

Information

Biography

Biographical Statement

My research investigates how neural representations are structured, and how they underlie behaviour. To do this, I use pattern-based fMRI: applying methods from machine learning to study distributed multivoxel activation patterns in the brain. In particular, I am interested in relating patterns of distributed brain activation to individual differences in people's behavioural performance, and in modeling neural similarity.

Professional

Research

Current Research Activities

Research questions

- How are neural representations structured, and how do they underlie behaviour?
- Individual differences in behavioural performance
- Social and environmental effects on learning

Methods

- Multivoxel pattern-based fMRI analysis (MVPA)
- Computational modeling
- Psychophysics
- EEG brain-computer interface (BCI)

Extension

Education

Courses

Websites

Related Websites

raizadalab.org

Administration

Publications

Selected Publications

Raizada, R.D.S. & Connolly, A.C. (2012) What makes different people's representations alike: neural similarity-space solves the problem of across-subject fMRI decoding. Journal of Cognitive Neuroscience, Advance Online Publication. raizadalab.org/papers/RaizadaConnolly_JoCN_2012_uncorrected_proofs.pdf

Raizada, R.D.S. and Kriegeskorte, N. (2010) Pattern-information fMRI: new questions which it opens up, and challenges which face it. International Journal of Imaging Systems and Technology, 20(1), 31-41. Special issue on recent developments in neuroimaging, guest edited by Dae-Shik Kim. raizadalab.org/papers/raizada_kriegeskorte_IJIST_review_2010.pdf

Raizada, R.D.S., Tsao, F.M., Liu, H.M., Holloway, I.D., Ansari, D. and Kuhl, P.K. (2010) Linking brain-wide multivoxel activation patterns to behaviour: examples from language and math. NeuroImage, 51,

462-471. raizadalab.org/papers/raizada_brainwide_multivoxel_behav_NeuroImage2010.pdf

Raizada, R.D.S. and Kishiyama, M. (2010) Effects of socioeconomic status on brain development, and how Cognitive Neuroscience may contribute to leveling the playing field. *Frontiers in Human Neuroscience*. doi:10.3389/neuro.09.003.2010. raizadalab.org/papers/raizada_kishiyama_SES_review_FrontHumNeurosci2010.pdf

Raizada, R.D.S., Tsao, F.M., Liu, H.M. and Kuhl, P.K. (2010) Quantifying the adequacy of neural representations for a cross-language phonetic discrimination task: prediction of individual differences. *Cerebral Cortex*, 20(1), 1-12. raizadalab.org/papers/Raizada_rl_CerebralCortex2009.pdf

Raizada, R.D.S., Richards, T.L., Meltzoff, A.N. and Kuhl, P.K. (2008) Socioeconomic status predicts hemispheric specialisation of the left inferior frontal gyrus in young children. *NeuroImage*, 40(3), 1392-401. raizadalab.org/papers/Raizada_SES_Brocas_NeuroImage2008.pdf