

CURRICULUM VITAE

Patrick Sadil, PhD, MS

PROFESSIONAL DATA

psadill@jh.edu

[GitHub](#)

he/him

EDUCATION AND TRAINING

2020 *PhD, Cognitive Psychology, University of Massachusetts, Amherst*
2019 *MS, Cognitive Psychology, University of Massachusetts, Amherst*
2014 *BA, Biology, Reed College*

Postdoctoral Training

2021-2022 *Biostatistics, Johns Hopkins University*

2020-2021 *Psychological and Brain Sciences, UMass Amherst*

PROFESSIONAL EXPERIENCE

Johns Hopkins University

Research Associate, Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health, 2022 – present

PROFESSIONAL ACTIVITIES

Society Membership and Leadership

Participation on Advisory Panels and Boards

EDITORIAL AND OTHER INVITED PEER REVIEW ACTIVITIES

Journal Peer Review Activities

Imaging Neuroscience (2025-); Frontiers Aging Neuroscience (2024-); Journal of Mathematical Psychology (2022-)

Journal or Other Editorial Board Membership

Proposal Peer Reviews

Peer Review of Reports and Other Documents

Springer Book Review (2018)

Peer Review of Other Scholarly Products

HONORS AND AWARDS

Honors

Awards

- Keith Rayner Memorial Graduate Student Research Award (\$1500), 2018, Department of Psychological and Brain Sciences, University of Massachusetts, Amherst
- Center for Research on Families Travel Grant (\$500), 2018, Center for Research on Families, University of Massachusetts, Amherst
- Edna M. Dahlquist Scholarship (\$2000), 2016, Department of Psychological and Brain Sciences, University of Massachusetts, Amherst
- Summer Undergraduate Research Fellowship (\$5000), 2013, Department of Biology, Reed College

Named Lectureships

PUBLICATIONS

* *indicates student or post-doctoral fellow was mentored for the published work*

Journal Articles (peer reviewed; do not include submitted manuscripts currently under review)

Pluimer, B., Sridhar, A., Mawla, I., Wu, H. M., Lulla, R., Hennessy, S., ..., **Sadil, P.**, ... & Harris, R. E. (2026). A Proof-of-Concept Study on the Use of Large Language Models for Assessing Research Methodology in Neuroimaging. *Neuroscience Informatics*, 100262.

Sadil, P., & Lindquist, M. A. (2026). From maps to models: A survey on the reliability of small studies of task-based fMRI. *Imaging Neuroscience*; 4 IMAG.a.1076.

Jung, H., Amini, M., Hunt, B. J., Murphy, E. I., **Sadil, P.**, Halchenko, Y. O., ... & Wager, T. D. (2025). Spacetop: A multimodal fMRI dataset unifying naturalistic processes with a rich array of experimental tasks. *Scientific Data*, 12(1), 1465.

Sadil, P., & Lindquist, M. A. (2024). Comparing automated subcortical volume estimation methods; amygdala volumes estimated by FSL and FreeSurfer have poor consistency. *Human Brain Mapping*, 45(17), e70027. <https://doi.org/10.1002/hbm.70027>

Halchenko, Y. O., Goncalves, M., Ghosh, S., Velasco, P., Oleggio Castello, M. V. di, Salo, T., Wodder, J. T., Hanke, M., **Sadil, P.**, Gorgolewski, K. J., Ioanas, H.-I., Rorden, C., Hendrickson, T. J., Dayan, M., Houlihan, S. D., Kent, J., Strauss, T., Lee, J., To, I., ... Kennedy, D. N. (2024). HeuDiConv — flexible DICOM conversion into structured directory layouts. *Journal of Open Source Software*, 9(99), 5839.

Sadil, P., Cowell, R. A., & Huber, D. E. (2023). The push–pull of serial dependence effects: Attraction to the prior response and repulsion from the prior stimulus. *Psychonomic Bulletin & Review*, 31, 259–273.

Sadil, P., Cowell, R. A., & Huber, D. E. (2022). A modeling framework for determining modulation of neural-level tuning from non-invasive human fMRI data. *Communications Biology*, 5(1244), 1–12.

Cowell, R. A., Barense, M. D., & **Sadil, P.** (2019). A Roadmap for Understanding Memory: Decomposing Cognitive Processes into Operations and Representations. *eNeuro*, 6(4).

Sadil, P., Cowell, R. A., & Huber, D. E. (2019). A hierarchical Bayesian state trace analysis for assessing monotonicity while factoring out subject, item, and trial level dependencies. *Journal of Mathematical Psychology*; 90, 118–131.

Sadil, P., Potter, K. W., Huber, D. E., & Cowell, R. A. (2019). Connecting the dots without top-down knowledge: Evidence for rapidly-learned low-level associations that are independent of object identity. *Journal of Experimental Psychology: General*; 148(6), 1058–1070.

Ross, D. A., **Sadil, P.**, Wilson, M. D., & Cowell, R. A. (2017). Hippocampal Engagement during Recall Depends on Memory Content. *Cerebral Cortex*; 28(8), 2685–2698.

Sadil, P., & Cowell, R. A. (2017). A Computational Model of Perceptual and Mnemonic Deficits in Medial Temporal Lobe Amnesia. *Journal of Cognitive Neuroscience*; 29(6), 1075–1088.

Sadil, P., & Cowell, R. A. (2016). A Computational Model of Perceptual Deficits in Medial Temporal Lobe Amnesia. *Proceedings of the 38th Annual Meeting of the Cognitive Science Society*.

Books or Monographs

Chapters

Articles, Editorials and Other Publications Not Peer Reviewed

Published

Deposited in a Pre-Print Server

Ansari, B., **Sadil, P.**, Ford, J., Taub, M., Kahn, A., Urrutia, J., ... & Acute to Chronic Pain Signatures Consortium. (2026). Data Quality Assurance Tool for the Acute to Chronic Pain Signatures Study (A2CPS): An Interactive R Shiny Application. *medRxiv*, 2026-01.

Miao, Z., Jung, H., Kragel, P. A., Bo, K., **Sadil, P.**, Lindquist, M. A., & Wager, T. D. (2025). Common and distinct neural correlates of social interaction perception and theory of mind. *bioRxiv*, 2024-12.

Sadil, P., Arfanakis, K., Bhuiyan, E. H., Caffo, B., Calhoun, V. D., Clauw, D. J., ... & Acute to Chronic Pain Signatures Consortium. (2024). Image Processing in the Acute to Chronic Pain Signatures (A2CPS) Project. *bioRxiv*, 2024-12.

PRACTICE ACTIVITIES

Practice-Related Reports

Testimony

Presentations to Policymakers, Communities, and Other Stakeholders

Consultations or Collaborations with Policymakers, Community Groups, and Other Stakeholders

Media Dissemination

Traditional Media (e.g., newspaper, broadcast networks, magazine, etc.)

Social Media, Podcasts, Blog Posts, Videos

Blog: <https://psadil.github.io/psadil/posts.html> (Google Analytics reported active users in 2025: 690)

Software and Other Product Development

Maintainer

[conda-forge/pylibjpeg-libjpeg-feedstock](#) (2025-: 19k downloads)

[conda-forge/pylibjpeg-rle-feedstock](#) (2025-: 8.4k downloads)

[conda-forge/pylibjpeg-openjpeg-feedstock](#) (2025-: 10k downloads)

[conda-forge/r-cifitools-feedstock](#) (2025-: 1k downloads)

[conda-forge/r-mgc-feedstock](#) (2025-: 1k downloads)

[conda-forge/tapipy-feedstock](#) (2026-: <100 downloads)

Listed Contributor

[nipreps/smriprep](#)

[nipreps/fmriprep](#)

[nipreps/mriqc](#)

[PennLINC/qsiprep](#)

[nipy/heudiconv](#)

[nilearn/nilearn](#)

Other Practice Activities

External Data Curation

[SpatialTopology](#)

Internal JHSPH Data Curation

JHPCE Database Catalog: Steward for 5 Datasets

PART II

TEACHING

Academic Advisees

Names, Degree, Dates

Thesis Title

Capstone Advisees

Master's Thesis Reader

Department Oral Exam Participation

Preliminary Oral Exam Participation

Doctoral Thesis Committee

Final Oral Exam Participation

Classroom Instruction

Title, Course Enrollment [Primary or co-instructor indicated]

Other Teaching (e.g., guest lectures, MOOCs, continuing education)

Teaching Excellence Recognition (Course title, Term, Year)

RESEARCH MENTORSHIP

Post-doctoral fellows

Formal Faculty Mentoring

RESEARCH AND PRACTICE FUNDING

External Sponsored Grants and Contracts

Ongoing Research Support

Completed Research Support

Oracle for Research, 2021-2022, Oracle

PI: Patrick Sadil

Amount: \$50,000

Objective: Advances in artificial intelligence and large-scale MRI datasets have enabled the development of highly accurate neuroimaging biomarkers for diagnosing conditions like Alzheimer's and depression; however, these successes may be undermined by a lack of generalizability and the risk of algorithmic bias; most models are not tested on independent data and rely on datasets, such as the UK Biobank, that are demographically imbalanced (e.g., predominantly white), raising the danger that clinical applications could suffer from the same discriminatory error rates seen in, e.g., early facial recognition technology. To address this, we propose a case-study analysis of the UK Biobank, intending to train predictive models on overrepresented populations and test them against diverse held-out subsets to rigorously evaluate how well these algorithms perform across different demographics before they are adopted in clinical settings.

Role: PI

Internal JHU Funding

ACADEMIC SERVICE

Division and/or Department

School

University

PRESENTATIONS *both in-person and virtual

Scientific Meetings

Sadil, P., on Behalf of the A2CPS Consortium (2025). Image Processing in the Acute to Chronic Pain Signatures (A2CPS) Project. Poster presented at the 2025 Society for Neuroscience Meeting.

Sadil, P. & Lindquist, M.A. (2025). Amygdala Volumes Estimated by FSL and FreeSurfer Have Poor Consistency. Poster presented at the 2025 Annual Meeting of the Organization for Human Brain Mapping.

Sadil, P., ..., & Lindquist, M. (2025). The State of Motion: A survey of motion-related artifacts in fMRI studies. Poster presented at the 2025 Annual Meeting of the Organization for Human Brain Mapping.

Sadil, P., ..., on Behalf of the A2CPS Consortium. (2024). Image Processing in the Acute to Chronic Pain Signatures (A2CPS) Project. Poster presented at the 2025 Annual Meeting of the Organization for Human Brain Mapping.

Sadil, P., Farahani, Farzad V., Nath, T., & Lindquist, M. (2023). Assessing generalizability of predictions of age from anatomical images with 3DCNN. Poster presented at the 2023 Annual Meeting of the Organization for Human Brain Mapping.

Sadil, P., Farahani, Farzad V., Nath, T., & Lindquist, M. (2022). Reliability of effect sizes and spatial localization with population-level sample sizes. Poster presented at the 2022 Annual Meeting of the Organization for Human Brain Mapping.

Sadil, P., Cowell, R. A., & Huber, D. E. (2020). The serial dependence effect is both attraction to the previous response and repulsion from the previous stimulus. Poster presented at the 61st annual Psychonomics Society Meeting. Virtual.

Sadil, P., Cowell, R. A., & Huber, D. E. (2019). A hierarchical Bayesian state trace analysis for assessing monotonicity factoring out subject, item, and trial level dependencies. Poster presented at the 52nd Annual Meeting of the Society for Mathematical Psychology Montreal, Quebec. CA.

Sadil, P., Huber, D. E., & Cowell, R. A. (2018). A hierarchical Bayesian model for inferring neural subpopulation tuning functions from fMRI. Poster presented at the 1st Annual UMass Interdisciplinary Neurosciences Conference. Amherst, MA.

Sadil, P., Huber, D. E., & Cowell, R. A. (2018). A hierarchical Bayesian model for inferring neural tuning functions from voxel tuning functions. Talk given at the annual Vision Science Society Meeting. St. Pete Beach, Florida.

Sadil, P., Huber, D. E., & Cowell, R. A. (2018). Episodic-like retrieval mechanisms for non-episodic memories: Visual recollection in the absence of identification. Talk given at the 14th annual Context and Episodic Memory Symposium. Philadelphia, PA.

Sadil, P., Huber, D.E., & Cowell, R.A. (2017). A novel method for fMRI analysis: Inferring neural mechanisms from voxel tuning. Poster presented at the 1st annual Conference on Cognitive Computational Neuroscience. New York, NY.

Sadil, P., Potter, K., Huber, D. E., & Cowell, R. A. (2017). A continuous flash suppression study of implicit visual recollection. Talk given at the 13th annual Context and Episodic Memory Symposium. Philadelphia, PA.

Sadil, P., Huber, D. E., & Cowell, R. A. (2016). Computational model of perceptual deficits in medial temporal lobe amnesia. Poster presented at the 12th annual Context and Episodic Memory Symposium. Philadelphia, PA.

Sadil, P., Potter, K., Huber, D. E., & Cowell, R. A. (2016). A continuous flash suppression study of implicit visual recollection. Poster presented at the 57th annual Psychonomics Society Meeting. Boston, MA.

Sadil, P., Huber, D. E., & Cowell, R. A. (2015). Visual recollection. Poster presented at the 11th annual Context and Episodic Memory Symposium. Philadelphia, PA.

Invited Seminars

Sadil, P., Cowell, R. A., & Huber, D. E. (2022). Uncovering the neural and behavioral factors that underlie changes in processing visual orientation. Invited talk given at Arizona State University seminar series.

ADDITIONAL INFORMATION

As a Research Associate, I specialize in **data engineering**, an essential component of large-scale neuroimaging research. My work addresses the technical bottleneck between raw data acquisition and biostatistical discovery by building robust, reproducible processing pipelines for multi-site consortia, such as the **Acute to Chronic Pain Signatures (A2CPS)** project. Beyond project-specific research, I provide foundational infrastructure for the scientific community by maintaining high-volume software feedstocks and serving as a data steward and curator for datasets on local, high-performance computing resources. By integrating software engineering rigor with statistical validation, I ensure that complex neuroimaging datasets are high-quality, standardized, and computationally ready for population-level analysis.

Research Impact: Enhancing Methodological Reliability

My research program identifies and addresses critical methodological "blind spots" in neuroimaging. This includes evaluating the consistency of automated subcortical volume estimation—demonstrating poor consistency between tools like FSL and FreeSurfer—and surveying the reliability of task-based fMRI in small-sample studies. By developing hierarchical Bayesian models to disentangle complex behavioral effects, such as serial dependence, I provide the field with the statistical tools necessary to interpret nuanced neural signals.

Practice Leadership: Building Global Software Infrastructure

A core component of my portfolio is a commitment to the global open-source ecosystem. I maintain critical infrastructure within the conda-forge community, including the pylibjpeg feedstocks, which support tens of thousands of users worldwide. Within the neuroimaging community, I actively contribute to the nipreps ecosystem, where I contribute to high-impact pipelines including fMRIPrep, and MRIQC.
