



Rory Vu Mather

Postdoctoral Scholar, Anesthesiology, Perioperative and Pain Medicine

Bio

BIO

I'm a future physician-scientist working at the intersection of statistics, machine learning, and neural signal processing. As part of the Harvard/MIT MD-PhD Program, I recently completed my PhD in Medical Engineering & Medical Physics (MEMPH) through the Harvard-MIT Health Sciences and Technology (HST) Program.

Currently I'm a postdoctoral fellow in pediatric anesthesiology with Dr. Jennifer Rabbitts and Dr. Cornelius Groenewald at Stanford, where I apply causal inference methods to large-scale electronic health record data to estimate how intraoperative decisions shape long-term postoperative pain and opioid outcomes in children.

I'm also interested in medical education and administration, particularly supporting minority populations such as LGBTQIA+ and Vietnamese communities. Outside of science, I bring a background in graphic design, marketing, and brand development for technology companies, universities, and non-profits.

HONORS AND AWARDS

- First Place - Stanford Graduate School of Business Healthcare Pitch Competition, Stanford Graduate School of Business (2026)
- Harvard Medical School Soma Weiss Award for Excellence in Research, Harvard Medical School (2026)
- Stanford Anesthesia Research Awards - Honorable Mention for Best Research Abstract, Stanford University Department of Anesthesiology, Perioperative and Pain Medicine (2026)
- NIH F30 MD-PhD Fellowship Grant, NIH: National Institute on Drug Abuse (NIDA) (2025 - 2026)
- SAE International Doctoral Engineering Scholarship, SAE (2025)
- Stanford Anesthesia Research Awards - Best Clinical Science Abstract, Stanford University Department of Anesthesiology, Perioperative and Pain Medicine (2025)
- Stanford SPARK Program Award in Excellence, Stanford SPARK Program (2025)
- Point Foundation Scholar, Point Foundation (2024, 2025)
- Stanford SPARK Program Scholar, Stanford SPARK Program (2024 - 2026)
- Harvard-MIT HST Neuroimaging Training Program NIH T32 Grant, NIH: National Institute of Biomedical Imaging and Bioengineering (NIBIB) (2023 - 2025)
- MIT Institute of Medical Engineering & Sciences (IMES) Prince Fellowship, MIT Institute of Medical Engineering & Sciences (IMES) (2022 - 2023)
- MIT HST Roger G. Mark Outstanding Service Award, Harvard/MIT Health Sciences and Technology (HST) Program (2021)
- Harvard-MIT MD-PhD NIH Medical Scientist Training Program (MSTP) Grant, National Institutes of Health (NIH): National Institute of General Medical Sciences (NIGMS) (2020 - 2030)

- LGBT Foundation Scholar, LGBT Foundation (2020 - 2024)
- Harrison D. Stalker Senior Thesis Award in Biology, Washington University in St. Louis (2019)
- Latin Honors: Summa Cum Laude, Washington University in St. Louis (2019)
- Scholar in Arts & Sciences, Washington University in St. Louis (2018)

PROFESSIONAL EDUCATION

- MD, Harvard/MIT Health Sciences and Technology (HST) Program
- PhD, Harvard/MIT Health Sciences and Technology (HST) Program , Biomedical Engineering (2026)
- MS, Washington University in St. Louis , Systems Science & Mathematics (2020)
- BA, Washington University in St. Louis , Neuroscience & Electrical Engineering (2019)

STANFORD ADVISORS

- Cornelius Groenewald, Postdoctoral Research Mentor
- Jennifer Rabbitts, Postdoctoral Faculty Sponsor

Research & Scholarship

LAB AFFILIATIONS

- Jennifer Rabbitts, Rabbitts Lab (6/1/2026)
- Cornelius Groenewald, Groenewald Lab (6/1/2026)
- Patrick Purdon, Purdon Lab (3/1/2021 - - 5/31/2026)

Publications

PUBLICATIONS

- **Association of peripheral nerve blocks with increased postoperative pain and opioid use in orthopaedic surgery: a single-centre retrospective cohort study.** *British journal of anaesthesia*
Chung, A. R., Mather, R. V., Gutierrez, R., Liu, R., Leung, C. F., Zhang, M., Santa Cruz Mercado, L. A., Houle, T. T., Bittner, E. A., Purdon, P. L.
2025
- **Intraoperative Frontal EEG Alpha Power is Associated with Post-Operative Mortality and Other Adverse Outcomes.** *Anesthesiology*
Mather, R. V., Nipp, R. D., Balanza, G., Stone, T. A., Gutierrez, R., Raje, P., Higuchi, M., Liu, R., Santa Cruz Mercado, L. A., Bittner, E. A., Kunitake, H., Purdon, P. L.
2024
- **Development and prospective validation of postoperative pain prediction from preoperative EHR data using attention-based set embeddings.** *NPJ digital medicine*
Liu, R., Gutiérrez, R., Mather, R. V., Stone, T. A., Santa Cruz Mercado, L. A., Bharadwaj, K., Johnson, J., Das, P., Balanza, G., Uwanaka, E., Sydloski, J., Chen, A., Hagood, et al
2023; 6 (1): 209
- **A Prospective Study Characterizing Cognitive Function in Patients with Inflammatory Bowel Disease.** *Clinical and translational gastroenterology*
Raje, P., Stone, T. A., Alkourabi, J., Mather, R. V., Liu, R., Higuchi, M., Nipp, R. D., Purdon, P. L., Kochar, B., Kunitake, H.
2026
- **Intraoperative Electroencephalogram Alpha Power Associated with Mortality: Reply.** *Anesthesiology*
Mather, R. V., Nipp, R. D., Balanza, G., Stone, T. A., Gutierrez, R., Raje, P., Higuchi, M., Liu, R., Mercado, L. A., Bittner, E. A., Kunitake, H., Purdon, P. L.
2025; 143 (5): 1425-1427
- **Electroencephalogram-Guided General Anesthesia in a Pediatric Patient With Alexander's Disease: A Case Report.** *A&A practice*
Zhang, M., Mather, R. V., Chung, A. R., Leung, C. F., Ramamurthi, R. J., Purdon, P. L.

2025; 19 (1): e01910

- **Development and multicentre validation of the FLEX score: personalised preoperative surgical risk prediction using attention-based ICD-10 and Current Procedural Terminology set embeddings.** *British journal of anaesthesia*

Liu, R., Stone, T. A., Raje, P., Mather, R. V., Santa Cruz Mercado, L. A., Bharadwaj, K., Johnson, J., Higuchi, M., Nipp, R. D., Kunitake, H., Purdon, P. L.

2024