

# Ashkan Alvand

## WORK EXPERIENCES

 <b>Ph.D. in Psychology</b>	July 2018 - present
Department of Psychology, the University of Auckland	
 <b>Research Assistant</b>	May 2022 - Sep 2022
Department of Exercise Science, University of Auckland, Auckland, New Zealand	
 <b>Graduate Teaching Assistant (GTA)</b>	Mar 2021 - July 2022
Assistant teacher in the course <i>Psych 202</i> , Biopsychology	
 <b>Research Assistant</b>	July 2018 - Dec 2021
School of Psychology, University of Auckland, Auckland, New Zealand	
 <b>Research Associate</b>	Mar 2016 - Mar 2018
Institute for Cognitive and Brain Sciences, Shahid Beheshti University, Tehran, Iran	

## EDUCATION

❖ <b>Qualification:</b> Doctor of Philosophy in Psychology	July 2018 – present
<b>Provider:</b> University of Auckland	
❖ <b>Qualification:</b> Master of Information Technology in Computer Networking	Oct 2014 – Aug 2016
<b>Provider:</b> Azad University, Garmsar Branch	
❖ <b>Qualification:</b> Bachelor of Information Technology	Oct 2010 – Sep 2014
<b>Provider:</b> 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](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 Tippet, 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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|--|--------------------------|
| • <b>PRIME-DE Workshop</b>   | <b>Sep 5-6, 2019</b>     |
| Held by Child Mind Institute and National Institute of Health (NIH) at the Wellcome Trust in London. |                          |
| • <b>Mini FSL course</b>   | <b>Feb 18-22, 2019</b>   |
| Held by the University of Oxford, Dunedin, New Zealand, Funded by the University of Auckland         |                          |
| • <b>MRI Course</b>  | <b>April - June 2016</b> |
| 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., 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

- 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   | <b>June 2022 - present</b>  |
| ❖ Member of Neuroimaging Research Group (NRG) at the University of Auckland | <b>July 2018 - present</b>  |
| ❖ Member of Organization of Human Brain Mapping (OHBM)                      | <b>April 2020 - present</b> |
| ❖ Member of PRIMatE Data Exchange (PRIME-DE) group                          | <b>Sep 2019 - present</b>   |
| ❖ Member of New Zealand Neurological Foundation                             | <b>July 2020 - present</b>  |
| ❖ Member of Eisdell Moore Centre (EMC)                                      | <b>July 2018 – present</b>  |

- ❖ Member of Brain Research New Zealand (BRNZ) early career researcher **July 2018 – present**
- ❖ 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**