

Amin Saberi

PhD Student at Cognitive Neurogenetics Lab
Max Planck Institute for Human Cognitive and Brain Sciences
Institute of Neurosciences and Medicine (INM-7), Research Center Jülich
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EDUCATION

- 2021– Ph.D., Heinrich Heine University Düsseldorf
- 2011–19 M.D., Mashhad University of Medical Sciences

PROFESSIONAL EXPERIENCE

- 2021– Max Planck Institute for Human Cognitive and Brain Sciences / Research Center Jülich
Doctoral Student
- 2018–21 Institute of Medical Science and Technology, Shahid Beheshti University
Researcher
- 2017–18 Mashhad University of Medical Sciences
Medical Intern

RESEARCH AREAS

Brain imaging, Computational neuroscience, Psychiatry, Cortical microstructure, Brain development

SKILLS

Programming (Python, C/C++, CUDA, R & Matlab), Structural and functional MRI analysis, Whole-brain dynamical modelling, Neuroimaging and clinical meta-analysis, Statistical analysis, High performance computing

PUBLICATIONS

Papers and Preprints

- 2024 John, A., Hettwer, M. D., Schaare, H. L., Saberi, A., Bayrak, Ş., Wan, B., ... Valk, S. L.* "A Multimodal Characterization of Low-Dimensional Thalamocortical Structural Connectivity Patterns." *bioRxiv*. doi:10.1101/2024.02.01.578366
- 2024 Elberse, J. D., Saberi, A., Ahmadi, R., Changizi, M., Bi, H., Hoffstaedter, F., ... Tahmasian, M.* "The interplay between insomnia and Alzheimer Disease across three main brain networks." *medRxiv*. doi:10.1101/2024.01.18.24301427
- 2023 Saberi, A., Ebneabbasi, A., Rahimi, S., Sarebannejad, S., Sen, Z. D., Graf, H., ... Tahmasian, M.* "Convergent functional effects of antidepressants in major depressive disorder: A neuroimaging meta-analysis." *medRxiv*. doi:10.1101/2023.11.24.23298991

- 2023 Saberi, A., Paquola, C., Wagstyl, K., Hettwer, M., Bernhardt, B.C., Eickhoff, S.B., Valk, S.L.* "The regional variation of laminar thickness in the human isocortex is related to cortical hierarchy and interregional connectivity." *PLOS Biology*. doi:10.1371/journal.pbio.3002365
- 2023 Küchenhoff, S., Bayrak, Ş., Zsido, R. G., Saberi, A., Bernhardt, B., Weis, S., ... Valk, S. L.* "Relating sex differences in cortical and hippocampal microstructure to sex hormones." *bioRxiv*. doi:10.1101/2023.11.01.565213
- 2023 Lotter, L. D., Saberi, A., Hansen, J. Y., Misic, B., Barker, G. J., Bokde, A. L. W., Desrivieres, S., Flor, H., Grigis, A., Garavan, H., Gowland, P., Heinz, A., Brühl, R., Martinot, J.-L., Paillère, M.-L., Artiges, E., Orfanos, D. P., Paus, T., Poustka, L., ... Dukart, J.* "Human cortex development is shaped by molecular and cellular brain systems." *bioRxiv*. doi:10.1101/2023.05.05.539537
- 2023 Maleki Balajoo, S., Eickhoff, S. B., Masouleh, S. K., Plachti, A., Waite, L., Saberi, A., Bahri, M. A., Bastin, C., Salmon, E., Hoffstaedter, F., Palomero-Gallagher, N., Genon, S.* "Hippocampal metabolic subregions and networks: Behavioral, molecular, and pathological aging profiles." *Alzheimer's & Dementia*. doi:10.1002/alz.13056
- 2022 Hettwer, M. D., Saberi, A., Fan, Y.-S., Valk, S. L.* "Schizophrenia and Macroscale Brain Structure: Genes in Context." *Biological Psychiatry*, 92(4), 258–260. doi:10.1016/j.biopsych.2022.06.010
- 2022 Kamalian, A., Khodadadifar, T., Saberi, A., Masoudi, M., Camilleri, J. A., Eickhoff, C. R., ... Tahmasian, M.* "Convergent regional brain abnormalities in behavioral variant frontotemporal dementia: A neuroimaging meta-analysis of 73 studies." *Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring*, 14(1), e12318. doi:10.1002/dad2.12318
- 2022 Ghodsi, H., Rahimi, H. R., Aghili, S. M., Saberi, A., Shoeibi, A.* "Evaluation of curcumin as add-on therapy in patients with Parkinson's disease: A pilot randomized, triple-blind, placebo-controlled trial." *Clinical Neurology and Neurosurgery*, 107300. doi:10.1016/j.clineuro.2022.107300
- 2022 Rahimi Jafari, S., Sareban Nejad, S., Saberi, A., Khazaie, H., Camilleri, J. A., Eickhoff, C. R., Eickhoff, S. B., Tahmasian, M.* "Is there any consistent structural and functional brain abnormality in narcolepsy? A meta-analytic perspective." *Neuroscience & Biobehavioral Reviews*, 132, 1181–1182. doi: 10.1016/j.neubiorev.2021.10.034
- 2021 Saberi, A., Mohammadi, E., Zarei, M., Eickhoff, S. B., Tahmasian, M.* "Structural and functional neuroimaging of late-life depression: A coordinate-based meta-analysis." *Brain Imaging and Behavior*, 16, 518–531. doi: 10.1007/s11682-021-00494-9
- 2021 Saberi, A., Abdolalizadeh, A., Mohammadi, E., Nahayati, M. A., Bagheri, H., Shekarchi, B., Kargar, J.* "Thalamic shape abnormalities in patients with multiple sclerosis-related fatigue." *Neuroreport*, 32(6), 438–442. doi: 10.1097/WNR.0000000000001616
- 2021 Tahmasian, M.*, Aleman, A., Andreassen, O. A., Arab, Z., Baillet, M., Benedetti, F., Bresser, T., Bright, J., Chee, M. W. L., Chylinski, D., Cheng, W., Deantoni, M., Dresler, M., Eickhoff, S. B., Eickhoff, C. R., Elvsåshagen, T., Feng, J., Foster-Dingley, J. C., Ganjgahi, H., ... Saberi, A., ... Zarei, M. "ENIGMA-Sleep: Challenges, opportunities, and the road map." *Journal of Sleep Research*, e13347. doi: 10.1111/jsr.13347
- 2021 Bijari, M., Jangjoo, S., Emami, N., Raji, S., Mottaghi, M., Moallem, R., Jangjoo, A., Saberi, A.* "The Accuracy of Visceral Adiposity Index for the Screening of Metabolic Syndrome: A Systematic Review and Meta-Analysis." *International Journal of Endocrinology*, 2021,

e6684627. doi: 10.1155/2021/6684627

- 2021 Ghodsi, A., Bijari, M., Alamdaran, S. A., Saberi, A., Mahmoudabadi, E., Balali, M. R., Ghahremani, S*. "Chest computed tomography findings of COVID-19 in children younger than 1 year: A systematic review." *World Journal of Pediatrics*, 17, 234–241. doi: 10.1007/s12519-021-00424-1
- 2021 Khorrampazhouh, N., Omranzadeh, A., Fazeli, B., Zarifian, A., Ghodsi, A., Amirkhanlou, F., Saberi, A., ... Moghadam, M. D.* "A Systematic Review and Meta-analysis of Clinical Studies on Ankylosing Spondylitis and Neutrophil to Lymphocyte Ratio." *Current Rheumatology Reviews*, 18, 160-167. doi: 10.2174/1573397117666210921114431
- 2020 Rezaeitalab, F., Esmaeili, M. *, Saberi, A., Vahidi, Z., Emadzadeh, M., Rahimi, H. R., Ramezani, N., Mirshabani-Toloti, S. Z. "Predictive value of inflammatory markers for functional outcomes in patients with ischemic stroke." *Current Journal of Neurology*, 19(2), 47–52. doi: 10.18502/cjn.v19i2.4940
- 2017 Ganji, A., Esmaeilzadeh, A., Ghanaei, O., Saberi, A. *, Taherzadeh, D., Sazgarnia, S., Mayabi Joghali, Z., Zirak, M., AbdollahRamazani, S., Zarifm Mahmoudi, L. "Predictive value of red blood cell distribution width for mortality in patients with acute pancreatitis: A systematic review and meta-analysis." *Medical Journal of the Islamic Republic of Iran*, 31, 124. doi: 10.14196/mjiri.31.124

Conference Abstracts (as presenting author)

- 2023 "Whole-brain dynamical modeling of the adolescent developing brain." 32nd *Annual Computational Neuroscience Meeting* (Leipzig, Germany), 29th *Annual Meeting of the Organization for Human Brain Mapping* (Montreal, Canada) & 7th *BigBrain Workshop* (Reykjavik, Iceland).
- 2022 "Organization of laminar thickness covariance in the human cortex." 6th *BigBrain Workshop* (Zadar, Croatia) & 28th *Annual Meeting of the Organization for Human Brain Mapping* (Glasgow, United Kingdom).
- 2020 "Brain mediators of the vicarious facilitation of pain." 7th *Iranian Human Brain Mapping Congress* (Tehran, Iran).
- 2019 "A coordinate based meta-analysis on the brain functional and structural changes in late life depression." 6th *Iranian Human Brain Mapping Congress* (Tehran, Iran).
- 2017 "Neutrophil to lymphocyte ratio as a prognostic marker in glioblastoma multiforme: a systematic review and meta-analysis." *The 1st International Neuroinflammation Congress* (Mashhad, Iran).
- 2016 "Cerebral blood volume as a prognostic marker in glioblastoma patients treated with bevacizumab: a systematic review." *1st International Razavi Cancer Congress* (Mashhad, Iran).
- 2012 "The effect of stress on working memory in individuals with different personality traits." *1st International Anxiety Congress* (Mashhad, Iran).

SOFTWARE DEVELOPMENT

"NiMARE-GPU", GPU-accelerated activation likelihood estimation meta-analysis.
 "cuBNM", a toolbox for biophysical network modeling on GPUs.

“Review Speed Analytics”, an app for extracting and presenting peer review speed data of journal articles

TEACHING & SUPERVISION

- 2023 Co-supervisor for BSc internship of Anna-Lea Beyer
- 2022 Co-supervisor for MSc internship of Marie Rademacher
- 2022 Co-supervisor for BSc internship of Julia Rakowski
- 2021 “Python for Data Science”, Online.
- 2020 “NeuromatchAcademy, an international computational neuroscience crash course” (Teaching assistant), Online.
- 2017 “Meta-analysis of prognostic and diagnostic studies workshop”, Mashhad, Iran.

PEER REVIEW

Reviewed academic journal articles for *Translational Neuroscience* and *Brain Structure and Function*.

GRANTS AND AWARDS

- 2023 Granted access to Jülich Supercomputing Center, Germany
- 2015 Awarded membership of National Elites Foundation, Iran

PROFESSIONAL MEMBERSHIPS

Organization for Computational Neurosciences
Organization for Human Brain Mapping
ENIGMA-Sleep group
Iranian Medical Council