cordova, M., Doyle, O., Hermosillo, R., Earl, E., Perrone, A., Moore, L., Graham, A., Nigg, J., Thompson, W., Feczko, E., Miranda-Dominguez, O., Fair, D. (**Co-First Authors*). Polyneuro Risk Scores of Executive Function Show Widely Distributed Effects Across the Whole Brain. Poster presented at the Organization for Human Brain Mapping Conference (June 2021).

Byington, N*., **Grimsrud**, G*., Mooney, M., Cordova, M., Doyle, O., Hermosillo, R., Earl, E., Perrone, A., Moore, L., Graham, A., Nigg, J., Thompson, W., Feczko, E., Miranda-Dominguez, O., Fair, D. (**Co-First Authors*). Harnessing Supercomputing Power to Calculate Risk Scores Based on Whole-Brain Functional Connectivity. Poster presented at UMN Minnesota Supercomputing Institute Research Symposium (April 2021).

Grimsrud, G., Byington, N., Mooney, M., Cordova, M., Doyle, O., Hermosillo, R., Earl, E., Perrone, A., Moore, L., Graham, A., Nigg, J., Thompson, W., Feczko, E., Miranda-Dominguez, O., Fair, D. Polyneuro Risk Scores: Testing a Multivariate Approach to Study Functional Connectivity Involved in Executive Functioning. Poster presented at UMN Undergraduate Research Symposium (April 2021).

Grimsrud, G*., Byington, N*., Mooney, M., Cordova, M., Doyle, O., Hermosillo, R., Earl, E., Perrone, A., Moore, L., Graham, A., Nigg, J., Thompson, W., Feczko, E., Miranda-Dominguez, O., Fair, D. (**Co-First Authors*). Head Motion in Functional MRI Scans Does Not Drive Results of Brain-Wide Association Study: An ABCD Study Multivariate Analysis. Poster presented at the Society for Neuroscience Conference (November 2021).

Grimsrud, G*., Byington, N*., Mooney, M., Cordova, M., Doyle, O., Hermosillo, R., Earl, E., Perrone, A., Moore, L., Graham, A., Nigg, J., Thompson, W., Feczko, E., Miranda-Dominguez, O., Fair, D. (**Co-First Authors*). Patterns of Brain Connectivity Associated with Executive Function Are Globally Distributed Among Higher-Order Heteromodal Areas. Poster presented at the Flux Society International Conference (September 2021).

Grimsrud, G., Byington, N., Mooney, M., Cordova, M., Doyle, O., Hermosillo, R., Earl, E., Perrone, A., Moore, L., Graham, A., Nigg, J., Thompson, W., Feczko, E., Miranda-Dominguez, O., Fair, D. Using Polyneuro Risk Scores of Executive Function to Investigate Biological Mechanisms of ADHD. Poster presented at UMN SURE (August 2021).

Godfrey, K., Ramirez, J.S. "Bene", **Grimsrud, G. J.**, Conelea, C., Fair. D.A., Tervo-Clemmens, B., Nelson, S. Common and specific large-scale fMRI network representations across passive viewing of crosshair fixation and movie clips. Accepted to present at the Society for Neuroscience Conference (San Diego, CA, November 2025).

Byington, N., **Grimsrud**, G., Hermosillo, R., Nugel, T., Feczko, E., Nelson, S., Fair, D., Cohen, Miranda-Dominguez, O. Examining brain-wide effects of methylphenidate in medication-naïve children and adults with ADHD. Poster presented at the Flux Society International Conference (Dublin, Ireland September 2025).

Ramirez, J.S. "Bene", Hermosillo, R.J.M., **Grimsrud, G.J.**, Moser, J., Morgan, V., Madison, T.J., Weldon, K.B., Miranda-Dominguez, O., Chaouch, E., Barth, N., Kern, N., Byington, N.K., Hufnagle, K.M., Tervo-Clemmens, B., Dosenbach, N.U.F., Nelson, S.M., & Fair, D.A. Finding Confidence in Individualized Functional Networks: Confidence Mapping in a Precision Developmental Dataset. Poster presented at the Flux Society International Conference (Baltimore, MA, September 2024).

Byington, N., Miranda-Dominguez, O., **Grimsrud**, G., Hermosillo, R., Nugel, T., Feczko, E., Nelson, S., Fair, D., Cohen, J. Polyneuro Risk Scores Reflect Treatment Effects in Medication-Naive Children with ADHD. Poster presented at the Flux Society International Conference (Santa Rosa, CA, September 2023).

Hufnagle, K., Byington, N., Scheidter, K., Monk, J., **Grimsrud**, G., Rueter, A., Burrows, C., Conelea, C., Jacob, S., Barch, D., Constantino, J., Nigg, J., Elison, J., Dosenbach, N., Fair, D. A. Data Collection Strategies: Decreasing Participant Burden and Increasing Retention in Typically and Atypically Developing Populations. Poster presented at the Flux Society International Conference (Paris, September 2022).

Experience

Developmental Cognition and Neuroimaging Lab, Supplemental Research Professional II

May 2024

Masonic Institute for the Developing Brain, PI: Dr. Damien A. Fair

Conducted research focused on individual brain organization using neuroimaging techniques, specializing in Precision Functional Mapping (PFM). Responsibilities include structural and functional MRI data processing and analysis, data acquisition, and project leadership and management. Leading analysis of a novel pediatric PFM cohort to examine relationships between the Somatomotor Cognitive Action Network and neurodevelopmental outcomes.

Turing Medical, Clinical Operations & Central Region Territory Manager

May 2024-July 2025

Contribute to commercial operations for a precision neuro-tech company focused on neuroimaging quality assurance, protocol optimization, and patient-specific brain mapping. Manage projects, site communication, and product training for neurosurgical and neuroradiology teams. Familiarity with neuronavigation platforms including BrainLAB and Medtronic Stealth. Developed and maintained critical relationships with physicians, promoted new FDA-cleared neuroimaging technologies, and communicated the benefits of patient-specific fMRI mapping for pre-surgical planning.

Center for Developmental Neuroimaging, Research Professional II

May 2023-May 2024

Masonic Institute for the Developing Brain, PI: Dr. Steve Nelson

Research focused on using neuroimaging techniques to inspect individual brain organization. Researched individual brain organization using Precision Functional Mapping (PFM) techniques. Primary responsibilities include structural and functional MRI data processing, analysis, and protocol development. Support IRB-compliant studies on neurodevelopmental populations, including children with dyslexia. Lead investigations into differences in functional connectivity between pure-rest and video-watching resting-state conditions, examining implications for Precision Functional Mapping research.

Turing Medical, Commercial Development Intern

September 2022-May 2024

Turing Medical precision neuro-tech company focused on providing neuroimaging quality assurance and protocol optimization. I assisted the commercial team in project management, site communication, and scientific education. Conducted routine communication and collaboration with leading neurosurgeons and neuroradiologists across the country.

Developmental Cognition and Neuroimaging Lab, Undergraduate Research Assistant

September 2020-May 2023

Masonic Institute for the Developing Brain, PI: Dr. Damien A. Fair

2020-2021 Academic Year: Part-Time Student RA

Summer 2021: Full-Time Research Assistant on the clinical team

2021-2022 Academic Year: Part-Time Student RA

Summer 2022: Full-Time Research Assistant on the clinical team

2022-2023 Academic Year: Honors Thesis Student

Conducted research on the behavior and functional connectivity of adolescents with ADHD, ASD, and typically developing (TD) peers. Responsibilities included participant recruitment, assessment, and MRI imaging of TD, ADHD, and ASD children aged 9-10 years. Co-led the development of a novel multivariate approach to analyze brain-wide association study (BWAS) data and utilized Precision Functional Mapping (PFM) techniques to investigate responses to stimulant medication in individuals with ADHD, examining effects on functional connectivity. Engaged with large consortia datasets, including the Adolescent Brain Cognitive Development (ABCD) study and the Human Connectome Project (HCP).

Community Outreach Lead, College of Biological Sciences Outreach

September 2020-October 2022

Volunteer position; created scientific modules for elementary and middle school classrooms, delivering content online and in person. Served as a mentor to young students, encouraging early engagement in science.

Research Quality Improvement Intern, Hennepin County Medical Center

September 2021-December 2021

Volunteer position; monitored patients in the Emergency Department to assess eligibility for research studies, collected data, conducted informed consent, and coordinated fast-paced research activities, requiring effective communication skills.

Biochemistry and Molecular Biology Research Assistant, Mayo Clinic
January 2020-December 2021

PI: Dr. Steve Ekker & Dr. Chris Pierret

Conducted research on DNA modification of the "Hulk" transgenic Zebrafish line, utilizing SnapGene for plasmid construction, LightSheet imaging, and exploring zebrafish reporter lines.

Community Science Lead, InSciEd Out Program
September 2019-September 2021

Led scientific experiments in K-12 classrooms, including virtual programs during the pandemic. Conducted school mental health screenings, analyzed assessment data, and developed a virtual science education professional development course for teachers.

Psychiatry Research Intern, University of Virginia – Emergency Medicine
June 2019-August 2019

PI: Dr. Gregory Saathoff

Conducted research pertaining to substance abuse, threat assessment teams, and psychiatric cases as part of the Critical Incident Response Group. Examined various historic documents paying great attention to small details.

Skills

Computational & Data Science

- Proficient in scripting and workflow automation using Bash, R, and MATLAB
- Advanced GitHub user for version control, collaborative coding, and technical documentation with ReadTheDocs
- Familiar with Python and Jupyter Notebooks for data analysis and reproducibility
- Experience developing and debugging in Visual Studio Code across Linux and Windows environments

Neuroimaging Acquisition & Analysis

- Certified 3T and 7T MRI operator; expert in MRI protocol development, participant safety, and high-throughput data acquisition
- Extensive experience with structural and functional MRI processing and analysis using Freesurfer, Workbench, fMRIPrep, XCP-D, and related QC tools
- Skilled in advanced neuroimaging pipelines, data harmonization, and multimodal integration for pediatric and clinical populations

Statistical Analysis & Documentation

- Proficient with statistical computing, visualization, and reproducible research in R, MATLAB, and Python
- Skilled in data wrangling, descriptive statistics, inferential analysis, and multivariate models
- Experienced in rigorous documentation practices, research protocol development, and open science initiatives

Clinical & Cognitive Research

- IRB-compliant participant recruitment, screening, and data collection in academic & clinical settings
- CITI-certified (Good Clinical Practice, Human Subjects, RCR)
- Trained in administration of cognitive and behavioral assessments (WISC-V, NIH Toolbox), with meticulous attention to protocol fidelity and participant comfort

Outreach & Science Education

- Developed and delivered inquiry-based science modules with InSciEd Out for K-12 classrooms, emphasizing neuroscience and mental health literacy
- Facilitated professional development workshops for educators, introducing innovative tools such as the lunchbox microscope and zebrafish as model organisms
- Led outreach initiatives and educational programming to promote STEM, mental health understanding, and accessible science communication
- Empowered teachers to incorporate interactive science curricula and best practices in inquiry-based learning
- Managed classroom logistics, ensured safety during hands-on demonstrations, and tailored content for diverse student populations

Communication & Project Management

- Dynamic presenter at national conferences; skilled in tailoring technical content to diverse audiences
- Engaged science communicator via web/video production, educational program development, and community outreach
- Experienced mentor and workshop leader, advancing STEM education for K-12 audiences and professional peers

Archival Research & Documentation

Proficient in historical/archival research, including complex document analysis, synthesis, and curation
Acute note-taking and evidence management for multidisciplinary research projects

Additional Tools & Technologies

Familiar with high-performance computing (HPC) environments and job scheduling (e.g., SLURM)
Experience with survey administration platforms (Qualtrics), REDCap, and database management
Basic proficiency with web development via GitHub (HTML/CSS)

Neurotechnology & Commercial Operations

Expertise in neuroimaging quality assurance and clinical protocol optimization for precision medicine applications
Skilled in site management, stakeholder engagement, and cross-functional team coordination in fast-paced start-up environments
Proficient in project management, including task prioritization, timeline oversight, and progress reporting
Strong experience in physician relationship management, fostering strategic partnerships and encouraging clinical adoption
Promoted FDA-cleared neuroimaging technologies by developing and presenting compelling sales materials, technical presentations, and evidence-based value propositions
Communicated complex concepts regarding patient-specific brain mapping and pre-surgical planning to both technical and non-technical audiences
Familiar with regulatory compliance, FDA guidelines, and quality documentation for medical device/software implementation
Agile and adaptive problem-solver, able to respond quickly to client needs, technical challenges, and innovative solution opportunities