SATRAJIT SUJIT GHOSH

Curriculum Vitae

McGovern Institute for Brain Research
43 Vassar St, 46-4033F
Cambridge, MA, 02139

617.324.3544
satra@mit.edu
https://satra.cogitatum.org

Department of Otolaryngology – Head and Neck Surgery
Massachusetts Eye and Ear
243 Charles Street Boston, MA 02114

ssghosh@fas.harvard.edu

Degrees
PhD, Cognitive and Neural Systems, Boston University, 2005, Prof. Frank Guenther
B.S. (Honors), Computer Science, National University of Singapore, 1997, Prof. Lonce L. Wyse

Employment
Director of the Open Data in Neuroscience Initiative, McGovern Institute for Brain Research, MIT, 2023 – Current
Principal Research Scientist, McGovern Institute for Brain Research, MIT, 2015 – Current
Assistant Professor, Department of Otolaryngology, Harvard Medical School, 2014 – Current
Research Scientist, McGovern Institute for Brain Research, MIT, 2011 – 2014
Research Scientist, Research Laboratory of Electronics, MIT, 2007 – 2011
Postdoctoral Associate, Research Laboratory of Electronics, MIT, 2004 – 2007, Dr. Joseph S. Perkell
Software Engineer, Kent Ridge Digital Labs, Singapore, 1997-1998

External Positions held
Massachusetts Eye and Ear, 2014 – Current, Research Associate
Speech and Hearing Biosciences and Technology (SHBT), Division of Medical Sciences, Harvard Medical School, 2011 – Current, Member of the Faculty
Program in Neuroscience, Division of Medical Sciences, Harvard Medical School, 2019 – Current, Member of the Faculty
Speech and Hearing Biosciences and Technology (SHBT), Health Science and Technology (HST), 2008 – 2011, Member of the Faculty
Standards for Datasharing Taskforce, International Neuroinformatics Coordinating Facilities, 2010 – 2016
Executive board, TankThink Labs, LLC, 2011 – 2015
Department of Cognitive and Neural Systems, Boston University, 2005-2010, Research Fellow

Honors
Winner - Predictive Analytics Competition for Depression, University of Muenster, 2018
Phase I winner for the Open Science Prize competition, NIH, HHMI, Wellcome Trust, 2016
Educational stipend, International Society for Magnetic Resonance in Medicine, 2008
Graduate Teaching Fellow Award, Boston University, 2000
Presidential University Graduate Fellowship, Boston University, 1998

UROP Students supervised
Alkhairy, Samiya, Fall, 2009, Spring 2010
Zhang, Mark, Spring 2012

Ung, William, Spring 2012
Smith, Ashley, Spring 2015
Biswas, Jyotishka, Spring 2016
Suh, Michelle, Spring 2016
Taylor, Tilly, Spring 2016
Jackson, Blake, Spring 2016
Batmunkh, Zulsar, Spring 2016
Wu, David, Fall 2016
Wu, Kathy, Spring 2017
Shumaev, Alexander, Fall 2018
Moreno, Felipe, Fall 2018
Megha Vemuri, Fall, Spring, Summer 2022
Nicholas F Gustafson, Fall, 2022
Sabeen Lohawala, Spring, 2023

MEng/MSc Thesis Supervised
Alice Bizeul, EPFL, 2020
Gasser Elbanna, EPFL, 2023
Agathe Tournant, ETH, 2024
Sabeen Lohawala, MIT, 2024

Ph.D. Students Supervised
Ciccarelli, Gregory, Characterization of Phone Rate as a Vocal Biomarker of Depression, 2017 (Current: Amazon, Inc.)
Sitek, Kevin, Investigating the human subcortical auditory pathway with MRI, 2019 (Current: Research Assistant Professor, Northwestern University)
Low, Daniel, Speech and text psychometrics: Identifying suicide risk factors with large language models and acoustic networks, 2024 (Current: Postdoctoral Fellow, Harvard University)
Mentch, Jefffrey, SHBT PhD student, Harvard Medical School, In progress
Burdinski, Debbie, MD/PhD student, Harvard Medical School, In progress
Rahul Brito, SHBT PhD student, Harvard Medical School, In progress

Postdoctoral Researchers Supervised
Ghosh, Debanjan, 2018 – 2019 (Current: Educational Testing Service, Princeton, NJ)
Padhy, Smruti, 2016 – 2018 (Current: Research Associate, Texas Advanced Supercomputing Center, TX)
Jarecka, Dorota, 2016 – 2017 (Current: Research scientist, MIT)
Rajaei, Hoda, 2019 – 2022 (Current: Machine Learning Scientist, Beyond Limits, CA)
Kleinberger, Rebecca, 2020 – 2021 (Current: Assistant Professor, Northeastern University)
Rana, Aakanksha, 2020 – 2022 (Current: Senior Scientist, Imaging AI, Johnson & Johnson)
Das, Dhritiman, 2020 - 2022
Catania, Fabio, 2022 -
King, Maedbh, 2022 -
Chan, Yibei, 2023 –
Chhetri, Tek Raj, 2024 -

Teaching experience
6.541/SHBT.204, Speech Communication, Spring 2009, 2011- 2016
6.551/SHBT.200, Acoustics of Speech and Hearing, Fall 2007- 2015

9.S912, Quantitative Methods and Computational Models in Neuroscience, Fall 2015
HST.583, fMRI Data Acquisition and Analysis, Fall 2015, 2017, 2019
HST.714/SHBT.200/9.016, Introduction to Sound, Speech, and Hearing, Fall 2016 – Fall 2022
SHBT.205, Speech and Hearing: From Neuroscience to Perception, Spring 2024 -

Service

Internal service:
Committee on Research Computing and Data, Office of Research Computing and Data, MIT, 2022 - Current
Admissions committee, Speech and Hearing Biosciences and Technology Program (HST), 2010 – Current
Curriculum committee, Speech and Hearing Biosciences and Technology Program (HST), 2009 – Current
Director, Openmind Neuroscience High Performance Computing Resource, 2014 - 2023
Chair, BCS Faculty Committee on Computational Infrastructure, 2019 - 2022

External service:

Scientific Advisory Board
　　INCF, Council for Training, Science and Infrastructure (CTSI), Chair, 2024 -
　　NIH Healthy Brain and Child Development Study (https://hbcdstudy.org), 2021 -
　　OpenScope Project Allen Institute for Brain Science (https://openscope.ai), 2021-
　　NWB – Neurodata Without Borders (https://nwb.org), 2020 -
　　CONP – Canadian Open Neuroscience Platform (https://conp.ca), 2018 - 2019
　　SINDS – Neurohackademy Training Program (https://neurohackademy.org), 2017 - 2022
Editorial board
　　Aperture Neuro, Handling editor, 2020 -
　　Frontiers in Brain Imaging Methods, 2012 – 2022
　　Frontiers in Neuroinformatics, 2016 – 2022
　　Frontiers in Human Neuroscience, 2015 – 2017
Member
　　NIH Study Section, Neurological, Mental and Behavioral Health (NMBH), Standing Member, 2023 –
　　Organization for Human Brain Mapping (OHBM) - Best Practices Committee, 2020 - 2024
　　Alzheimer's Drug Discovery Foundation - Diagnostics Accelerator Speech Consortium, 2020
Ad hoc grant reviewer
　　EU Horizon (2023)
　　National Institute of Health, 2017 – 2022 (NOIT, BRAIN Initiative, EITN)
　　National Science Foundation, 2008, 2010, 2013
　　National Medical Research Council, Singapore, 2007, 2009, 2011-2012
　　Department of Defense, 2011
　　Simons Foundation, 201
　　Israel Science Foundation, 2015, 2019
Ad hoc editorial reviewer
　　Biological Psychiatry
　　Brain
　　Brain and Language
　　Brain Structure and Function
　　Cerebral Cortex

Current Biology
Elife
European Journal of Neuroscience
Frontiers in Computational Neuroscience
Frontiers in Systems Neuroscience
Frontiers in Neuroinformatics
Human Brain Mapping
Journal of the Acoustical Society of America
Journal of Machine Language Research
Journal of Neuroscience
Journal of Speech, Language and Hearing Research
Magnetic Resonance in Medicine
Nature Methods
Nature Translational Psychiatry
NeuroImage
Neuroinformatics
Neuron
PLOS One
PLOS Computational Biology

Editorial board, Special Research Topic, Python in Neuroscience I / II, Frontiers in Neuroscience
Nipype teaching workshops, Edinburgh 2011, Magdeburg 2012, Boston 2017
Speaker, Educational workshop, Organization for Human Brain Mapping, 2013, 2018
Organizer, HBM Hackathon, Organization for Human Brain Mapping, Seattle, 2013
Local organizing committee, 4th Biennial Conference on Resting State Connectivity, Boston, 2014

Technological and Other Scientific Innovations

DANDI	https://dandiarchive.org An opensource infrastructure as a service supported by the US NIH BRAIN Initiative to house and disseminate neurophysiology data for the international neuroscience community. https://github.com/dandi
Methods and Apparatus for Reducing Stuttering	US Patent No.: 11727949 – Issued August 2023 This is based on dissertation work of former postdoctoral associate Rebecca Kleinberger. It involves an apparatus and a software to enable realtime vocal modification as an assistive technology for individuals who stutter. An application (Mumble Melody) is available on the Apple Store for worldwide use.
Assessing Disorders Through Speech And A Computational Model	U.S. Patent No.: 10127929 – Issued November 2018 1. Williamson JR, Quatieri TF, Helfer BS, Perricone J, **Ghosh SS**, ** Ciccarelli G, Mehta DD. (2015) Segment-dependent dynamics in predicting Parkinson's disease. In Sixteenth Annual Conference of the International Speech Communication Association.

2. ** Ciccarelli G, Quatieri TF, **Ghosh SS** (2016) Neurophysiological Vocal Source Modeling for Biomarkers of Disease. In Seventeenth Annual Conference of the International Speech Communication Association. (** Mr. Ciccarelli, an MIT EECS graduate student is a current mentee).

The goal of this effort is to supplement the VoiceUp platform with augmented algorithms for tracking mental health state using computational models. The model itself is based on my doctoral thesis work and I guided the team to using that framework. This came out of the MIT MINT funded collaboration with MIT Lincoln Laboratory.

Nipype: Brain imaging analysis framework 2008-	Gorgolewski K, Burns CD, Madison C, Clark D, Halchenko YO, Waskom ML, Ghosh SS. (2011). Nipype: a flexible, lightweight and extensible neuroimaging data processing framework in Python. Front. Neuroimform. 5:13. https://github.com/nipy/nipype

Nipype provides an open source Python library for constructing scalable, reusable, and efficient dataflows for biomedical research. Nipype provides a standard Python interface to 750+ tools and algorithms from more than 25 neuroimaging software packages written in C++, MATLAB, Java, and Python. Nipype dataflows can be executed in various HPC (high-performance computing), commercial Cloud, and local environments. Nipype forms a base software layer for some of the most popular neuroimaging workflows in use today (fMRIPrep, Mindboggle, C-PAC and others).

Over 200+ individuals have contributed to the code base and the software is used in 88+ countries.

MURFI: a realtime MR biofeedback software 2007	Hinds, O., **Ghosh, S**., Thompson, T.W., Yoo, J.J., Whitfield-Gabrieli, S., Triantafyllou, C., Gabrieli, J.D. (2011) Computing moment-to-moment BOLD activation for real-time neurofeedback. Neuroimage. 54(1):361-8. PMID: 20682350. https://github.com/gablab/murfi2/ This opensource software framework allows biofeedback of activation based on the BOLD signal. I created the testing and validation framework for the software and contributed to its design and implementation. We are now using this software for ongoing projects in the treatment of schizophrenia and in the development of new paradigms. Development of this was supported by the McGovern Institute MINT program.

This is now in use in two clinical trials at Northeastern University and at University of Minnesota, Minneapolis.

Realtime vocal modification software 2005	Cai, S., **Ghosh, S.**, Guenther, F., Perkell, J. (2011). Focal manipulations of formant trajectories reveal a role of auditory feedback in the online control of both within-syllable and between-syllable speech timing. J Neurosci 31: 45. 16483-16490. PMID: 22072698.

https://github.com/shanqing-cai/audapter_matlab
https://github.com/shanqing-cai/audapter_mex
This opensource framework allows modifying vocal characteristics in realtime. I established the initial framework and guided Marc Boucek and Shanqing Cai in extending the framework to perform new paradigms.

Noise suppression for MRI patient microphone input 2004	Two provisional patents were applied for but not pursued after expiry. 2007 Online noise suppression software for Magnetic Resonance Imaging 2007 Bidirectional noise suppressing communication setup for Magnetic Resonance Imaging https://arxiv.org/abs/1207.5827 The goal of this software was to provide a mechanism to suppress MR noise. This is still being used in research projects at MIT.
Carotid artery diameter estimation from ultrasound images 1999	Current usage status is unknown. I built the graphical interface for the software to provide a semi-automated method for artery diameter estimation that reduced human intervention significantly and validated it against manual measurements.
FlexEffex: Interactive sound effects and music 1997	I contributed to the development of the FlexEffex architecture and rewrote the internal sound effects plugin api and hardware libraries. The software was subsequently sold to a company, MindMaker Inc.

Publications

1. Guenther, F.H., Nieto-Castanon, A., Tourville, J.A. and **Ghosh, S.S.** (2001) The effects of categorization training on auditory perception and cortical representations. Proceedings of the Speech Recognition as Pattern Classification (SPRAAC) Workshop, Nijmegen, The Netherlands.
2. Guenther, F.H. and **Ghosh, S.S.** (2003) A model of cortical and cerebellar function in speech. Proceedings of the XVth International Congress of Phonetic Sciences (pp. 169-173). Barcelona, Spain: 15th ICPhS Organizing Committee.
3. Guenther, F.H., **Ghosh, S.S.** and Nieto-Castanon, A. (2003) A neural model of speech production. Proceedings of the 6th International Seminar on Speech Production. Sydney, Australia
4. Nieto-Castanon, A., **Ghosh, S.S.**, Tourville, J.A., Guenther, F.H. (2003) Region of interest based analysis of functional imaging data. Neuroimage. 19(4):1303-16. PMID: 12948689.
5. Guenther, F.H., Nieto-Castanon, A., Ghosh, S.S., Tourville, J.A. (2004) Representation of sound categories in auditory cortical maps. J Speech Lang Hear Res. 47(1):46-57. PMID: 15072527.
6. Max, L., Guenther, F.H., Gracco, V.L., **Ghosh, S.S.** and Wallace, M.E. (2004) Unstable or insufficiently activated internal models and feedback-biased motor control as sources of dysfluency: A theoretical model of stuttering. Contemporary Issues in Communication Science and Disorders. 31.
7. Klein, A., Mensh, B., **Ghosh, S.**, Tourville, J., Hirsch, J. (2005) Mindboggle: automated brain labeling with multiple atlases. BMC Med Imaging. 5:7. PMCID: PMC1283974.
8. Guenther, F.H., **Ghosh, S.S.**, Tourville, J.A. (2006) Neural modeling and imaging of the cortical interactions underlying syllable production. Brain Lang. 96(3):280-301. PMCID: PMC1473986.

9. Guenther, F.H., **Ghosh, S.S.**, Nieto-Castanon, A. and Tourville, J.A. (2006) A neural model of speech production. In: J. Harrington & M. Tabain (eds.), Speech Production: Models, Phonetic Processes, and Techniques. London: Psychology Press.

10. Tiede, M., Shattuck-Hufnagel, S., Johnson, B., **Ghosh, S.**, Matthies, M., Zandipour, M. and Perkell, J. (2007) Gestural phasing in /kt/ sequences contrasting within and cross word contexts. Proceedings of the XVIth International Congress of Phonetic Sciences. Saarbrücken, Germany.

11. **Ghosh, S.S.**, Tourville, J.A., Guenther, F.H. (2008) A neuroimaging study of premotor lateralization and cerebellar involvement in the production of phonemes and syllables. J Speech Lang Hear Res. 51(5):1183-202. PMCID: PMC2652040.

12. Cai, S, Boucek, M, **Ghosh, S.S.**, Guenther, F.H., Perkell, J.S. (2008) A System for Online Dynamic Perturbation of Formant Trajectories and Results from Perturbations of the Mandarin Triphthong /iau/. International Seminar in Speech Production, Strassbourg, France.

13. Balci, S.K., Sabuncu, M.R., Yoo, J., **Ghosh, S.S.**, Whitfield-Gabrieli, S., Gabrieli, J.D., Golland, P. (2008) Prediction of Successful Memory Encoding from fMRI Data. Med Image Comput Comput Assist Interv. 2008(11):97-104. PMCID: PMC2855196.

14. Perkell, J.S., Lane, H., **Ghosh, S.S.**, Matthies, M.L., Tiede, M., Guenther, F., Ménard, L. (2008) Mechanisms of Vowel Production: Auditory Goals and Speaker Acuity. International Seminar in Speech Production, Strassbourg, France.

15. Klein, A., **Ghosh, S.S.**, Avants, B., Yeo, B.T., Fischl, B., Ardekani, B., Gee, J.C., Mann, J.J., Parsey, R.V. (2010) Evaluation of volume-based and surface-based brain image registration methods. Neuroimage. 51(1):214-20. PMCID: PMC2862732.

16. Cai, S., **Ghosh, S.S.**, Guenther, F.H., Perkell, J.S. (2010) Adaptive auditory feedback control of the production of formant trajectories in the Mandarin triphthong /iau/ and its pattern of generalization. J Acoust Soc Am. 128(4):2033-48. PMCID: PMC2981117.

17. **Ghosh, S.S.**, Kakunoori, S., Augustinack, J., Nieto-Castanon, A., Kovelman, I., Gaab, N., Christodoulou, J.A., Triantafyllou, C., Gabrieli, J.D., Fischl, B. (2010) Evaluating the validity of volume-based and surface-based brain image registration for developmental cognitive neuroscience studies in children 4 to 11 years of age. Neuroimage. 53(1):85-93. PMCID: PMC2914629.

18. **Ghosh, S.S.**, Matthies, M.L., Maas, E., Hanson, A., Tiede, M., Ménard, L., Guenther, F.H., Lane, H., Perkell, J.S. (2010) An investigation of the relation between sibilant production and somatosensory and auditory acuity. J Acoust Soc Am. 128(5):3079-87. PMCID: PMC3003728.

19. Golfinopoulos, E., Tourville, J.A., Bohland, J.W., **Ghosh, S.S.**, Nieto-Castanon, A., Guenther, F.H. (2011) fMRI investigation of unexpected somatosensory feedback perturbation during speech. Neuroimage. 55(3):1324-38. PMCID: PMC3065208

20. Silver, A.L., Nimkin, K., Ashland, J.E., **Ghosh, S.S.**, Van der Kouwe, A.J., Brigger, M.T., Hartnick, C.J. (2011) Cine magnetic resonance imaging with simultaneous audio to evaluate pediatric velopharyngeal insufficiency. Arch Otolaryngol Head Neck Surg. 137(3):258-63.

21. Brunner, J., **Ghosh, S.**, Hoole, P., Matthies, M., Tiede, M., Perkell, J. (2011) The influence of auditory acuity on acoustic variability and the use of motor equivalence during adaptation to a perturbation. J Speech Lang Hear Res. 54(3):727-39. PMID: 20966388.

22. Cai, S., **Ghosh, S.**, Guenther, F., Perkell, J. (2011). Focal manipulations of formant trajectories reveal a role of auditory feedback in the online control of both within-syllable and between-syllable speech timing. J Neurosci 31: 45. 16483-16490. PMID: 22072698.

23. Hinds, O., **Ghosh, S.**, Thompson, T.W., Yoo, J.J., Whitfield-Gabrieli, S., Triantafyllou, C., Gabrieli, J.D. (2011) Computing moment-to-moment BOLD activation for real-time neurofeedback. Neuroimage. 54(1):361-8. PMID: 20682350.

24. Gorgolewski, K., Burns, C.D., Madison, C., Clark, D., Halchenko, Y.O., Waskom, M.L., **Ghosh, S.S.** (2011). Nipype: a flexible, lightweight and extensible neuroimaging data processing framework in Python. *Front. Neuroinform.* **5**:13.

25. Perrachione, T.K., Del Tufo, S.N., **Ghosh, S.S.**, Gabrieli, J.D.E. (2011) "Phonetic variability in speech perception and the phonological deficit in dyslexia." 17th Meeting of the International Congress of Phonetic Sciences, (Hong Kong, August 2011).

26. Poline, J., Breeze, J.L., **Ghosh, S.S.**, Gorgolewski, K., Halchenko, Y.O., Hanke, M., Haslegrove, C., Helmer, K.G., Marcus, D.S., Poldrack, R.A., Schwartz, Y., Ashburner, J. and Kennedy, D.N. (2012). Data sharing in neuroimaging research. *Front. Neuroinform.* **6**:9.

27. **Ghosh, S.S.**, Klein, A., Avants, B. and Millman, K.J. (2012). Learning from open source software projects to improve scientific review. *Front. Comput. Neurosci.* **6**:18

28. Cai, S., Beal, D.S., **Ghosh, S.S.**, Tiede, M.K., Guenther, F.H., Perkell, J.S. (2012) Weak responses to auditory feedback perturbation during articulation in persons who stutter: Evidence for abnormal auditory-motor transformation. PLoS One.

29. *** Doehrmann, O., * Ghosh, S.S.**, Polli, F.P., Reynolds, G., Horn, F., Keshavan, A., Whitfield-Gabrieli, S., Hofmann, S.G., Pollack, M., Gabrieli, J.D. (2013) Predicting treatment response in social anxiety disorder from functional magnetic resonance imaging. JAMA Psychiatry. (* Joint first authors)

30. Hinds, O., Thompson, T., **Ghosh, S.S.**, Yoo, J., Whitfield-Gabrieli, S., Triantafyllou, C., Gabrieli, J. (2013) Roles of Default-Mode Network and Supplementary Motor Area in Human Vigilance Performance: Evidence from Real-Time fMRI. Journal of Neurophysiology.

31. Tustison NJ, Johnson HJ, Rohlfing T, Klein A, **Ghosh SS**, Ibanez L and Avants B (2013). Instrumentation bias in the use and evaluation of scientific software: Recommendations for reproducible practices in the computational sciences. Front. Neurosci. 7:162.

32. **Ghosh, S.S.**, Keshavan, A., Langs, G (2013). Predicting Treatment Response from Resting State fMRI Data: Comparison of Parcellation Approaches. 3rd International Workshop on Pattern Recognition in NeuroImaging (Philadelphia, June 2013).

33. Perrachione, T.K. and **Ghosh, S.S.** (2013). Optimized design and analysis of sparse-sampling fMRI experiments. Front. Neurosci. 7:55. doi: 10.3389/fnins.2013.00055

34. Cai, S., Beal, D.S., **Ghosh, S.S.**, Guenther, F.H., Perkell, J.S. (2014) Impaired timing adjustments in response to time-varying auditory perturbation during connected speech production in persons who stutter. Brain and Language.

35. Cai, S., Tourville, J.A., Beal, D.S., Perkell, J.S., Guenther, F.H. and **Ghosh, S.S.** (2014). Diffusion Imaging of Cerebral White Matter in Persons Who Stutter: Evidence for Network-Level Anomalies. Front. Hum. Neurosci. 8:54

36. Christodoulou JA, Del Tufo SN, Lymberis J, Saxler PK, **Ghosh SS**, Triantafyllou C, Whitfield-Gabrieli S, Gabrieli JD. (2014). Brain bases of reading fluency in typical reading and impaired fluency in dyslexia. PLoS One. 9(7):e100552. doi: 10.1371/journal.pone.0100552. eCollection 2014.

37. Stoeckel, L.E., Garrison, K.A., **Ghosh, S.S.**, Wighton, P., Hanlon, C.A., Gilman, J.M., Greer, S., Turk-Browne, N.B., deBettencourt, M.T., Scheinost, D., Craddock, C., Thompson, T., Calderon, V., Bauer, C.C., George, M., Breiter, H.C., Whitfield-Gabrieli, S., Gabrieli, J.D., LaConte, S.M., Hirshberg, L., Brewer, J.A., Hampson, M., Van Der Kouwe, A., Mackey, S., Evins, A.E. (2014). Optimizing real time fMRI neurofeedback for therapeutic discovery and development, NeuroImage: Clinical

38. Gabrieli, J.D.E., **Ghosh, S.S.**, Whitfield-Gabrieli, S. (2015). Prediction as a Humanitarian and Pragmatic Contribution from Human Cognitive Neuroscience. Neuron.

39. Gorgolewski KJ, Varoquaux G, Rivera G, Schwartz Y, Sochat VV, **Ghosh SS**, Maumet C, Nichols TE, Poline JB, Yarkoni T, Margulies DS, Poldrack RA (2015). NeuroVault.org: A repository for sharing unthresholded statistical maps, parcellations, and atlases of the human brain. Neuroimage.

40. Gorgolewski KJ, Varoquaux G, Rivera G, Schwarz Y, **Ghosh SS**, Maumet C, Sochat VV, Nichols TE, Poldrack RA, Poline JB, Yarkoni T, Margulies DS. (2015). NeuroVault.org: a web-based repository for collecting and sharing unthresholded statistical maps of the human brain. Front Neuroinform. 10;9:8.

41. Langs G, Golland P, **Ghosh SS.** (2015) Predicting Activation Across Individuals with Resting-State Functional Connectivity Based Multi-Atlas Label Fusion. Med Image Comput Comput Assist Interv. 9350:313-320.

42. Williamson JR, Quatieri TF, Helfer BS, Perricone J, **Ghosh SS**, Ciccarelli G, Mehta DD. (2015) Segment-dependent dynamics in predicting Parkinson's disease. In Sixteenth Annual Conference of the International Speech Communication Association.

43. Sitek KR, Cai S, Beal DS, Perkell JS, Guenther F and **Ghosh SS** (2016). Decreased cerebellar-orbitofrontal connectivity correlates with stuttering severity: Whole-brain functional and structural connectivity associations with persistent developmental stuttering. Front. Hum. Neurosci. 10:190. doi: 10.3389/fnhum.2016.00190

44. Whitfield-Gabrieli S, **Ghosh SS**, Nieto-Castanon A, Saygin Z, Doehrmann O, Chai XJ, Reynolds GO, Hofmann SG, Pollack MH, Gabrieli JD. (2016) Brain connectomics predict response to treatment in social anxiety disorder. Mol Psychiatry.

45. Allen GI, Amoroso N, Anghel C, Balagurusamy V, Bare CJ, Beaton D, Bellotti R, Bennett DA, Boehme K, Boutros PC, Caberlotto L, Caloian C, Campbell F, Chaibub Neto E, Chang YC, Chen B, Chen CY, Chien TY, Clark T, Das S, Davatzikos C, Deng J, Dillenberger D, Dobson RJB, Dong Q, Doshi J, Duma D, Errico R, Erus G, Everett E, Fardo DW, Friend SH, Fröhlich H, Gan J, George-Hyslop P, **Ghosh SS**, Glaab E, Green RC, Guan Y, Hong MY, Huang C, Hwang J, Ibrahim J, Inglese P, Jiang Q, Katsumata Y, Kauwe JSK, Klein A, Kong D, Krause R, Lalonde E, Lauria M, Lee E, Lin X, Liu Z, Livingstone J, Logsdon BA, Lovestone S, Lyappan A, Ma M, Malhotra A, Mangravite LM, Maxwell TJ, Merrill E, Nagorski J, Namasivayam A, Narayan M, Naz M, Newhouse SJ, Norman TC, Nurtdinov RN, Oyang YJ, Pawitan Y, Peng S, Peters MA, Piccolo SR, Praveen P, Priami C, Sabelnykova VY, Senger P, Shen X, Simmons A, Sotiras A, Stolovitzky G, Tangaro S, Tateo A, Tung YA, Tustison NJ, Varol E, Vradenburg G, Weiner MW, Xiao G, Xie L, Xie Y, Xu J, Yang H, Zhan X, Zhou Y, Zhu F, Zhu H, Zhu S. (In press) Crowdsourced estimation of cognitive decline and resilience in Alzheimer's disease, Alzheimer's & Dementia, Available online 11 April 2016, ISSN 1552-5260, http://dx.doi.org/10.1016/j.jalz.2016.02.006.

46. Cameron Craddock R, S Margulies D, Bellec P, Nolan Nichols B, Alcauter S, A Barrios F, Burnod Y, J Cannistraci C, Cohen-Adad J, De Leener B, Dery S, Downar J, Dunlop K, R Franco A, Seligman Froehlich C, J Gerber A, **Ghosh SS**, J Grabowski T, Hill S, Sólon Heinsfeld A, Matthew Hutchison R, Kundu P, R Laird A, Liew SL, J Lurie D, G McLaren D, Meneguzzi F, Mennes M, Mesmoudi S, O'Connor D, H Pasaye E, Peltier S, Poline JB, Prasad G, Fraga Pereira R, Quirion PO, Rokem A, S Saad Z, Shi Y, C Strother S, Toro R, Q Uddin L, D Van Horn J, W Van Meter J, C Welsh R, Xu T (2016). Brainhack: a collaborative workshop for the open neuroscience community. Gigascience. 5:16. doi: 10.1186/s13742-016-0121-x. eCollection 2016. PubMed PMID: 27042293; PubMed Central PMCID: PMC4818387.

47. Gorgolewski KJ, Auer T, Calhoun VD, Craddock RC, Das S, Duff EP, Flandin G, **Ghosh SS**, Glatard T, Halchenko YO, Handwerker DA, Hanke M, Keator D, Li X, Michael Z, Maumet C, Nichols BN, Nichols TE, Pellman J, Poline JB, Rokem A, Schaefer G, Sochat V, Triplett W, Turner JA, Varoquaux G, Poldrack RA. (2016) The brain imaging data structure, a format for organizing and describing outputs of neuroimaging experiments. Sci Data. 3:160044. doi: 10.1038/sdata.2016.44.

PubMed PMID: 27326542.

48. Ciccarelli G, Quatieri TF, **Ghosh SS** (2016) Neurophysiological Vocal Source Modeling for Biomarkers of Disease. In Seventeenth Annual Conference of the International Speech Communication Association.

49. Margulies DS, **Ghosh SS**, Goulas A, Falkiewicz M, Huntenburg JM, Langs G, Bezgin G, Eickhoff SB, Castellanos FX, Petrides M, Jefferies E, Smallwood J (2016). Situating the default-mode network along a principal gradient of macroscale cortical organization. Proc Natl Acad Sci U S A. Nov 1;113(44):12574-12579. PubMed PMID: 27791099; PubMed Central PMCID: PMC5098630.

50. Maumet C, Auer T, Bowring A, Chen G, Das S, Flandin G, **Ghosh S**, Glatard T, Gorgolewski KJ, Helmer KG, Jenkinson M, Keator DB, Nichols BN, Poline JB, Reynolds R, Sochat V, Turner J, Nichols TE (2016). Sharing brain mapping statistical results with the neuroimaging data model. Sci Data. Dec 6;3:160102. doi: 10.1038/sdata.2016.102. PubMed PMID: 27922621; PubMed Central PMCID: PMC5139675.

51. Gorgolewski KJ, Auer T, Calhoun VD, Craddock RC, Das S, Duff EP, Flandin G, **Ghosh SS**, Glatard T, Halchenko YO, Handwerker DA, Hanke M, Keator D, Li X, Michael Z, Maumet C, Nichols BN, Nichols TE, Pellman J, Poline JB, Rokem A, Schaefer G, Sochat V, Triplett W, Turner JA, Varoquaux G, Poldrack RA. The brain imaging data structure, a format for organizing and describing outputs of neuroimaging experiments. Sci Data. 2016 Jun 21;3:160044. doi: 10.1038/sdata.2016.44. PubMed PMID: 27326542; PubMed Central PMCID: PMC4978148.

52. Perrachione TK, Del Tufo SN, Winter R, Murtagh J, Cyr A, Chang P, Halverson K, **Ghosh SS**, Christodoulou JA, Gabrieli JD. (2016) Dysfunction of Rapid Neural Adaptation in Dyslexia. Neuron. 92(6):1383-1397. doi: 10.1016/j.neuron.2016.11.020. PubMed PMID: 28009278; PubMed Central PMCID: PMC5226639.

53. Klein A, **Ghosh SS**, Bao FS, Giard J, Häme Y, Stavsky E, Lee N, Rossa B, Reuter M, Chaibub N, Keshavan A (2017) Mindboggling morphometry of human brains. PLOS Comp Biol.

54. Christodoulou JA, Murtagh J, Cyr A, Perrachione TK, Chang P, Halverson K, Hook P, Yendiki A, **Ghosh S**, Gabrieli JDE (2017). Relation of white-matter microstructure to reading ability and disability in beginning readers. Neuropsychology. 31(5):508-515. doi: 10.1037/neu0000243. Epub 2016 Mar 7. PubMed PMID: 26949926.

55. Gorgolewski K, Alfaro-Almagro F, Auer T, Bellec P, Capotă M, Mallar Chakravarty M, Churchill N, Cohen A, Craddock C, Devenyi G, Eklund A, Esteban O, Flandin G, **Ghosh S**, Guntupalli S, Jenkinson M, Keshavan A, Kiar G, Liem F, Raamana P, Raffelt D, Steele C, Quirion PO, Smith R, Strother S, Varoquaux G, Wang Y, Yarkoni T, Poldrack R (2017) BIDS Apps: Improving ease of use, accessibility, and reproducibility of neuroimaging data analysis methods. PLOS Comp Biol.

56. Nenning KH, Liu H, **Ghosh S**, Sabuncu M, Schwartz E, Langs G (2017) Diffeomorphic Functional Brain Surface Alignment: Functional Demons. Neuroimage. pii: S1053-8119(17)30321-X. doi: 10.1016/j.neuroimage.2017.04.028.

57. Perrachione T, **Ghosh SS**, Ostrovskaya I, Gabrieli J, Kovelman I (2017) Phonological working memory for words and nonwords in cerebral cortex. Journal of Speech, Language, and Hearing Research.

58. O'Connor D, Potler N, Kovacs M, Xu T, Ai L, Pellman J, Vanderwal T, Parra L, Cohen S, **Ghosh S**, Escalera J, Grant-Villegas N, Osman Y, Bui A, Craddock C, Milham M (2017) The healthy brain network serial scanning initiative: a resource for evaluating inter-individual differences and their reliabilities across scan conditions and sessions. Giga Science.

59. **Ghosh SS**, Poline JB, Keator DB, Halchenko YO, Thomas AG, Kessler DA, Kennedy DN (2017). A very simple, re-executable neuroimaging publication. Version 2. F1000Res. 6:124. doi: 10.12688/f1000research.10783.2. eCollection 2017. PubMed PMID: 28781753; PubMed Central PMCID: PMC5516225.

60. Tarabichi O, Kozin ED, Kanumuri VV, Barber S, **Ghosh S**, Sitek KR, Reinshagen K, Herrmann B, Remenschneider AK, Lee DJ (2018) Diffusion Tensor Imaging of Central Auditory Pathways in Patients with Sensorineural Hearing Loss: A Systematic Review. Otolaryngol Head Neck Surg. 158(3):432-442. doi: 10.1177/0194599817739838.

61. Guell X, Schmahmann JD, Gabrieli J, **Ghosh SS**. (2018) Functional gradients of the cerebellum. Elife. pii: e36652. doi: 10.7554/eLife.36652. PubMed PMID: 30106371; PubMed Central PMCID: PMC6092123.

62. McClure P, Zheng C, Kaczmarzyk J, Rogers-Lee J, **Ghosh S**, Nielson D, Bandettini P, Pereira F (2018) Distributed Weight Consolidation: A Brain Segmentation Case Study In: NeurIPS - Neural Information Processing Systems 2018.

63. Esteban O, Markiewicz CJ, Blair RW, Moodie CA, Isik AI, Erramuzpe A, Kent JD, Goncalves M, DuPre E, Snyder M, Oya H, **Ghosh SS**, Wright J, Durnez J, Poldrack RA, Gorgolewski KJ (2019). fMRIPrep: a robust preprocessing pipeline for functional MRI. Nat Methods.

64. Kennedy DN, Abraham SA, Bates JF, Crowley A, **Ghosh S**, Gillespie T, Goncalves M, Grethe JS, Halchenko YO, Hanke M, Haselgrove C, Hodge SM, Jarecka D, Kaczmarzyk J, Keator DB, Meyer K, Martone ME, Padhy S, Poline JB, Preuss N, Sincomb T, Travers M (2019). Everything Matters: The ReproNim Perspective on Reproducible Neuroimaging. Front Neuroinform. 13:1. doi: 10.3389/fninf.2019.00001. eCollection 2019. PubMed PMID: 30792636; PubMed Central PMCID: PMC6374302.

65. Guell X, Goncalves M, Kaczmarzyk JR, Gabrieli JDE, Schmahmann JD, **Ghosh SS** (2019). LittleBrain: A gradient-based tool for the topographical interpretation of cerebellar neuroimaging findings. PLoS One. 14(1):e0210028. doi: 10.1371/journal.pone.0210028. PubMed PMID: 30650101; PubMed Central PMCID: PMC6334893.

66. **Ghosh SS**, Baker JT (2019). Will neuroimaging produce a clinical tool for psychiatry? Psychiatric Annals.

67. Guell X, Anteraper SA, **Ghosh SS**, Gabrieli JDE, Schmahmann JD (2019). Neurodevelopmental and Psychiatric Symptoms in Patients with a Cyst Compressing the Cerebellum: an Ongoing Enigma. Cerebellum. 2019 Jul 18;. doi: 10.1007/s12311-019-01050-4. [Epub ahead of print] PubMed PMID: 31321675.

68. Sitek KR, Gulban OF, Calabrese E, Johnson GA, Lage-Castellanos A, Moerel M, **Ghosh SS****, De Martino F** (2019). Mapping the human subcortical auditory system using histology, post mortem MRI and in vivo MRI at 7T. Elife. doi: 10.7554/eLife.48932 (** equal contributions)

69. Wagley N, Perrachione TK, Ostrovskaya I, **Ghosh SS**, Saxler PK, Lymberis J, Wexler K, Gabrieli JDE, Kovelman I (2019) Persistent Neurobehavioral Markers of Developmental Morphosyntax Errors in Adults. J Speech Lang Hear Res. 2019 Dec 9;:1-12. doi: 10.1044/2019_JSLHR-19-00154.

70. Quevedo K, Liu G, Teoh JY, **Ghosh S**, Zeffiro T, Ahrweiler N, Zhang N, Wedan R, Oh S, Guercio G, Paret C (2019) Neurofeedback and neuroplasticity of visual self-processing in depressed and healthy adolescents: A preliminary study. Dev Cogn Neurosci. 2019 Sep 11;40:100707. doi: 10.1016/j.dcn.2019.100707.

71. McClure P, Rho N, Lee JA, Kaczmarzyk JR, Zheng CY, **Ghosh SS**, Nielson DM, Thomas AG, Bandettini P, Pereira F (2019) Knowing What You Know in Brain Segmentation Using Bayesian Deep Neural Networks. Front Neuroinform. 2019;13:67. doi: 10.3389/fninf.2019.00067.

72. Low DM, Bentley KH, **Ghosh SS** (2020). Automated assessment of psychiatric disorders using speech: A systematic review. Laryngoscope Investig Otolaryngol. 2020 Feb;5(1):96-116. doi: 10.1002/lio2.354. eCollection 2020 Feb. Review. PubMed PMID: 32128436; PubMed Central PMCID: PMC7042657.

73. Guell X, Anteraper SA, **Ghosh SS**, Gabrieli JDE, Schmahmann JD (2020). Neurodevelopmental and Psychiatric Symptoms in Patients with a Cyst Compressing the Cerebellum: an Ongoing Enigma.

Cerebellum. 2019 Jul 18;. doi: 10.1007/s12311-019-01050-4. [Epub ahead of print] PubMed PMID: 31321675.

74. Okano K, Bauer C, **Ghosh S**, Lee YJ, Melero H, de los Angeles C, Nestor P, del Re E, Northoff G, Whitfield-Gabrieli S, Niznikiewicz M (2020) Real-time fMRI feedback impacts brain activation, results in auditory hallucinations reduction: Part 1: Superior Temporal Gyrus -Preliminary evidence-. Psychiatry Research.

75. Bauer CCC, Okano K, **Ghosh SS**, Lee YJ, Melero H, Angeles CL, Nestor PG, Del Re EC, Northoff G, Niznikiewicz MA, Whitfield-Gabrieli S. (2020) Real-time fMRI neurofeedback reduces auditory hallucinations and modulates resting state connectivity of involved brain regions: Part 2: Default mode network -preliminary evidence. Psychiatry Res. 284:112770. doi: 10.1016/j.psychres.2020.112770 PMID: 32004893

76. Hubbard NA, Siless V, Frosch IR, Goncalves M, Lo N, Wang J, Bauer CCC, Conroy K, Cosby E, Hay A, Jones R, Pinaire M, Vaz De Souza F, Vergara G, **Ghosh S**, Henin A, Hirshfeld-Becker DR, Hofmann SG, Rosso IM, Auerbach RP, Pizzagalli DA, Yendiki A, Gabrieli JDE, Whitfield-Gabrieli S (2020). Brain function and clinical characterization in the Boston adolescent neuroimaging of depression and anxiety study. Neuroimage Clin. 2020 Mar 12;27:102240. doi: 10.1016/j.nicl.2020.102240. [Epub ahead of print] PubMed PMID: 32361633; PubMed Central PMCID: PMC7199015.

77. Siless V, Hubbard NA, Jones R, Wang J, Lo N, Bauer CCC, Goncalves M, Frosch I, Norton D, Vergara G, Conroy K, De Souza FV, Rosso IM, Wickham AH, Cosby EA, Pinaire M, Hirshfeld-Becker D, Pizzagalli DA, Henin A, Hofmann SG, Auerbach RP, **Ghosh S**, Gabrieli J, Whitfield-Gabrieli S, Yendiki A (2020). Image acquisition and quality assurance in the Boston Adolescent Neuroimaging of Depression and Anxiety study. Neuroimage Clin. 2020 Mar 19;26:102242. doi: 10.1016/j.nicl.2020.102242. [Epub ahead of print] PubMed PMID: 32339824; PubMed Central PMCID: PMC7184183.

78. Charles AS, Falk B, Turner N, Pereira TD, Tward D, Pedigo BD, Chung J, Burns R, **Ghosh SS**, Kebschull JM, Silversmith W, Vogelstein JT (2020). Toward Community-Driven Big Open Brain Science: Open Big Data and Tools for Structure, Function, and Genetics. Annu Rev Neurosci. 2020 Apr 13;. doi: 10.1146/annurev-neuro-100119-110036. [Epub ahead of print] PubMed PMID: 32283996.

79. Hung Y, Uchida M, Gaillard SL, Woodworth H, Kelberman C, Capella J, Kadlec K, Goncalves M, **Ghosh S**, Yendiki A, Chai XJ, Hirshfeld-Becker DR, Whitfield-Gabrieli S, Gabrieli JDE, Biederman J (2020). Cingulum-Callosal white-matter microstructure associated with emotional dysregulation in children: A diffusion tensor imaging study. Neuroimage Clin. 2020 Apr 25;27:102266. doi: 10.1016/j.nicl.2020.102266. [Epub ahead of print] PubMed PMID: 32408198; PubMed Central PMCID: PMC7218214.

80. Esteban O, Goncalves M, Markiewicz CJ, **Ghosh SS**, Poldrack RA (2020) Software Tool to Read, Represent, Manipulate, and Apply N-Dimensional Spatial Transforms In: 2020 IEEE 17th International Symposium on Biomedical Imaging (ISBI) 709-712.

81. Jarecka D, Goncalves M, Markiewicz CJ, Esteban O, Lo N, Kaczmarzyk J, **Ghosh SS** (2020) Pydra - a flexible and lightweight dataflow engine for scientific analyses In: Proceedings of the 19th Python in Science Conference Edited by: Meghann Agarwal, Chris Calloway, Dillon Niederhut, David Shupe. 132-139.

82. Esteban O, Ciric R, Finc K, Blair RW, Markiewicz CJ, Moodie CA, Kent JD, Goncalves M, DuPre E, Gomez DEP, Ye Z, Salo T, Valabregue R, Amlien IK, Liem F, Jacoby N, Stojić H, Cieslak M, Urchs S, Halchenko YO, **Ghosh SS**, De La Vega A, Yarkoni T, Wright J, Thompson WH, Poldrack RA, Gorgolewski KJ (2020). Analysis of task-based functional MRI data preprocessed with fMRIPrep.

Nat Protoc. 2020 Jun 8;. doi: 10.1038/s41596-020-0327-3. [Epub ahead of print] PubMed PMID: 32514178.

83. Low DM, Rumker L, Talker T, Torous J, Cecchi G, **Ghosh SS** (2020). Natural Language Processing Reveals Vulnerable Mental Health Support Groups and Heightened Health Anxiety on Reddit during COVID-19: An Observational Study. J Med Internet Res. 2020 Sep 13;. doi: 10.2196/22635. PubMed PMID: 32936777.

84. Lee YJ, Guell X, Hubbard NA, Siless V, Frosch IR, Goncalves M, Lo N, Nair A, **Ghosh SS**, Hofmann SG, Auerbach RP, Pizzagalli DA, Yendiki A, Gabrieli JDE, Whitfield-Gabrieli S, Anteraper SA. (2020) Functional Alterations in Cerebellar Functional Connectivity in Anxiety Disorders. Cerebellum. 2020 Nov 18;. doi: 10.1007/s12311-020-01213-8. [Epub ahead of print] PubMed PMID: 33210245.

85. Abrams MB, Bjaalie JG, Das S, Egan GF, **Ghosh SS**, Goscinski WJ, Grethe JS, Kotaleski JH, Ho ETW, Kennedy DN, Lanyon LJ, Leergaard TB, Mayberg HS, Milanesi L, Mouček R, Poline JB, Roy PK, Strother SC, Tang TB, Tiesinga P, Wachtler T, Wójcik DK, Martone ME. (2021) A Standards Organization for Open and FAIR Neuroscience: the International Neuroinformatics Coordinating Facility. Neuroinformatics. 2021 Jan 27;. doi: 10.1007/s12021-020-09509-0. [Epub ahead of print] PubMed PMID: 33506383.

86. Bannier E, Barker G, Borghesani V, Broeckx N, Clement P, Emblem KE, **Ghosh S**, Glerean E, Gorgolewski KJ, Havu M, Halchenko YO, Herholz P, Hespel A, Heunis S, Hu Y, Hu CP, Huijser D, de la Iglesia Vayá M, Jancalek R, Katsaros VK, Kieseler ML, Maumet C, Moreau CA, Mutsaerts HJ, Oostenveld R, Ozturk-Isik E, Pascual Leone Espinosa N, Pellman J, Pernet CR, Pizzini FB, Trbalić AŠ, Toussaint PJ, Visconti di Oleggio Castello M, Wang F, Wang C, Zhu H. (2021) The Open Brain Consent: Informing research participants and obtaining consent to share brain imaging data. Hum Brain Mapp. 2021 Feb 1;. doi: 10.1002/hbm.25351. [Epub ahead of print] PubMed PMID: 33522661.

87. Abrams MB, Bjaalie JG, Das S, Egan GF, **Ghosh SS**, Goscinski WJ, Grethe JS, Kotaleski JH, Ho ETW, Kennedy DN, Lanyon LJ, Leergaard TB, Mayberg HS, Milanesi L, Mouček R, Poline JB, Roy PK, Strother SC, Tang TB, Tiesinga P, Wachtler T, Wójcik DK, Martone ME. A Standards Organization for Open and FAIR Neuroscience: the International Neuroinformatics Coordinating Facility. Neuroinformatics. 2021 Jan 27;. doi: 10.1007/s12021-020-09509-0. [Epub ahead of print] PubMed PMID: 33506383.

88. Gau R, Noble S, Heuer K, Bottenhorn KL, Bilgin IP, Yang YF, Huntenburg JM, Bayer JMM, Bethlehem RAI, Rhoads SA, Vogelbacher C, Borghesani V, Levitis E, Wang HT, Van Den Bossche S, Kobeleva X, Legarreta JH, Guay S, Atay SM, Varoquaux GP, Huijser DC, Sandström MS, Herholz P, Nastase SA, Badhwar A, Dumas G, Schwab S, Moia S, Dayan M, Bassil Y, Brooks PP, Mancini M, Shine JM, O'Connor D, Xie X, Poggiali D, Friedrich P, Heinsfeld AS, Riedl L, Toro R, Caballero-Gaudes C, Eklund A, Garner KG, Nolan CR, Demeter DV, Barrios FA, Merchant JS, McDevitt EA, Oostenveld R, Craddock RC, Rokem A, Doyle A, **Ghosh SS**, Nikolaidis A, Stanley OW, Uruñuela E. Brainhack: Developing a culture of open, inclusive, community-driven neuroscience. Neuron. 2021 Jun 2;109(11):1769-1775. doi: 10.1016/j.neuron.2021.04.001. Epub 2021 Apr 30. PubMed PMID: 33932337.

89. Sarawgi U, Khincha R, Zulfikar W, **Ghosh S**, Maes P (2021) Uncertainty-Aware Boosted Ensembling in Multi-Modal Settings In: The International Joint Conference on Neural Networks (IJCNN).

90. Low, D. M., Zuromski, K., Kessler, D., **Ghosh, S. S.**, Nock, M. K. and Dempsey, W. (2021). It's quality and quantity: the effect of the amount of comments on online suicidal posts. EMNLP 2021 First Workshop on Causal Inference & NLP.

91. Halchenko Y, Meyer K, Poldrack B, Solanky D, Wagner A, Gors J, MacFarlane D, Pustina D, Sochat V, **Ghosh S**, Mönch C, Markiewicz C, Waite L, Shlyakhter I, de la Vega A, Hayashi S, Häusler C,

Poline J, Kadelka T, Skytén K, Jarecka D, Kennedy D, Strauss T, Cieslak M, Vavra P, Ioanas H, Schneider R, Pflüger M, Haxby J, Eickhoff S, Hanke M. DataLad: distributed system for joint management of code, data, and their relationship. Journal of Open Source Software. 2021 July; 6(63):3262-. doi: 10.21105/joss.03262.

92. Klein A, Clucas J, Krishnakumar A, Ghosh SS, Van Auken W, Thonet B, Sabram I, Acuna N, Keshavan A, Rossiter H, Xiao Y, Semenuta S, Badioli A, Konishcheva K, Abraham SA, Alexander LM, Merikangas KR, Swendsen J, Lindner AB, Milham MP. Remote Digital Psychiatry for Mobile Mental Health Assessment and Therapy: MindLogger Platform Development Study. J Med Internet Res. 2021 Nov 11;23(11):e22369. doi: 10.2196/22369. PubMed PMID: 34762054; PubMed Central PMCID: PMC8663601.

93. BRAIN Initiative Cell Census Network (BICCN) A multimodal cell census and atlas of the mammalian primary motor cortex. Nature. 2021 Oct;598(7879):86-102. doi: 10.1038/s41586-021-03950-0. Epub 2021 Oct 6. PubMed PMID: 34616075; PubMed Central PMCID: PMC8494634.

94. Poline JB, Kennedy DN, Sommer FT, Ascoli GA, Van Essen DC, Ferguson AR, Grethe JS, Hawrylycz MJ, Thompson PM, Poldrack RA, **Ghosh SS**, Keator DB, Athey TL, Vogelstein JT, Mayberg HS, Martone ME. Is Neuroscience FAIR? A Call for Collaborative Standardisation of Neuroscience Data. Neuroinformatics. 2022 Jan 21;. doi: 10.1007/s12021-021-09557-0. [Epub ahead of print] PubMed PMID: 35061216.

95. Husain M, Simpkin A, Gibbons C, Talkar T, Low DM, Bonato P, **Ghosh S**, Quatieri T, OKeeffe DT (2022) Artificial Intelligence for Detecting COVID-19 with the Aid of Human Cough, Breathing and Speech Signals : Scoping Review IEEE Open Journal of Engineering in Medicine and Biology 1-1.

96. Sitek KR, Calabrese E, Johnson GA, **Ghosh SS**, Chandrasekaran B. Structural Connectivity of Human Inferior Colliculus Subdivisions Using in vivo and post mortem Diffusion MRI Tractography. Front Neurosci. 2022;16:751595. doi: 10.3389/fnins.2022.751595. eCollection 2022. PubMed PMID: 35392412; PubMed Central PMCID: PMC8981148.

97. Bourget MH, Kamentsky L, **Ghosh SS**, Mazzamuto G, Lazari A, Markiewicz CJ, Oostenveld R, Niso G, Halchenko YO, Lipp I, Takerkart S, Toussaint PJ, Khan AR, Nilsonne G, Castelli FM, Cohen-Adad J. Microscopy-BIDS: An Extension to the Brain Imaging Data Structure for Microscopy Data. Front Neurosci. 2022;16:871228. doi: 10.3389/fnins.2022.871228. eCollection 2022. PubMed PMID: 35516811; PubMed Central PMCID: PMC9063519.

98. de la Vega A, Rocca R, Blair RW, Markiewicz CJ, Mentch J, Kent JD, Herholz P, **Ghosh SS**, Poldrack RA, Yarkoni T. Neuroscout, a unified platform for generalizable and reproducible fMRI research. Elife. 2022 Aug 30;11. doi: 10.7554/eLife.79277. PubMed PMID: 36040302; PubMed Central PMCID: PMC9489206.

99. Rübel O*, Tritt A*, Ly R*, Dichter BK*, **Ghosh S***, Niu L, Baker P, Soltesz I, Ng L, Svoboda K, Frank L, Bouchard KE. The Neurodata Without Borders ecosystem for neurophysiological data science. Elife. 2022 Oct 4;11. doi: 10.7554/eLife.78362. PubMed PMID: 36193886; PubMed Central PMCID: PMC9531949. (* coequal authors)

100. Boaro A*, Kaczmarzyk JR*, Kavouridis VK, Harary M, Mammi M, Dawood H, Shea A, Cho EY, Juvekar P, Noh T, Rana A, **Ghosh S***, Arnaout O*. Deep neural networks allow expert-level brain meningioma segmentation and present potential for improvement of clinical practice. Sci Rep. 2022 Sep 14;12(1):15462. doi: 10.1038/s41598-022-19356-5. PubMed PMID: 36104424; PubMed Central PMCID: PMC9474556. (* coequal authors)

101. Uchida M, Bukhari Q, DiSalvo M, Green A, Serra G, Hutt Vater C, **Ghosh SS**, Faraone SV, Gabrieli JDE, Biederman J. Can machine learning identify childhood characteristics that predict future development of bipolar disorder a decade later?. J Psychiatr Res. 2022 Dec;156:261-267. doi: 10.1016/j.jpsychires.2022.09.051. Epub 2022 Oct 13. PubMed PMID: 36274531.

102.   Mahmood U, Fu Z, **Ghosh S**, Calhoun V, Plis S. Through the looking glass: Deep interpretable dynamic directed connectivity in resting fMRI. Neuroimage. 2022 Dec 1;264:119737. doi: 10.1016/j.neuroimage.2022.119737. Epub 2022 Nov 7. PubMed PMID: 36356823; PubMed Central PMCID: PMC9844250.

103.   Ciric R, Thompson WH, Lorenz R, Goncalves M, MacNicol EE, Markiewicz CJ, Halchenko YO, **Ghosh SS**, Gorgolewski KJ, Poldrack RA, Esteban O. TemplateFlow: FAIR-sharing of multi-scale, multi-species brain models. Nat Methods. 2022 Dec;19(12):1568-1571. doi: 10.1038/s41592-022-01681-2. Epub 2022 Dec 1. PubMed PMID: 36456786; PubMed Central PMCID: PMC9718663.

104.   Talkar T, Low DM, Simpkin AJ, **Ghosh S**, O'Keeffe DT, Quatieri TF. Dissociating COVID-19 from other respiratory infections based on acoustic, motor coordination, and phonemic patterns. Sci Rep. 2023 Jan 28;13(1):1567. doi: 10.1038/s41598-023-27934-4. PubMed PMID: 36709368.

105.   Kiar G, Clucas J, Feczko E, Goncalves M, Jarecka D, Markiewicz CJ, Halchenko YO, Hermosillo R, Li X, Miranda-Dominguez O, **Ghosh S**, Poldrack RA, Satterthwaite TD, Milham MP, Fair D. Align with the NMIND consortium for better neuroimaging. Nat Hum Behav. 2023 Jul;7(7):1027-1028. doi: 10.1038/s41562-023-01647-0. PubMed PMID: 37386112.

106.   Hawrylycz M, Martone ME, Ascoli GA, Bjaalie JG, Dong HW, **Ghosh SS**, Gillis J, Hertzano R, Haynor DR, Hof PR, Kim Y, Lein E, Liu Y, Miller JA, Mitra PP, Mukamel E, Ng L, Osumi-Sutherland D, Peng H, Ray PL, Sanchez R, Regev A, Ropelewski A, Scheuermann RH, Tan SZK, Thompson CL, Tickle T, Tilgner H, Varghese M, Wester B, White O, Zeng H, Aevermann B, Allemang D, Ament S, Athey TL, Baker C, Baker KS, Baker PM, Bandrowski A, Banerjee S, Bishwakarma P, Carr A, Chen M, Choudhury R, Cool J, Creasy H, D'Orazi F, Degatano K, Dichter B, Ding SL, Dolbeare T, Ecker JR, Fang R, Fillion-Robin JC, Fliss TP, Gee J, Gillespie T, Gouwens N, Zhang GQ, Halchenko YO, Harris NL, Herb BR, Hintiryan H, Hood G, Horvath S, Huo B, Jarecka D, Jiang S, Khajouei F, Kiernan EA, Kir H, Kruse L, Lee C, Lelieveldt B, Li Y, Liu H, Liu L, Markuhar A, Mathews J, Mathews KL, Mezias C, Miller MI, Mollenkopf T, Mufti S, Mungall CJ, Orvis J, Puchades MA, Qu L, Receveur JP, Ren B, Sjoquist N, Staats B, Tward D, van Velthoven CTJ, Wang Q, Xie F, Xu H, Yao Z, Yun Z, Zhang YR, Zheng WJ, Zingg B. A guide to the BRAIN Initiative Cell Census Network data ecosystem. PLoS Biol. 2023 Jun;21(6):e3002133. doi: 10.1371/journal.pbio.3002133. eCollection 2023 Jun. PubMed PMID: 37390046; PubMed Central PMCID: PMC10313015.

107.   Queder N, Tien VB, Abraham SA, Urchs SGW, Helmer KG, Chaplin D, van Erp TGM, Kennedy DN, Poline JB, Grethe JS, **Ghosh SS**, Keator DB. NIDM-Terms: community-based terminology management for improved neuroimaging dataset descriptions and query. Front Neuroinform. 2023;17:1174156. doi: 10.3389/fninf.2023.1174156. eCollection 2023. PubMed PMID: 37533796; PubMed Central PMCID: PMC10392125.

108.   Moore J, Basurto-Lozada D, Besson S, Bogovic J, Bragantini J, Brown EM, Burel JM, Casas Moreno X, de Medeiros G, Diel EE, Gault D, **Ghosh SS**, Gold I, Halchenko YO, Hartley M, Horsfall D, Keller MS, Kittisopikul M, Kovacs G, Küpcü Yoldaş A, Kyoda K, le Tournoulx de la Villegeorges A, Li T, Liberali P, Lindner D, Linkert M, Lüthi J, Maitin-Shepard J, Manz T, Marconato L, McCormick M, Lange M, Mohamed K, Moore W, Norlin N, Ouyang W, Özdemir B, Palla G, Pape C, Pelkmans L, Pietzsch T, Preibisch S, Prete M, Rzepka N, Samee S, Schaub N, Sidky H, Solak AC, Stirling DR, Striebel J, Tischer C, Toloudis D, Virshup I, Walczysko P, Watson AM, Weisbart E, Wong F, Yamauchi KA, Bayraktar O, Cimini BA, Gehlenborg N, Haniffa M, Hotaling N, Onami S, Royer LA, Saalfeld S, Stegle O, Theis FJ, Swedlow JR. OME-Zarr: a cloud-optimized bioimaging file format with international community support. Histochem Cell Biol. 2023 Sep;160(3):223-251. doi: 10.1007/s00418-023-02209-1. Epub 2023 Jul 10. PubMed PMID: 37428210; PubMed Central PMCID: PMC10492740.

109. Schabdach JM, Schmitt JE, Sotardi S, Vossough A, Andronikou S, Roberts TP, Huang H, Padmanabhan V, Ortiz-Rosa A, Gardner M, Covitz S, Bedford SA, Mandal AS, Chaiyachati BH, White SR, Bullmore E, Bethlehem RAI, Shinohara RT, Billot B, Iglesias JE, **Ghosh S**, Gur RE, Satterthwaite TD, Roalf D, Seidlitz J, Alexander-Bloch A. Brain Growth Charts for Quantitative Analysis of Pediatric Clinical Brain MRI Scans with Limited Imaging Pathology. Radiology. 2023 Oct;309(1):e230096. doi: 10.1148/radiol.230096. PubMed PMID: 37906015; PubMed Central PMCID: PMC10623207.

110. Bloom PA, Pagliaccio D, Zhang J, Bauer CCC, Kyler M, Greene KD, Treves I, Morfini F, Durham K, Cherner R, Bajwa Z, Wool E, Olafsson V, Lee RF, Bidmead F, Cardona J, Kirshenbaum JS, **Ghosh S**, Hinds O, Wighton P, Galfalvy H, Simpson HB, Whitfield-Gabrieli S, Auerbach RP. Mindfulness-based real-time fMRI neurofeedback: a randomized controlled trial to optimize dosing for depressed adolescents. BMC Psychiatry. 2023 Oct 17;23(1):757. doi: 10.1186/s12888-023-05223-8. PubMed PMID: 37848857; PubMed Central PMCID: PMC10580563.

111. Subash P, Gray A, Boswell M, Cohen SL, Garner R, Salehi S, Fisher C, Hobel S, **Ghosh S**, Halchenko Y, Dichter B, Poldrack RA, Markiewicz C, Hermes D, Delorme A, Makeig S, Behan B, Sparks A, Arnott SR, Wang Z, Magnotti J, Beauchamp MS, Pouratian N, Toga AW, Duncan D. A comparison of neuroelectrophysiology databases. Sci Data. 2023 Oct 19;10(1):719. doi: 10.1038/s41597-023-02614-0. Review. PubMed PMID: 37857685; PubMed Central PMCID: PMC10587056.

112. Zhao C, Jarecka D, Covitz S, Chen Y, Eickhoff SB, Fair DA, Franco AR, Halchenko YO, Hendrickson TJ, Hoffstaedter F, Houghton A, Kiar G, Macdonald A, Mehta K, Milham MP, Salo T, Hanke M, **Ghosh SS**, Cieslak M, Satterthwaite TD (2024). A reproducible and generalizable software workflow for analysis of large-scale neuroimaging data collections using BIDS Apps. Imaging Neurosci. 2024;2:1–19. doi:10.1162/imag_a_00074.

113. Poldrack RA, Markiewicz CJ, Appelhoff S, Ashar YK, Auer T, Baillet S, Bansal S, Beltrachini L, Benar CG, Bertazzoli G, Bhogawar S, Blair RW, Bortoletto M, Boudreau M, Brooks TL, Calhoun VD, Castelli FM, Clement P, Cohen AL, Cohen-Adad J, D'Ambrosio S, de Hollander G, de la Iglesia-Vayá M, de la Vega A, Delorme A, Devinsky O, Draschkow D, Duff EP, DuPre E, Earl E, Esteban O, Feingold FW, Flandin G, Galassi A, Gallitto G, Ganz M, Gau R, Gholam J, **Ghosh SS**, Giacomel A, Gillman AG, Gleeson P, Gramfort A, Guay S, Guidali G, Halchenko YO, Handwerker DA, Hardcastle N, Herholz P, Hermes D, Honey CJ, Innis RB, Ioanas H-I, Jahn A, Karakuzu A, Keator DB, Kiar G, Kincses B, Laird AR, Lau JC, Lazari A, Legarreta JH, Li A, Li X, Love BC, Lu H, Marcantoni E, Maumet C, Mazzamuto G, Meisler SL, Mikkelsen M, Mutsaerts H, Nichols TE, Nikolaidis A, Nilsonne G, Niso G, Norgaard M, Okell TW, Oostenveld R, Ort E, Park PJ, Pawlik M, Pernet CR, Pestilli F, Petr J, Phillips C, Poline JB, Pollonini L, Raamana PR, Ritter P, Rizzo G, Robbins KA, Rockhill AP, Rogers C, Rokem A, Rorden C, Routier A, Saborit-Torres JM, Salo T, Schirner M, Smith RE, Spisak T, Sprenger J, Swann NC, Szinte M, Takerkart S, Thirion B, Thomas AG, Torabian S, Varoquaux G, Voytek B, Welzel J, Wilson M, Yarkoni T, Gorgolewski KJ. The past, present, and future of the brain imaging data structure (BIDS). Imaging Neurosci. 2024;2:1–19. doi:10.1162/imag_a_00103.

114. Low DM, Rao V, Randolph G, Song PC*, **Ghosh SS***. (2024) Identifying bias in models that detect vocal fold paralysis from audio recordings using explainable machine learning and clinician ratings. PLOS Digital Health. (* coequal authors)

115. Park J, Wang J, Guan W, Gjesteby LA, Pollack D, Kamentsky L, Evans NB, Stirman J, Gu X, Zhao C, Marx S, Kim ME, Choi SW, Snyder M, Chavez D, Su-Arcaro C, Tian Y, Park CS, Zhang Q, Yun DH, Moukheiber M, Feng G, Yang XW, Keene CD, Hof PR, **Ghosh SS**, Frosch MP, Brattain LJ, Chung K. (2024) Integrated platform for multiscale molecular imaging and phenotyping of the human brain. Science. 2024. doi:10.1126/science.adh9979. Epub 2024 Jun 14. PubMed PMID: 38870291.

116.   Hubbard N, Bauer C, Siless V, Auerbach R, Elam J, Frosch I, Henin A, Hofmann S, Hodge M, Jones R, Lenzini P, Lo N, Park A, Pizzagalli D, Vaz-DeSouza F, Gabrieli J, Whitfield-Gabrieli S, Yendiki A, and **Ghosh S**. (2024) The Human Connectome Project of adolescent anxiety and depression dataset. Sci Data 11, 837. https://doi.org/10.1038/s41597-024-03629-x

117.   Bensoussan Y, **Ghosh SS**, Rameau A, Boyer M, Bahr R, Watts S, Rudzick F, Bolser D, Lerner-Ellis J, Awan S, Powell M, Belisle-Pipon J-C, Ravitsky V, Johnson A, Sigaras A, Elemento O, Dorr D, Payne P (2024) Developing Multi-Disorder Voice Protocols: A team science approach involving clinical expertise, bioethics, standards, and DEI. Interspeech 2024.

118.   Zuromski KL, Low D, Jones N, Kuzma R, Kessler D, Zhou L, Kastman EK, Epstein J, Madden C, **Ghosh SS**, Gowel D, Nock MK (in press). Detecting suicide risk among U.S. Servicemembers and Veterans: A deep learning approach using social media data. Psychological Medicine.

119.   Kliemann D, Galdi P, Van De Water AL, Egger B, Jarecka D, Adolphs R*, **Ghosh SS***. (In press) Resting-state functional connectivity of the amygdala in autism: a preregistered large-scale study. (* coequal authors)

Presentations

The transformative potential and challenges of open data and technologies in neuroscience
NIH Data Sharing and Reuse Seminar Series 2024

The Role of Infrastructures in Enabling AI for Neuroscience
Symposium: BRAIN Informatics in the AI Era
BRAIN Initiative Conference 2024

Building an Integrated Ecosystem for Brain Behavior Quantification and Synchronization (BBQS)
Specialty Session: Brain Behavior Quantification and Synchronization (BBQS) - Laying the Foundation for a New Data and Knowledge Ecosystem
BRAIN Initiative Conference 2024

Exploring the Speech Chain: Bridging Science and Technology
Boston University Speech, Language, and Hearing Sciences (SLHS) Colloquium Series, 2024

Data availability, access, and transparency
Study Panel on The Science and Ethics of Measuring and Modeling Individual and Group Behavior, American College of Neuropsychopharmacology (ACNP), 2023

An Emerging Ecosystem for Psychopathology Research
Psychiatry Grand Rounds, Motto Endowed Lecture, University Hospitals and Case Western Reserve University, 2023

The transformative potential and challenges of open data and computation in neuroscience
BBQS Sensors Workshop, NIH, 2023

Using translational applications to unpack machine learning models and systemic challenges
Machine Learning in Medicine Seminar Series, Radiology, WCM & Electrical and Computer Engineering, Cornell-Ithaca and Cornell-Tech, 2023

Seeing precision psychiatry through the variability lens of data and technologies
American Psychopathological Association Conference, 2023

Can neuroinformatics infrastructures like DANDI advance scientific discovery?
NeuroDataShare: Exploring and sharing multi-scale neuroscience data, University College London, 2023

Unpacking the Speech Chain: A window of scientific and technological opportunities
Quantitative Life Sciences Seminar Series, McGill University, 2022

Leveraging brain research to change scientific culture, education, and infrastructure
Precision Convergence Webinar Series, McGill University and Pittsburgh Supercomputing Center, 2022

Towards precision psychiatry through diverse sensors and machine learning
Data Science in Clinical Settings Symposium, Fundación INECO, 2021

Into the neuroverse
OHBM Student and Postdoc Special interest group, 2021

Sensors and the Brain
CANDI Lab Shriver Center, University of Massachusetts Medical School, 2021
OSU-CN Yang Webinar series, Oregon State University, 2021

What constitutes a good standard for neuroscience?
INCF Virtual assembly, 2021

The Shifting Dunes of Data and Computation
University of Virginia, Biomedical Data Science Seminar, 2021

Reproducible Workflows and Analysis
ABCD-Repronim course, Florida International University, 2020

Challenging the Invisibility of Mental Illness
American Medical Informatics Association - INCF, 2020

The evolution of machine learning in brain imaging
Frontiers in Brain Imaging Symposium, University of Texas, Southwestern, 2020

What has working with brains, voice, and infrastructure technologies taught us about open science?
NeuroHub Seminar Series, McGill University, 2019

Retooling Psychiatry: How will we get there?
Computational Psychiatry Symposium, University of Iowa, 2019

Brains, Voice, and Technology: A multifaceted approach to mental health
Center for Depression, Anxiety, and Stress Research, McLean Hospital, 2019

Assistive Intelligence for Brain Health
>World Medical Innovation Forum, 2019

Modeling Noise and Individual Variation
>Organization for Human Brain Mapping, Singapore, 2018

Tools of the trade: From Data to Results in Neuroimaging
>Neuroscience Information Framework, Online Webinar, 2018

Speaking one's mind: Vocal biomarkers of mental health
>University of Washington, Seattle, August, 2018

A brain cartographer's quandary
>Workshop on large-scale trends in cortical organization, Leipzig, Germany, 2017

Speaking one's mind: Vocal biomarkers of mental health
>Technology in Psychiatry, Symposium, Boston, USA, 2017

The emerging informatics revolution in neuroscience
>Boston Children's Hospital, Boston, USA, 2017
>Center for Addiction Medicine, Massachusetts General Hospital, Boston, USA, 2017
>Department of Biomedical Informatics, University of Pittsburgh, Pittsburgh, USA, 2017

Variance is the spice of reproducible research
>Keynote: Annual Neuroinformatics Congress, Kuala Lampur, Malaysia, 2017

Applications of Machine Learning to Brain Imaging and Psychiatry
>Computational Psychiatry Workshop, Satellite of Biological Psychiatry, San Diego, USA, 2017

Predicting Treatment Outcome in Social Anxiety Disorder and Tracking Major Depression and Parkinson State Using Behavioral Information
>ACNP 55th Annual Meeting, Florida, USA, 2016

Standardized Provenance for Reproducible Dataflows in Neuroscience
>Japan Neuroscience Society, Yokohama, Japan, 2016

Speaking one's mind: Vocal biomarkers of depression and Parkinson disease
>Acoustical Society of America, Salt Lake City, USA, 2016

Predicting Treatment Outcome in Anxiety and Depression
>McLean Hospital, Belmont, USA, 2015
>Organization for Human Brain Mapping, Hawaii, USA, 2015

Linking Knowledge and Reproducible Research Via Standardized Provenance Models
>Workshop at the Bernstein Computational Neuroscience conference, Heidelberg, Germany, 2015
>Tools for Integrating and Planning Research in Neuroscience, UCLA, Los Angeles, USA, 2014

A Neuroinformatics Bridge to Personalized Healthcare

Boston University, Hearing research seminar, Boston, USA, 2014
Vanderbilt University, Nashville, USA, 2014

Enabling knowledge generation and reproducible research by embedding provenance models in metadata stores
Neuroinformatics Congress, Stochkholm, Sweden, 2013

Python Tools for Reproducible Research in Brain Imaging
PyData conference, Boston, USA, 2013

Nipype: Opensource platform for unified and replicable interaction with existing neuroimaging tools
Brigham and Womens Hospital, Boston, USA, 2009
Massachusetts General Hospital, Boston, USA, 2010, 2012, 2013
Radiology, U of Washington, Seattle, USA, 2011,
PICSL, U of Pennsylvania, Philadelphia, USA, 2011
Scientific Python Conference in India, Hyderabad, India, 2010
INCF Datasharing Workshop, Quebec, Canada, 2011
Python in Neuroscience Workshop, Paris, France, 2011

Leveraging scientific computation to bridge neuroimaging and clinical applications
Radiology, U of Pennsylvania, Philadelphia, USA, 2011
Haskins Laboratories, New Haven, Connecticut, USA 2012

Datasharing and reproducible research: Barriers and solutions
Janelia Farm Bioimage Informatics II Conference, Washington DC, USA, 2011
University de Montreal, Montreal, Canada, 2013

Using high-resolution fMRI to identify individual-specific speech motor regions
Surgical Brain-Mapping laboratory, Brigham and Womens Hospital, Boston, USA, 2010

Region of interest analysis of functional Magnetic Resonance Imaging data
New York State Psychiatric Institute, Columbia University, New York, USA, 2007
Singapore General Hospital, Singapore, Singapore, 2007

Exploring speech motor control through computational modeling and neuroimaging
Center for Life Sciences, National University of Singapore, Singapore, 2007

Research contracts and grants

Current
2023 - 2028   BRAIN Connects: The center for Large-scale Imaging of Neural Circuits (LINC)
               NIH/NINDS/1UM1NS132358-01
               Site PI
2023 – 2025   Biometric assessment and monitoring of psychiatric symptoms
               Child Mind Institute, New York
               PI

2022 – 2026	Voice as a Biomarker of Health: Building an ethically sourced, bioacoustic database to understand disease like never before NIH/OD/OT2 OD032720 MPI (co-PIs: see https://reporter.nih.gov/search/FS74E19pCEacUekazZnwjA/project-details/10858564)
2022 – 2027	An extensible brain knowledge base and toolset spanning modalities for multi-species data-driven cell types NIH/NIMH/U24 MH130918 MPI (co-PI Shoaib Mufti, Michael Hawrylycz, Lydia Ng, Allen Institute for Brain Science)
2022 – 2025	ReadNet: Preventing Reading Failure Harvard University Site co-I
2019 – 2029	DANDI: Distributed Archives for Neurophysiology Data Integration NIH/NIMH/R24 MH117295 MPI (co-PI - Yaroslav Halchenko, Dartmouth College)
2016 – 2026	ReproNim: Center for Reproducible Neuroimaging Computation NIH/NIBIB/P41 EB019936 (PI: David Kennedy, UMass Medical School) Director: Technology, Research and Development Project 2 Member of administrative and training cores Site PI

Past

2008 – 2010	Dissemination of cross-platform software for artifact detection and region of interest analysis of fMRI data NIH/NIBIB/R03 EB008673 Co-PI with Susan Whitfield-Gabrieli, McGovern Institute for Brain Research, MIT
2012 – 2014	Learned regulation of the limbic network via combined EEG and fMRI (PI: John Gabrieli) NIH/NIMH/R21 MH092564 Investigator
2012 – 2015	MURFI: An Optimized Platform for Realtime fMRI Neurofeedback MIT McGovern Institute Neurotechnology Program Co-PI with John Gabrieli (MIT), Eden Evins (MGH)
2011 – 2016	Using Real-Time Functional Brain Imaging and Computer Training To Enhance Recovery from Traumatic Brain Injury (TBI) (PI: John Gabrieli) DOD/Clinical trial award PT100120 Investigator
2015 – 2017	Genetic Determinants of Schizophrenia Intermediate Phenotypes NIH/NIMH/R01 (Supplement) MH092380 (PI: Tracey Petryshen, MGH) Site PI
2012 – 2017	A randomized controlled trial of intranasal oxytocin as an adjunct to behavioral therapy for autism spectrum disorder (PI: John Gabrieli, MGH) DOD/Clinical Trial Award AR110329 Site PI
2014 – 2017	Brain basis for voice-based tracking of neurological disorders MIT McGovern Institute Neurotechnology Program MIT Lincoln Lab Funds Co-PI with Tom Quatieri, MIT Lincoln Laboratory, MIT

2012 – 2018   Blast Induced Traumatic Brain Injury
DOD/Institute for Soldier Nanotechnologies
Investigator

2015 – 2020   Connectomes related to anxiety and depression in adolescents.
NIH/NIMH/U01 MH108168 (PI: Susan Whitfield-Gabrieli, John Gabrieli, MIT)
Informatics Lead

2016 – 2020   Nipype: Dataflows for Reproducible Biomedical Research
NIH/NIBIB/R01 EB020740
PI

2019 – 2020   Tracking Alzheimer's Disease from Retinal OCT Images using Deep Learning
Foundation for Ophthalmology Research and Education International, Inc.
PI

2020 – 2021   Realtime speech modification apparatus for enhancing fluency in people that stutter.
McGovern Institute Neurotechnology Program
PI (co-PI Tod Machover, Media Arts and Sciences)

2019 - 2022   The Neuroimaging Data Model: FAIR descriptors of Brain Initiative Imaging Experiments
(PI: David Keator, University of California, Irvine)
National Institute of Mental Health, R01
Site PI

2016 – 2022   NeuroScout: A cloud-based platform for rapid re-analysis of naturalistic fMRI datasets
NIH/NIMH/R01 MH109682 (PI: Tal Yarkoni, UTexas, Austin)
Site PI

2020 – 2023   Mumble Melody: A real-time speech modification system to enhance fluency in people who stutter
MIT Deshpande Center for Technological Innovation
PI (co-PI Tod Machover, Media Arts and Sciences)

2020 – 2024   Nobrainer: A robust and validated neural network tool suite for imagers
NIH/NIMH/RF1 MH121885
PI