Ashkan Alvand

WORK EXPERIENCES

- ***Research Fellow*** **Feb 2023 – pre**
  Liggins Institute, the University of Auckland, Auckland, New Zealand
- ***Research Assistant*** **Nov 2022 - Feb 2023**
  Department of Psychology, the University of Auckland, Auckland, New Zealand
- ***Research Assistant*** **May 2022 - Sep 2022**
  Department of Exercise Science, the University of Auckland, Auckland, New Zealand
- ***Graduate Teaching Assistant*** **Mar 2021 - July 2022**
  Assistant teacher in the course *Psych 202*, Biopsychology
- ***Research Assistant*** **July 2018 - Dec 2021**
  School of Psychology, the University of Auckland, Auckland, New Zealand
- ***Research Associate*** **Mar 2016 - Mar 2018**
  Institute for Cognitive and Brain Sciences, Shahid Beheshti University, Tehran, Iran

EDUCATION

- **Qualification:** Doctor of Philosophy in Psychology **July 2018 - Dec 2022**
  Provider: University of Auckland
- **Qualification:** Master of Information Technology in Computer Networking **Oct 2014 - Aug 2016**
  Provider: Azad University, Garmsar Branch
- **Qualification:** Bachelor of Information Technology **Oct 2010 - Sep 2014**
  Provider: University of Mazandaran

Publications/Conference posters/Invited talks

- Alvand, A., Kuruvilla-Mathew, A., Kirk, I. J., Roberts, R. P., Pedersen, M., & Purdy, S. C. (2022). **Altered brain network topology in children with Auditory Processing Disorder: a resting-state multi-echo fMRI study**. *Neuroimage: Clinical*. https://doi.org/10.1016/j.nicl.2022.103139
- Milham, M., Petkov, C. I., Margulies, D. S., Schroeder, C. E., Basso, M. A., Belin, P., ... & Messinger, A. (2022). **Towards Next Generation Primate Neuroscience: A Collaboration-based Strategic Plan for Integrative Neuroimaging.** https://www.sciencedirect.com/science/article/pii/S0896627321007832
- Farnaz Faridi, Ashkan Alvand, Reza Khosrowabadi (2022). **Brain structural correlates of intelligence in ADHD individuals**, *Basic & Clinical Neuroscience*. http://dx.doi.org/10.32598/bcn.2021.2244.1
- Milham, M., Petkov, C. I., Margulies, D. S., Schroeder, C. E., Basso, M. A., Belin, P., ... & Messinger, A. (2020). **Accelerating the evolution of nonhuman primate neuroimaging**. *Neuron*. 10.1016/j.neuron.2019.12.023

Poster presentation

- Ashkan Alvand, Reza Khosroabadi, Kaveh Kavousi "**Graph analysis of brain functional connectivity in ADHD using task-free fMRI**", the 5th international conference on basic and clinical neuroscience, Tehran, Iran, December 2016
- Ashkan Alvand*, Suzanne C. Purdy, Reece Roberts, Tracy Melzer, Catherine Morgan, Lynette J Tippett, Ian J Kirk and the BRNZ Collaboration "**Large-Scale network analysis of functional connectivity in Individuals with Mild Cognitive Impairment and Alzheimer Disease"**, BRNZ conference, Queenstown, New Zealand, April 14-16, 2021

Oral presentation

- Seventeenth annual InHouse symposium: ***graph theory analysis of functional connectivity, links with central auditory processing***. Organized by school of Psychology at the University of Auckland (Feb 21, 2020)
- Cogneuro talk series***, Brain Functional Organization of children with Auditory Processing Disorder: Network Neuroscience approach***, Organized by department of Psychology at the University of Auckland (June 18, 2021)

Training/Courses

- **PRIME-DE Workshop** **Sep 5-6, 2019**
  Held by Child Mind Institute and National Institute of Health (NIH) at the Wellcome Trust in London.
- **Mini FSL course** **Feb 18-22, 2019**
  Held by the University of Oxford, Dunedin, New Zealand, Funded by the University of Auckland
- **MRI Course** **April - June 2016**
  Held by Institute for Cognitive and Brain Sciences, Shahid Beheshti University, Tehran, Iran

SKILLS & ATTRIBUTES

Neuroimaging skills

- ***Functional MRI data analysis (preprocessing, denoising and quality control):*** application of inhouse and opensource pipelines (e.g., fmriprep) for data cleaning, including scrubbing, Spike regression, ICA-AROMA, ICA-FIX, CompCore, Multi-echo data preprocessing, and benchmarking the quality of denoising pipelines
- **Scanning operation**: MRI data acquisition, Clinical Participant recruitment
- ***Network science application (Graph theory analysis***): brain connectivity matrix, global and nodal measures analysis, dynamic connectivity analysis, null models, edge-centric connectivity, community detection, visualization
- ***Diffusion MRI data preprocessing****:* Tractography and fiber reconstruction, quality control, Inference
- ***Statistical analysis:*** Multivariate statistics, Linear modeling (GLM), parametric & non-parametric inference, permutation testing, ICA analysis
- ***Machine learning****:* Multivariate analysis, regression, classification, clustering
- ***Meta-analysis:*** Neurosynth, BrainWeb
- ***Neuroimaging tools:*** FSL, SPM, AFNI, FreeSurfer, BCT, GRETNA, GAT, MRtrix3, NBS, Marsbar, DSI studio, PALM, BrainNet viewer, MRIcron, BIDS, DSIstudio, QSIstudio

IT skills

- ***Programming:*** MATLAB, Python, Shell (Unix), git, R
- **Windows** (XP,7,8.1,10), **Office package** (Word, Excel, Access, PowerPoint, Publisher, OneNote), **Linux** (Ubuntu, Debian)
- **Adobe**: Photoshop, After effects, lightroom, illustrator
- **Web development:** GitHub page (HTML, SCSS, CSS, Jekyll)

Honors/Awards

- EMC travel award for attending OHBM conference in July 2023
- Travel award for attending PRIME-DE workshop in September 2019
- Ranking first in GPA among all M.Sc. students at the Azad University of Garmsar, 2016

Membership

- ❖ Member of Society of Neuroscience **June 2022 - pre**
- ❖ Member of Neuroimaging Research Group (NRG) at the University of Auckland **July 2018 - pre**
- ❖ Member of Organization of Human Brain Mapping (OHBM) **April 2020 - pre**

- Member of PRIMatE Data Exchange (PRIME-DE) group **Sep 2019 - pre**
- Member of New Zealand Neurological Foundation **July 2020 - pre**
- Member of Eisdell Moore Centre (EMC) **July 2018 – pre**
- Member of Brain Research New Zealand (BRNZ) early career researcher **July 2018 – Dec 2022**
- Committee member of Early Career Researcher (ECR) at Center for Brain Research (CBR) **May 2019 - May 2022**
- Member of Post-Graduate Staff/Student Advisory Committee (PGSSAC) **Nov 2020 - Mar 2022**