

Mohammad Dastgheib

PhD Student in Psychology and Cognitive Neuroscience

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Education

- 2021–Present **PhD Student, Psychology, University of California-Riverside, Riverside, CA**
Preliminary thesis: 'How Locus Coeruleus Integrity in Older Adults Mediates Perceptual Processes?'
Supervisors: Aaron R. Seitz, PhD (Northeastern University); Ilana J. Bennett, PhD (UC Riverside)
GPA: 3.93
- 2017 – 2020 **M.Sc., Psychology, Queen's University, Kingston, ON**
Thesis: 'The Effects of Self-Guided Meditation and Napping on Memory Consolidation in Humans'
Supervisor: Hans C. Dringenberg, PhD
GPA: 3.83
- 2013 – 2017 **Hon. B.Sc., Biological Sciences & Psychology, York University, Toronto, ON, Double major**
Thesis: 'Are Older Adults' Attitudes about Aging Influenced by a Psychoeducational Program?'
Supervisors: Jill B. Rich, PhD, CPsych (York University); Angela K. Troyer, PhD, CPsych (Baycrest Hospital)
- 2008 – 2012 **B.Eng., Chemical Engineering, Azad University, Tehran, Iran, unfinished**

Professional Experience

- 2021 **Research Assistant I, Surgical Safety Technologies (SST), Toronto, ON**
Artificial Intelligence Annotator
- Assisted in the development of a state-of-the-art instance segmentation module for surgical tool detection and tracking
 - Applied algorithms for quantifying inter-rater reliability metrics amongst the participating surgical analysts
 - Conducted an in-depth surgical review of relevant healthcare papers in the machine learning domain
- 2020 **Research Volunteer, International Centre for Surgical Safety (ICSS), Toronto, ON**
Cancelled due to COVID-19 restrictions
- Data collection and EEG monitoring on surgeons in the Operation Room

- 2015 – 2020 **Research Fellow**, *Toronto General Hospital*, Toronto, ON
- Conducted data collection and analysis in the Internal Medicine Department, digitizing paper documents and managing patient records.
 - Utilized Electronic Medical Records (EMR) system for data retrieval and analysis, ensuring data integrity and confidentiality.
 - Contributed to clinical research through data management, analysis, and literature reviews.
- 2017 **Research Volunteer**, *Baycrest Hospital*, North York, ON
- Assisted organizers in educational seminars for the Memory & Aging program, contributing to knowledge dissemination in geriatric care.
 - Analyzed older adults' behavioral performance post-workshop, aiding cognitive health assessments.
 - Supported research initiatives on cognitive health in older adults, aiding evidence-based interventions.
- 2016 **Keenan Research Summer Student**, *St. Michael's Hospital*, Toronto, ON
- Shadowed administration of neuropsychological tests to older adults with MCI, including MoCA and MMSE.
 - Participated in case discussions with Neurologists and Neuropsychologists.
- 2008 – 2009 **Undergraduate Research Volunteer**, *Tarbiat Modares University*, Tehran, Iran
- Conducted literature review in the department of chemical engineering.

Academic Experience

Research experience

- 2021–Present **Graduate Student Researcher**, *Seitz lab*, UC Riverside
- Designed and optimized perceptual and memory experiments using PsychToolbox
 - Conducted extensive data analysis using R for behavioral and psychophysical data
 - Preprocessed and analyzed pupillometry data using MATLAB, R, and Python
 - Coordinated research projects and supervised two research assistants
 - Collected data from over 80 participants
- 2022–Present **Graduate Student Researcher**, *LANI lab*, UC Riverside
- Analyzed Diffusion MRI data using FSL, including Probabilistic Tractography and Tensor-Based Metrics
 - Trained and supervised three research assistants
- 2023–Present **Graduate Student Researcher**, *Soundmind collaboratory*, Northeastern University
- Validated neuropsychological tests
 - Trained and supervised three research assistants
- 2017 – 2019 **Graduate Research Assistant**, *Neuroplasticity lab*, Queen's University
- Conducted data collection and analysis for over 60 participants
 - Analyzed behavioral data using R and Bayesian methods
 - Assessed sleep stages through EEG/EMG/EOG recordings
 - Supervised volunteers and two research assistants
 - Managed polysomnography equipment and protocols

Teaching Experience

- 2023–Present **Graduate Teaching Assistant**, *Department of Psychology*, UC Riverside
 Taught discussion sections, Marked assignments and exams.
- Cognitive Processes (Prof. Halle Dimsdale-Zucker, Winter 2025)
 - Psychological Methods: Statistics (Prof. Ilana Bennett, Fall 2024)
 - Perception (Prof. Lawrence Rosenblum, Spring 2024)
 - Introduction to Psychology (Prof. Annie Ditta, Winter 2024)
 - Perception (Prof. Sarah Maples, Fall 2023)
- 2018 – 2019 **Graduate Teaching Assistant**, *Department of Psychology*, Queen's University
 Taught classes and tutorials, Marked assignments and exams.
- History of Modern Psychology (Prof. Cella Olmstead, Winter 2019)
 - Brain & Behaviour I (Prof. Tyson Baker, Fall 2019)
 - Introduction to Comparative Cognition (Prof. Cella Olmstead, Fall 2019)
 - Introduction to Cognition (Prof. Monica Castelhana, Winter 2018 and Winter 2019)
 - Advanced Perception (Prof. Niko Troje, Winter 2018)
- 2011 – 2012 **Instructor**, *Mofid Middle School*, Tehran, Iran
 Supervisor: Mostafa Moeini
- Persian Literature and Composition

Publications

Review paper

- 2022 **Dastgheib, M.**, *Kulanayagam, A., & Dringenberg, H. C.*, Is the role of sleep in memory consolidation overrated?, *Neuroscience & Biobehavioral Reviews*, 140, 104799
<https://doi.org/10.1016/j.neubiorev.2022.104799>

Submitted

- 2025 Ghaffari, A., Langley, J., **Dastgheib, M.**, Chen, X., Bennett, I., Hu, X., *Functional MRI Connectome Fingerprinting in Older Adults*, Submitted to the 2025 IEEE International Symposium on Biomedical Imaging (ISBI 2025)

In preparation

- Nov 2024 **Dastgheib, M.**, *Sun, A., Yaghoubi, K., Chen, X., Peters, M., Zhang, W., Bennett, I., Seitz, A.*, The Effect of Physical Effort on Perception and Visual Memory: A Pupillometric Analysis.
- TBD **Dastgheib, M.**, *Sun, A., Maniscalco, B., Peters, M., Seitz, A.*, Analysis of metacognitive efficiency in younger and older adults in auditory and visual perceptual task.

Conference Abstracts

- 2020 Sarwar, S., Shafiee, M., **Dastgheib, M.**, Hajighadimi, S., Ghafarian, H., Rokni, H., *Current Diagnostic Approaches to Patients with Hypernatremia at University Health Network Hospitals*, Critical Care Canada Forum 2019 Abstracts. *Can J Anesth/J Can Anesth* 67 (Suppl 1), 1–162 (2020)., <https://doi.org/10.1007/s12630-019-01552-z>

Conference Talks and Presentations

International Conference Presentations

- 2024 **The Differential Effect of Physical Effort within Perceptual and Visual Memory Domains: Insights from Psychometric Function Analysis**, *65th Annual Meeting of the Psychonomic Society*, New York City, NY, **Dastgheib, M.**, Bennett, I., Seitz, A.
- 2023 **The Effect of Physical Effort on Perception and Visual Memory**, *International Conference on Learning and Memory*, Huntington Beach, CA, **Dastgheib, M.**, Yaghoubi, K., Kobaissi, H., Alba, J., Bennett, I., Seitz, A.
- 2019 **The Effects of Self-guided Meditation and Napping on Non-Declarative and Declarative Memory Consolidation**, *Canadian Society for Brain, Behaviour, & Cognitive Sciences meeting*, Waterloo, ON, **Dastgheib, M.**, Legro L., Stewart M., Dringenberg H.
- 2019 **Discrepancy between Clinical Volume Assessment vs. Laboratory Investigations and Change in the Hyponatremia Management**, *17th International Congress of Nephrology, Dialysis, and Transplantation*, Tabriz, Iran, Shafiee, M., Mumtaz, M., **Dastgheib, M.**, Rezaei, R.
- 2019 **Common Etiologies of Hyponatremia and Current Analytic Approaches Used at University Health Network Hospitals**, *17th International Congress of Nephrology, Dialysis, and Transplantation*, Tabriz, Iran, Shafiee, M., **Dastgheib, M.**, Sarwar, S., Hajighadimi, S., Rezaei, R.

Intramural Conference Presentations

- 2019 **Current Diagnostic Approaches to Patients with Hyponatremia at University Health Network Hospitals**, *Critical Care Canada Forum (CCCF)*, Toronto, ON., Sarwar, S., Shafiee, M., **Dastgheib, M.**, Hajighadimi, S., Ghafarian, H., Rokni, H.
- 2018 **The Effects of Self-guided Meditation and Napping on Non-Declarative and Declarative Memory Consolidation**, *Southern Ontario Neuroscience Association (SONA) conference*, Guelph, ON., **Dastgheib, M.**, Legro L., Stewart M., Dringenberg H.
- 2017 **Are Older Adults' Attitudes about Aging Influenced by a Psychoeducational Program?**, *Psychology Undergraduate Thesis Poster Day at York University*, Toronto, ON., **Dastgheib, M.**
- 2016 **Syndrome of Inappropriate Anti-Diuretic Hormone (SIADH); Risks and Dangers of a Misnomer**, *2016 Critical Care Canada Forum (CCCF)*, Toronto, ON., Shafiee M., Tabataba-Vakili S., Parastandechehr G., Hakimfaal S., Umar S., **Dastgheib M.**, Nazarian, A., Ghaffarian H.
- 2015 **Enzymatic Activity of Pancreatic α -amylase in Microgravity**, *2015 Science Rendezvous at Ryerson University*, Toronto, ON., Aziz, T., Calabia, D., **Dastgheib, M.**, Dastgheib, M., Farache, R., Geramy, S., Haberfellner, C., Lee, J., Tampus, J., Upshaw, T

Skills

UX Research User Research, Interaction Design

Programming Experienced with: R, MATLAB, Bash. Familiar with: Python

Development Git(GitHub), Google Cloud Platform
Data Analysis Tidyverse (R), FSL, QSIPrep, SPM12 (MATLAB)
Task Design PsychToolbox (MATLAB)
Project Mgmt Slack, Notion, Quire
Writing L^AT_EX, Markdown (R Markdown, Obsidian), MS Office
Languages Persian (Native), English (Proficient), French (Basic)

Honors & Awards

UC Riverside

2023 **Graduate Student Travel Award**, *Graduate Student Association*

2021 **Dean's Distinguished Fellowship Award**, *Graduate Division*

Queen's University

2018 – 2019 **Graduate Student Conference Travel Award**, *Department of Psychology*

2018 **Mitchell and Wilda Andriesky Award**, *Faculty of Graduate Studies*

2017 **Entrance Scholarship**, *Faculty of Graduate Studies*

York University

2016 **Dean's Honour Roll**, *Faculty of Science*

Wichita State University

2012 **Dean's Honour Roll**, *Faculty of Liberal Arts and Sciences*

Professional Development

User Experience and Interaction Design

2024–Present **Interaction Design Specialization**, *LinkedIn Learning*

Data Science and Analytics

2018–Present **Data Science Courses**

- *Various courses in Datacamp*
- Principles of Data Science, University of California-Riverside

Research Methodology and Tools

2021 **Research Transparency and Reproducibility Training**, *Berkeley Initiative for Transparency in the Social Sciences*

2021 **FSL Neuroimaging Analysis Training**, *Oxford Centre for Functional MRI of the Brain*

Clinical Assessment Tools

2021 **Montreal Cognitive Assessment (MoCA) Certification**, *MoCA Cognitive*

- Certified to administer and interpret the MoCA test for cognitive impairment screening

Mentorship

UC Riverside

- 2022–Present **Undergraduate Mentorship**
- Participant recruitment and training
 - Conducting behavioral experiments
 - Data cleaning, analysis, and quality control (QC) of pupillometry and neuroimaging data
 - Mentees: *Jacqueline Alba, Hadi Kobaissi, Shanya Sanof*

Northeastern University

- 2023–Present **Undergraduate Mentorship**
- Quality control of behavioral performance and pupillometry data
 - Data cleaning and analysis
 - Mentees: *Thomas Kato, Sadhana Gopinath, Rachel Keltz*

Queen's University

- 2017–2019 **Undergraduate Mentorship**
- Participant recruitment and training
 - Polysomnography analysis
 - Data cleaning, analysis, and quality control of EEG data
 - Mentees: *Liza Legro, Katie McGuire*

Community Involvement

Riverside, CA

- 2024 **Speaker, Aging and Your Brain Symposium**, *Center for Health Disparities Research*, UC Riverside
- Presented on data analysis for the LC Aging project
 - Conducted a Q&A session for older adults
- 2022 – 2023 **Lab Representative**, *Psi Chi Undergraduate Lab Fair*, UC Riverside
- 2022 **Panelist in the cognitive neuroscience area**, *UCR R'PSYC Conference*, UC Riverside
- 2022, 2024 **Reviewer**, *UCR R'PSYC Conference*, UC Riverside
- Reviewing and assessment of abstract submissions

Kingston, ON

- 2018 – 2019 **Category Judge**, *The Frontenac, Lennox and Addington Science Fair*
- Evaluated projects at the science fair
- 2018 – 2019 **Content Developer**, *RISE — Research and Information Science Education*, Queen's University
- Improved research skills and scientific literacy in students
 - Educational outreach at the secondary school level

2018 – 2019 **Volunteer**, *Providence Care Hospital*

2017 – 2019 **Educational Mentorship**, *QchaT Psychology*, Queen's University

Tehran, Iran

2008 – 2012 **Columnist**, *Music review in Aan magazine*, University of Tehran Student Journal

Affiliations & Memberships

Current

- Psychonomic Society
- Cognitive Science Society
- The National Center for Faculty Development and Diversity

Past

- Southern Ontario Neuroscience Association (SONA)
- Canadian Society for Brain, Behaviour, & Cognitive Science (CSBBCS)
- Society for Philosophy and Psychology