

# Ashkan Alvand

## WORK EXPERIENCES

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

## EDUCATION

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

## 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](https://doi.org/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

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- **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

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### Neuroimaging skills

- **Functional MRI data analysis (preprocessing, denoising and quality control)**: application of inhouse and opensource pipelines (e.g., fmripreg) 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

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- 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

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