

Mahdiyeh Khanbagi, M.Sc.

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[[Online Portfolio](#)] | [[LinkedIn Profile](#)] | [[Google Scholar](#)]

Education

PhD Candidate at MARCS Institute for Brain, Behaviour and Development

Western Sydney University, Sydney, Australia | 2023 – Present

Thesis: *Neural Basis of Invariant Object Representations in the Infant Brain*

Supervisors: Dr. Genevieve Quek, Dr. Tijn Grootswagers, A/Prof. Manuel Varlet, Dr. Antonia Goetz

M.Sc. in Developmental Biology, Brain and Cognitive Sciences Department

Royan Institute for Stem Cell Biology and Technology, Tehran, Iran | 2017 – 2020

Thesis: *Studying Cognitive and Neuroimaging Biomarkers of Alzheimer's Disease for Early Detection of Dementia using Artificial Intelligence*

Supervisor: Dr. Seyed-Mahdi Khaligh-Razavi

B.Sc. in Cell and Molecular Biology, School of Science, Department of Biology

University of Tehran, Tehran, Iran | 2012 – 2017

Additional Education

National Institute for Development of Exceptional Talents (NODET), Tehran, Iran | 2008 - 2012

Selective National Gifted Mid-High School Education Program (top 1% Students Nationwide)

Professional and Research Experience

Data Analyst Intern (Remote)

Cognetivity Ltd., UK | Sep 2022 – Mar 2023

Project Manager and Coordinator

Neuronio Clinic, Tehran, Iran | Feb – Sep 2021

Teaching Assistant in Mendelian Genetics

University of Tehran | 2015 – 2016

Scientific Secretary and Event Organiser

9th Royan International Summer School on
Brain and Cognitive Sciences | 2017 – 2018

Conference Attendance

Oral Presentations

13th Australasian Cognitive Neuroscience Society Conference (ACNS 2024) - Newcastle, Australia

Title: *The Neural Basis of Viewpoint-tolerant Object Representations in Infants and Adults*

8th Basic and Clinical Neuroscience Congress (BCNC 2019) - Tehran, Iran

Title: *Digital Biomarkers of Alzheimer's Disease*

Poster Presentations

14th Australasian Cognitive Neuroscience Society Conference (ACNS 2025) - Melbourne, Australia

Title: *Decoding Neural Responses to Partly Occluded Objects in 6-Month-Old Infants (Upcoming)*

47th European Conference on Visual Perception (ECPV 2025) - Mainz, Germany

Title: *Evidence for Viewpoint-tolerant Neural Representations in 6-Month-Old Infants*

Alzheimer's Association International Conference (AAIC 2020) - Amsterdam, Netherlands

Title: *Association between integrated cognitive assessment (ICA) and measures of brain structure in mild cognitive impairment and mild Alzheimer's disease*

Technical Skills

Programming:

MATLAB | R | Python | Bash | HTML | CSS

Neuroimaging Toolboxes:

EEGLAB | CoSMoMVPA | MNE | PsychoPy | FreeSurfer | SPM

Research Methods:

EEG/(f)MRI signal processing, experimental design

Publications

Journal Articles

- **Khanbagi M**, Grootswagers T, Varlet M, Goetz A, Quek G, Evidence for Viewpoint-tolerant Neural Representations in 6-Month-Old Infants [*in prep*]
- Marefat H, Vahabi Z, Afzalian N, **Khanbagi M**, Karimi H, Ebrahimi F, Kalafatis C, Modarres H, Khaligh-Razavi SM, Brain Representation of Animal and Non-Animal Images in Patients with Mild Cognitive Impairment and Alzheimer's Disease, Journal of Alzheimer's Disease Reports (2023) [[Link](#)]
- Karimi H, Marefat H, **Khanbagi M**, Kalafatis C, Modarres H, Vahabi Z, Khaligh-Razavi SM, Temporal Dynamics of Animacy Categorization in the Brain of Patients with Mild Cognitive Impairment. PLoS ONE (2021) [[Link](#)]
- Kalafatis C, Modarres H, Apostolou P, Marefat H, **Khanbagi M**, Karimi H, Vahabi Z, Aarsland D, Khaligh-Razavi SM, Validity and Cultural Generalizability of a 5-min AI-based, Computerized Cognitive Assessment in Mild Cognitive Impairment and Alzheimer's Dementia, Frontiers in Psychiatry | Aging Psychiatry (2021) [[Link](#)]
- Karimi H, Marefat H, **Khanbagi M**, Karami A, Vahabi Z, Drift Diffusion Model Can Detect Patients with Cognitive Impairment, Frontiers in Biomedical Technologies (2020)
- Khaligh-Razavi SM, Sadeghi M, **Khanbagi M**, Kalafatis C, Nabavi SM. A Self-Administered, Artificial Intelligence Platform for Cognitive Assessment in Multiple Sclerosis (MS) BMC Neurol. **20**, 193 (2020) [[Link](#)]
- Khaligh-Razavi S-M, Habibi S, Sadeghi M, Marefat H, **Khanbagi M**, Nabavi SM, et al. Integrated Cognitive Assessment: Speed and Accuracy of Visual Processing as a Reliable Proxy to Cognitive Performance. Sci Rep. **9**, 1102 (2019) [[Link](#)]

Conference Abstracts

- **Mahdیه Khanbagi**, Tijl Grootswagers, Manuel Varlet, Antonia Goetz, Genevieve Quek, Decoding Neural Responses to Partly Occluded Objects in 6-Months-Old Infants, Australian Cognitive Neuroscience Society (ACNS) | Melbourne, Australia, Nov 2025 [Poster Presentation]
- **Mahdیه Khanbagi**, Tijl Grootswagers, Manuel Varlet, Antonia Goetz, Genevieve Quek, Neural Decoding of Viewpoint-tolerant Object Representations in 6-Month-Old Infants and Adults, European Conference on Visual Perception (ECVP) | Mainz, Germany, Aug 2025 [Poster Presentation]
- **Mahdیه Khanbagi**, Tijl Grootswagers, Manuel Varlet, Antonia Goetz, Genevieve Quek, The Neural Basis of Viewpoint-tolerant Object Representations in Infants and Adults, Australian Cognitive Neuroscience Society (ACNS) | Newcastle, Australia, Nov 2024 [Short Talk]

- Marefat H, Ebrahimi F, **Khanbagi M**, Karimi H, Modarres H, Kalafatis C, Khaligh-Razavi SM, How Animacy Processing is Affected in Early Stages of AD?, Alzheimer Association Annual Conference | AAIC (2021) [\[Link\]](#)
- Aghaei M, Modarres H, Vahabi Z, Kalafatis C, Marefat H, **Khanbagi M**, Karimi H, Khaligh-Razavi SM, Association between a Computerized, Self-administered Cognitive Assessment and Fluid Biomarkers of Neurodegeneration, Clinical Trials on Alzheimer's Disease Conference (CTAD 2021) [\[Link\]](#)
- **Khanbagi M**, Marefat H, Karimi H, Kalafatis C, Vahabi Z, Khaligh-Razavi SM, Association between Integrated Cognitive Assessment (ICA) and Measures of Brain Structure in Mild Cognitive Impairment and Mild Alzheimer's Disease, Alzheimer Association Annual Conference (AAIC 2020) [\[Link\]](#)
- Karimi H, Marefat H, **Khanbagi M**, Kalafatis C, Vahabi Z, Khaligh-Razavi SM, Electroencephalography (EEG) reveals a decrease in speed of animacy processing in mild cognitive impairment and an alteration in neural response patterns, Alzheimer Association Annual Conference (AAIC 2020) [\[Link\]](#)
- Kalafatis C, Modarres MH, Marefat H, **Khanbagi M**, Karimi H, Vahabi Z, Khaligh-Razavi SM, Employing Artificial Intelligence in the Development of a Self-Administered, Computerized Cognitive Assessment for the Assessment of Neurodegeneration, Alzheimer's & Dementia, July 2019 [\[Link\]](#)
- Marefat H, Karimi H, **Khanbagi M**, Kalafatis C, Vahabi Z, Khaligh-Razavi SM. Neural Speed of Visual Information Processing is Delayed in Early Stages of Alzheimer's Disease. Alzheimer's Society Annual Conference (ASAC 2019) [\[Link\]](#)
- Khaligh-Razavi SM, Modarres H, Marefat H, Karimi H, **Khanbagi M**, Kalafatis C, Vahabi Z. Artificial Intelligence (AI)-Based Cognitive Assessment Tool for Early Diagnosis of AD. Alzheimer's Research UK (ARUK 2019) [\[Link\]](#)
- Karimi H, Marefat H, **Khanbagi M**, Vahabi Z, Khaligh-Razavi SM, Task-based EEG for Detection of Patients with Mild Cognitive Impairment, The 3rd Iranian Symposium on Brain Mapping Updates (ISBM 2019)
- Khaligh-Razavi SM, Sadeghi M, **Khanbagi M**, Kalafatis C, Nabavi SM. Using ICA —an artificial intelligence (AI)-assisted technology— as a digital biomarker of MS disease progression and treatment efficacy. 35th Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS 2019) [\[Link\]](#)
- Sadeghi M, Daemi M, Khaligh-Razavi SM, Tabasi SM, **Khanbagi M**, Nabavi SM, Kordi MR, Virtual Reality(VR)-Based Cognitive Rehabilitation: Cognitive games are complementary to physical training for an optimum rehabilitation strategy in patients with Multiple Sclerosis (MS), 35th Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS 2019), Oral Presentation [\[Link\]](#)
- Khaligh-Razavi SM, Sadeghi M, **Khanbagi M**, Kalafatis C, Nabavi SM. A Brief Language-Independent and Self-Administered Computerized Test for Cognitive Assessment in Multiple Sclerosis (MS). 34th Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS 2018) [\[Link\]](#)