

Stanford

Jessica Ross

Postdoctoral Scholar, Psychiatry

Bio

BIO

Dr. Ross is a research fellow for Psychiatry and Behavioral Sciences at Stanford Medicine and a Data Science fellow for the Veterans Affairs Palo Alto Health Care System (VAPAHCS). Her work uses transcranial magnetic brain stimulation (TMS) and electroencephalography brain recording (EEG) for research on neuromodulation-based psychiatric treatments. Her mentor is Corey Keller MD PhD in the Personalizing Neurotherapeutics Lab. She is also affiliated with Harvard Medical School/Beth Israel Deaconess Medical Center where she uses TMS-EEG to explore aberrant brain plasticity, cortical reactivity, and connectivity in older adults with cognitive disorder and healthy adults, under the guidance of Mouhsin Shafi MD PhD and Alvaro Pascual-Leone MD PhD.

PROFESSIONAL EDUCATION

- Bachelor of Arts, University of California Davis (2008)
- Associate of Arts, Sacramento City College (2011)
- Doctor of Philosophy, University of California Merced (2018)
- Postdoctoral Research Fellow, Harvard Medical School, Berenson-Allen Center for Noninvasive Brain Stimulation, Beth Israel Deaconess Medical Center, Boston, MA
- Postdoctoral Research Fellow, Stanford University School of Medicine, Sierra Pacific Mental Illness Research Education and Clinical Centers (MIRECC), Veterans Affairs Palo Alto Healthcare System, Palo Alto, CA

STANFORD ADVISORS

- Corey Keller, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **Reliability of resting-state EEG modulation by continuous and intermittent theta burst stimulation of the primary motor cortex: a sham-controlled study.** *Scientific reports*
Rodionov, A., Ozdemir, R. A., Benwell, C. S., Fried, P. J., Boucher, P., Momi, D., Ross, J. M., Santarnecchi, E., Pascual-Leone, A., Shafi, M. M.
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- **Reliability of resting-state EEG modulation by continuous and intermittent theta burst stimulation of the primary motor cortex: A sham-controlled study.** *bioRxiv : the preprint server for biology*
Rodionov, A., Ozdemir, R. A., Benwell, C. S., Fried, P. J., Boucher, P., Momi, D., Ross, J. M., Santarnecchi, E., Pascual-Leone, A., Shafi, M. M.
2023
- **Auditory, tactile, and multimodal noise reduce balance variability.** *Experimental brain research*
Carey, S., Ross, J. M., Balasubramaniam, R.
2023
- **Mapping cortical excitability in the human dorsolateral prefrontal cortex.** *bioRxiv : the preprint server for biology*
Gogulski, J., Cline, C. C., Ross, J. M., Truong, J., Sarkar, M., Parmigiani, S., Keller, C. J.
2023
- **Neural effects of TMS trains on the human prefrontal cortex** *bioRxiv*

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2023

- **Reliability and Validity of Transcranial Magnetic Stimulation-Electroencephalography Biomarkers.** *Biological psychiatry. Cognitive neuroscience and neuroimaging*
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2022
- **Personalized Repetitive Transcranial Magnetic Stimulation for Depression.** *Biological psychiatry. Cognitive neuroscience and neuroimaging*
Gogulski, J., Ross, J. M., Talbot, A., Cline, C. C., Donati, F. L., Munot, S., Kim, N., Gibbs, C., Bastin, N., Yang, J., Minasi, C., Sarkar, M., Truong, et al
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- **Neurophysiologic predictors of individual risk for post-operative delirium after elective surgery.** *Journal of the American Geriatrics Society*
Ross, J. M., Santarnecchi, E., Lian, S. J., Fong, T. G., Touroutoglou, A., Cavallari, M., Trivison, T. G., Marcantonio, E. R., Libermann, T. A., Schmitt, E. M., Inouye, S. K., Shafi, M. M., Pascual-Leone, et al
2022
- **Experimental suppression of transcranial magnetic stimulation-electroencephalography sensory potentials.** *Human brain mapping*
Ross, J. M., Sarkar, M., Keller, C. J.
2022
- **A systematic review and meta-analysis of the efficacy of intermittent theta burst stimulation (iTBS) on cognitive enhancement.** *Neuroscience and biobehavioral reviews*
Pabst, A., Proksch, S., Médé, B., Comstock, D. C., Ross, J. M., Balasubramaniam, R.
2022: 104587
- **Personalized rTMS for Depression: A Review** *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*
Gogulski, J., Ross, J. M., Talbot, A., Cline, C. C., Donati, F. L., Munot, S., Kim, N., Gibbs, C., Bastin, N., Yang, J., Minasi, C., Sarkar, M., Truong, et al
2022
- **Reliability and validity of TMS-EEG biomarkers** *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*
Parmigiani, S., Ross, J. M., Cline, C., Minasi, C., Gogulski, J., Keller, C. J.
2022
- **Time Perception for Musical Rhythms: Sensorimotor Perspectives on Entrainment, Simulation, and Prediction.** *Frontiers in integrative neuroscience*
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- **A structured ICA-based process for removing auditory evoked potentials.** *Scientific reports*
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- **Cortical Mu Rhythms During Action and Passive Music Listening.** *Journal of neurophysiology*
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- **Modality-specific frequency band activity during neural entrainment to auditory and visual rhythms** *EUROPEAN JOURNAL OF NEUROSCIENCE*
Comstock, D. C., Ross, J. M., Balasubramaniam, R.
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- **Time course of cognitive training in Parkinson disease** *NEUROREHABILITATION*
Nguyen, H. M., Aravindakshan, A., Ross, J. M., Disbrow, E. A.
2020; 46 (3): 311-320
- **Toward a socially responsible, transparent, and reproducible cognitive neuroscience** *The Cognitive Neurosciences*
Ashburn, S. M., Abugaber, D., Antony, J. W., Bennion, K. A., Bridwell, D., Cardenas-Iniguez, C., Doss, M., Fernández, L., Huijsmans, I., Krisst, L., Lapate, R., Layher, E., Leong, et al
MIT Press.2020; VI
- **The Role of Posterior Parietal Cortex in Beat-based Timing Perception: A Continuous Theta Burst Stimulation Study** *JOURNAL OF COGNITIVE NEUROSCIENCE*

Ross, J. M., Iversen, J. R., Balasubramaniam, R.

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● **Motor simulation theories of musical beat perception** *NEUROCASE*

Ross, J. M., Iversen, J. R., Balasubramaniam, R.

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● **A pilot study to evaluate multi-dimensional effects of dance for people with Parkinson's disease** *CONTEMPORARY CLINICAL TRIALS*

Ventura, M. I., Barnes, D. E., Ross, J. M., Lanni, K. E., Sigvardt, K. A., Disbrow, E. A.

2016; 51: 50-55

● **Auditory white noise reduces age-related fluctuations in balance** *NEUROSCIENCE LETTERS*

Ross, J. M., Will, O. J., McGann, Z., Balasubramaniam, R.

2016; 630: 216-221

● **Influence of Musical Groove on Postural Sway** *JOURNAL OF EXPERIMENTAL PSYCHOLOGY-HUMAN PERCEPTION AND PERFORMANCE*

Ross, J. M., Warlaumont, A. S., Abney, D. H., Rigoli, L. M., Balasubramaniam, R.

2016; 42 (3): 308-319

● **Auditory white noise reduces postural fluctuations even in the absence of vision** *EXPERIMENTAL BRAIN RESEARCH*

Ross, J., Balasubramaniam, R.

2015; 233 (8): 2357-2363

● **Using nonlinear methods to quantify changes in infant limb movements and vocalizations** *FRONTIERS IN PSYCHOLOGY*

Abney, D. H., Warlaumont, A. S., Haussman, A., Ross, J. M., Wallot, S.

2014; 5: 771

● **Physical and neural entrainment to rhythm: human sensorimotor coordination across tasks and effector systems** *FRONTIERS IN HUMAN NEUROSCIENCE*

Ross, J., Balasubramaniam, R.

2014; 8: 576

● **Perceived and performance-based executive dysfunction in Parkinson's disease** *JOURNAL OF CLINICAL AND EXPERIMENTAL NEUROPSYCHOLOGY*

Lanni, K. E., Ross, J. M., Higginson, C. I., Dressler, E. M., Sigvardt, K. A., Zhang, L., Malhado-Chang, N., Disbrow, E. A.

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