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# Mohammad Dastgheib

*PhD Student in Psychology and Cognitive Neuroscience*

**Last Updated:** April 1, 2025

## 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 collaboratary*, 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 and Spring 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 Castelhano, 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

### In preparation

TBD **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

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

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 Hypernatremia 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 Hypernatremia 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 $\alpha$-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 |

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|---|---|
| Data Analysis | Tidyverse (R), FSL, QSIPrep, SPM12 (MATLAB) |
| Task Design | PsychToolbox (MATLAB) |
| Project Mgmt | Slack, Notion, Quire |
| Writing | LaTeX, Markdown (R Markdown, Obsidian), MS Office |
| Languages | Persian (Native), English (Proficient), French (Basic) |

## Honors & Awards

### UC Riverside

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| 2023 | **Graduate Student Travel Award**, *Graduate Student Association* |
| 2021 | **Dean's Distinguished Fellowship Award**, *Graduate Division* |

### Queen's University

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| 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

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

### Wichita State University

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

## Professional Development

### User Experience and Interaction Design

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

### Data Science and Analytics

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| 2018–Present | **Data Science Courses** |
| | • Various courses in Datacamp |
| | • Principles of Data Science, University of California-Riverside |

### Research Methodology and Tools

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| 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

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| 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