Ashkan Alvand *(Ph.D.)*

Work Experience

Liggins Institute, the University of Auckland – Postdoctoral researcher
Auckland, NZ. 02/2023 – 09/2023

- Worked in a multidisciplinary team on a clinical trial
- Investigated neurodevelopmental changes in neonates using MRI data
- Conducted diffusion MRI data analysis on clinical trials of infants
- Managed data organization, performed data cleaning and quality control on cohort studies of infants
- Utilized statistical packages in MATLAB to analyze data and created visualizations
- Maintained cloud-based server (i.e., NeCTAR) including updating, installing and troubleshooting software
- Co-organized monthly seminars on neuroimaging techniques (Neuroimaging Research Group meetings)
- Wrote detailed reports to present research findings to team members

The University of Auckland – Doctoral Researcher
Auckland, NZ. 07/2018 – 12/2022

- Completed Ph.D. project investigating functional and structural organization in children diagnosed with auditory processing disorder
- Developed research proposals, identified research objectives
- crafted research ethics and created research plans
- Performed in-depth literature review
- Developed state-of-the-art data collection strategies, performed and monitored data quality
- Requested and acquired equipment necessary for projects
- Recruited more than 70 pediatric participants for MRI scan
- Performed data clerking
- Configured Unix machine, troubleshot and resolved equipment and data processing issues for the study
- Developed new data analysis pipelines using MATLAB, Python and Bash
- Conducted data analyses: Managed and analyzed big datasets (500 GB) leveraging AFNI, FSL, Bash and MATLAB for insights
- Utilized statistical packages in MATLAB and SPSS to analyze data and interpreted patterns and trends
- Interpreted data analysis results to draw inferences and conclusions
- Create visualizations in MATLAB, Python and Photoshop for presentations and publications
- Wrote detailed reports to present research findings to team members
- Presented findings at an international conferences
- Published 2 peer-reviewed articles in top-tier journals in neuroscience and clinical neuroimaging
- Attended 7 advanced research workshops and courses, honing skills in neuroimaging research
- Collaborated with renowned research labs globally, culminating in 2 joint publications
- Accumulated over 100 citations, reflecting significant impact and recognition in human neuroimaging
- Mentored and co-supervised 1 master student in their projects, leading to completion of the these

Profiles

🌐 https://ashkan-alvand.com/

in https://www.linkedin.com/in/ashkan-alvand/

Technical Skills

- Quantitative Research
- Study Design
- Data Analysis
- Data Modeling
- Data Visualization
- Data collection
- Statistical Modeling
- Algorithms
- Programing: MATLAB/Python/R/Bash/
- Web: git/HTML/CSS/Jekyll
- SPSS
- Machine learning
- Docker products
- Adobe Photoshop
- MS Office: Word/Excel/PowerPoint
- MS Power BI
- Network theory
- Neuroscience
- Neuroimaging: fMRI/dMRI/sMRI

Interpersonal Skills

- Data storytelling
- Problem Solving
- Critical Thinking
- Technical/Scientific Writing
- Organizational skills
- Teaching
- Supervision
- Teamwork
- Attention to details
- Presentation skill
- Team management
- Project Management

Awards

Eisdell Moore Centre mobility grant
2k NZD (Nov 2022)

Travel award from Child Mind Institute
1.2k USD (Sep 2019)

Research Assistant
School of Psychology. 12/2022-02/2023

Research Assistant
Department of Exercise Sciences. 05/2022-09/2022

Graduate Teaching Assistant
School of Psychology. 03/2021- 07/2022

Research Assistant
School of Psychology. 07/2018-12/2021

ICBS Institute, Shahid Beheshti University – Research Associate
Tehran, Iran. 04/2016 - 04/2018

- Managed and Maintained the Unix server
- Performed data analysis, statistical analysis and data visualizations
- Published 1 peer-reviewed article in neuroscience

Publications

1. **Ashkan Alvand** (2023), Graph theory analysis of functional and structural connectome: Links to Auditory Processing Disorder. *Ph.D. Thesis* - University of Auckland.
2. **Ashkan Alvand**, Abin Kuruvilla-Mathew, Reece P. Roberts, Mangor Pedersen, Ian J. Kirk, & Suzanne C. Purdy (2022). Altered structural connectome of children with Auditory Processing Disorder: A diffusion MRI study. *Cerebral Cortex.* https://doi.org/10.1093/cercor/bhad075
3. **Ashkan Alvand**, Abin Kuruvilla-Mathew, Ian J. Kirk, Reece P. Roberts, Mangor Pedersen, & Suzanne C. Purdy (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
4. Farnaz Faridi, **Ashkan Alvand**, Reza Khosrowabadi (2022). Brain Structural Correlates of Intelligence in Attention Deficit Hyperactivity Disorder (ADHD) Individuals. *Basic & Clinical Neuroscience.* http://dx.doi.org/10.32598/bcn.2021.2244.1
5. Milham, M., Petkov, C. I., Margulies, D. S., Schroeder, ..., **Ashkan Alvand**,… & Messinger, A. (2022). Towards Next Generation Primate Neuroscience: A Collaboration-based Strategic Plan for Integrative Neuroimaging**.** *Neuron***.** https://www.sciencedirect.com/science/article/pii/S0896627321007832
6. Milham, M., Petkov, C. I., Margulies, D. S., Schroeder, …, **Ashkan Alvand**, ... & Messinger, A. (2020). Accelerating the evolution of nonhuman primate neuroimaging. *Neuron*. 10.1016/j.neuron.2019.12.023

Faculty of Science full tuition award
36k NZD (2018-2022)

Ranking 1st among all enrolled students in Master of IT in Azad University (2016)

Education

University of Auckland	2018-2023
Auckland, NZ	
Ph.D. in Psychology	
Major: Network Neuroscience	

Azad University	2014-2016
Garmsar, Iran	
Master of Engineering in IT	
Major: Computer Networks	

University of Mazandaran	2010-2014
Babolsar, Iran	
Bachelor of Engineering in IT	

Oral presentation

OHBM conference	July 2023
(Montreal, Canada)	

School of Psychology Talk series	June2021
(Auckland, NZ)	

BRNZ conference	April 2021
(Queenstown, NZ)	

In-House symposium `	Feb 2020
(Auckland, NZ)	

Languages

English
Persian