

# ARASH NAZERI

Center for Addiction and Mental Health  
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## EDUCATION/TRAINING

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**M.D.** Tehran University of Medical Sciences, Tehran, Iran June 2013  
GPA=17.84/20 [3.57/4]

**Medical Internship** Tehran University of Medical Sciences, Tehran, Iran 2011-2013  
Completed eighteen months of medical internship at hospitals affiliated to the Tehran University of Medical Sciences, Tehran, Iran.

## HONORS AND AWARDS

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**Canadian Institutes of Health Research Fellowship Award** 2015  
Toronto, ON, Canada, 80,000\$ (40,000\$ per year)

**Centre for Addiction and Mental Health Fellowship Award** 2014  
Toronto, ON, Canada, 50,000\$

**Multiple Sclerosis International Federation's (MSIF) Du Pré Grant** 2011  
London, UK, £2750

**Ranked among the top 2.5% in the National "Pre-Internship Qualifying Examination" among Iranian Medical Students** 2011  
Ministry of Health and Medical Education, Iran

**Ranked 3rd in the National "Basic Medical Sciences Qualifying Examination" among Iranian Medical Students** 2008  
Ministry of Health and Medical Education, Iran

**Gold Medal in the 7<sup>th</sup> National Olympiads of Biology** 2004  
Tehran, Iran

## US MEDICAL BOARD EXAMS

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**United States Medical Licensing Examination (USMLE) Step 1** March 2015  
Scored 265 (*Mean and standard deviation for first-time examinees from U.S. and Canadian medical schools: 228 and 21, respectively*)

**United States Medical Licensing Examination (USMLE) Step 2 CS** June 2015  
Passed (1<sup>st</sup> attempt)

## RESEARCH EXPERIENCE

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**Centre for Addiction and Mental Health, Toronto, ON** September 2013-now  
**Postdoctoral Fellow**, Kimel Family Translational Imaging Genetics Lab  
Supervisor: Dr. Aristotle N. Voineskos

-Conducted the following research projects:

- Voxel-wise analysis of gray matter microstructure (gray matter-based spatial statistics [GBSS]) and neurite orientation dispersion and density imaging (NODDI)
- Genome-wide interaction analysis ( $G \times E$ ) in Parkinson's disease clinical and radiological progression
- Superficial white matter correlates of cognitive aging
- Voxel-wise mediation analysis compatible with threshold free cluster enhancement algorithm
- Resting-state functional MRI connectivity analysis in aging and major psychoses

-Mentored Institute of Medical Science (IMS) graduate students on neuroimaging research and BASH scripting.

-Became a Post-doctoral Research Fellow at the Department of Psychiatry, University of Toronto (10/2014).

**Tehran University of Medical Sciences, Tehran Iran** 2010 to 2013  
**Research Project Manager**, Multiple Sclerosis Research Center  
Supervisor: Dr. Mohammad Ali Sahraian

-Principal Investigator of Cross-modal Research Initiative for Multiple Sclerosis & Optic Neuritis (CRIMSON): Study design, MRI protocol setup, image analysis, patient recruitment, and physical examination

-Mentored junior medical students on neuroimaging research, statistical analysis, patient interview, and neurological examination.

**Montreal Neurological Institute, Montreal, QC** June 2011 to July 2011  
**Visiting Researcher**, Brain Imaging Centre  
Supervisor: Professor Douglas L. Arnold

-Learned the following during my stay:

- Magnetization Transfer Ratio (MTR) imaging and its applications in multiple sclerosis research
- Clinical trial research design

**Centre for Addiction and Mental Health**, Toronto, ON April 2011 to June 2011  
**Practicum Student**, Kimel Family Translational Imaging Genetics Lab

Supervisor: Dr. Aristotle N. Voineskos

-Conducted the following research projects:

- Alterations of superficial white matter in schizophrenia
- White matter deficits in psychopathic offenders

## TEACHING EXPERIENCE

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**Allameh Helli High School**, Tehran, Iran

2006-2009

### **Biology Teacher**

Taught various biology courses (e.g. cell physiology, mathematical biology, and biochemistry) to students in the largest National Organization for Development of Exceptional Talents (NODET) high school in Iran.

**Young Scholars Club**, Tehran, Iran

Summers of 2006 and 2007

### **Biology lab instructor and Biology teacher**, Iranian Biology Olympiad

Taught an intensive course (Mathematical Biology) to the Iranian Biology Olympiad finalists and designed the final exam questions.

## PUBLICATIONS

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### *First-Author Journal Publications*

1. **Nazeri A**, Roostaei T, Sadaghiani S., Chakravarty MM, Eberly S, Lang AE, Voineskos AN. (2015). Genome-wide variant by serum urate interaction in Parkinson's disease. *Annals of Neurology*. Epub ahead of print
2. **Nazeri A**, Chakravarty MM, Rotenberg DJ, Rajji TK, Rathi Y, Michailovich OV, Voineskos AN (2015) Functional Consequences of Neurite Orientation Dispersion and Density in Humans across the Adult Lifespan. *Journal of Neuroscience* 35:1753-1762.
3. **Nazeri A**, Chakravarty MM, Rajji TK, Felsky D, Rotenberg DJ, Mason M, Xu LN, Lobaugh NJ, Mulsant BH, Voineskos AN (2015) Superficial white matter as a novel substrate of age-related cognitive decline. *Neurobiology of Aging*.
4. **Nazeri A**, Ganjgahi H, Roostaei T, Nichols T, Zarei M, Alzheimer's Disease Neuroimaging Initiative (2014) Imaging proteomics for diagnosis, monitoring and prediction of Alzheimer's disease. *NeuroImage* 102:657-665
5. Roostaei T\*, **Nazeri A\***, Sahraian MA, Minagar A (2014) The Human Cerebellum: A Review of Physiologic Neuroanatomy. *Neurologic Clinics* 32:859-869.

6. **Nazeri A**, Heydarpour P, Sadaghiani S, Sahraian MA, Burkly LC, Bar-Or A (2014) A further TWEAK to multiple sclerosis pathophysiology. *Molecular Neurobiology* 49:78-87.
7. **Nazeri A**, Chakravarty MM, Felsky D, Lobaugh NJ, Rajji TK, Mulsant BH, Voineskos AN (2013) Alterations of superficial white matter in schizophrenia and relationship to cognitive performance. *Neuropsychopharmacology* 38:1954-1962.
8. Hoppenbrouwers SS\*, **Nazeri A\***, de Jesus DR, Stirpe T, Felsky D, Schutter DJLG, Daskalakis ZJ, Voineskos AN (2013) White matter deficits in psychopathic offenders and correlation with factor structure. *PloS ONE* 8:e72375.

#### ***Senior-Author Journal Publications:***

9. Roostaei T, Sadaghiani S, Park MTM, Noshad S, Mashhadi R, Salehi MJ, Naghibzadeh M, Moghadasi AN, Owji M, Doosti R, Hashemi Taheri AP, Shakouri Rad A, Azimi A, Chakravarty MM, Voineskos, AN, **Nazeri A\***, Sahraian MA\* (2015) Channelopathy-related SCN10A gene variant predicts cerebellar dysfunction in multiple sclerosis. *Neurology*, Accepted.

#### ***Other Journal Publications***

10. Eshaghi A, Riyahi-Alam S, Saeedi R, Roostaei T, **Nazeri A**, et al. (2015) Classification algorithms with multi-modal data fusion could accurately distinguish neuromyelitis optica from multiple sclerosis. *NeuroImage: Clinical*.
11. Esteghamati A, Noshad S, **Nazeri A**, Khalilzadeh O, Khalili M, Nakhjavani M (2012) Patterns of fruit and vegetable consumption among Iranian adults: a SuRFNCD-2007 study. *British Journal of Nutrition* 108:177-181.
12. Felsky D, Voineskos AN, Lerch JP, **Nazeri A**, Shaikh SA, Rajji TK, Mulsant BH, Kennedy JL (2012) Myelin-associated Glycoprotein gene and brain morphometry in schizophrenia. *Frontiers in Psychiatry* 3.
13. Eshaghi A, Riyahi-Alam S, Roostaei T, Haeri G, Aghsaei A, Aidi MR, Pouretmad HR, Zarei M, Farhang S, Saeedi R, **Nazeri A**, et al. (2012) Validity and reliability of a Persian translation of the Minimal Assessment of Cognitive Function in Multiple Sclerosis (MACFIMS). *The Clinical Neuropsychologist* 26:975-984.
14. Esteghamati A, Noshad S, Khalilzadeh O, Morteza A, **Nazeri A**, et al. (2011) Contribution of serum leptin to metabolic syndrome in obese and nonobese subjects. *Archives of Medical Research* 42:244-251.
15. Shearer AE, Hildebrand MS, Bromhead CJ, Kahrizi K, Webster JA, Azadeh B, Kimberling WJ, Anousheh A, **Nazeri A**, et al. (2009) A novel splice site mutation in the RDX gene causes DFNB24 hearing loss in an Iranian family. *American Journal of Medical Genetics Part A* 149:555-558.

### ***Presented Conference Papers:***

1. **Nazeri A**, Chakravarty MM, Rotenberg DJ, Rajji TK, Rathi Y, Michailovich OV, Voineskos AN. "Functional consequences of neurite orientation dispersion and density" *International Society for Magnetic Resonance in Medicine Annual Meeting (ISMRM)*, 2015. *Neuro Power Pitch*.
2. **Nazeri A**, Chakravarty MM, Rotenberg DJ, Rajji TK, Rathi Y, Michailovich OV, Voineskos AN. "Functional consequences of neurite orientation dispersion and density in humans across the adult lifespan." *Society of Biological Psychiatry (SOBP)*, 2015. *Poster Presentation*.
3. Ganjgahi H\*, **Nazeri A\***, Roostaei T, Eshaghi A, Oghabian MA. "Concurrent analysis of structural MRI and proteomics data using parallel ICA in Alzheimer's disease." *Organization for Human Brain Mapping Annual Meeting (OHBM)*, 2011. *iPoster*.

### ***Other Conference Papers:***

4. Abdolalizadeh A, **Nazeri A**, Roostaei T, Sahraian MA, Sadaghiani S, Mohajer B, Aarabi MH. "Statistical Brain Network Analysis in Female Relapsing Remitting Multiple Sclerosis Patients Using Diffusion Tensor Imaging." *International Society for Magnetic Resonance in Medicine Annual Meeting (ISMRM)*, 2015.
5. Roostaei T, Felsky D, **Nazeri A**, Voineskos AN, for the Alzheimer's Disease Neuroimaging Initiative. "Genetic modifiers of the relationship between brain beta-amyloid burden and cognitive performance in Alzheimer's disease: a genome-wide interaction study". *Society of Biological Psychiatry Annual Scientific Meeting (SOBP)*, 2015.
6. Roostaei T, **Nazeri A**, Felsky D, Chakravarty MM, Voineskos AN, for the Alzheimer's Disease Neuroimaging Initiative. "Genetic Correlates of the Homocysteine Risk Pathway for Alzheimer's Disease: A Genome-Wide Interaction Study." *Society of Biological Psychiatry Annual Scientific Meeting (SOBP)*, 2015.
7. Sadaghiani S, **Nazeri A**, Roostaei T, Naghibzadeh G, Park MTM, Owji M, et al. "Clinical and radiologic correlates of quality of life measures in patients with relapse-onset multiple sclerosis." *Middle East North Africa Committee for Treatment and Research in Multiple Sclerosis (MENACTRIMS)*, 2014.
8. Roostaei T, Sadaghiani S, Park MTM, Chakravarty MM, Salehi MJ, Doosti R, Azimi A, Shakouri Rad A, Hashemi Taheri AP, Moghadasi AN, Owji M, **Nazeri A**, Sahraian MA. "Central Cerebellar White Matter Contributes to Motor Coordination Deficits in Multiple Sclerosis." *European Federation of Neurological Societies and European Neurological Society Joint Congress (EFNS/ENS)*, 2014.

9. Sadaghiani S, Park MTM, Javadian N, Roostaei T, Chakravarty MM, Lerch JP, Mashhadi R, Doosti R, Azimi A, Shakouri Rad A., Hashemi Taheri AP, Moghadasi AN, Owji M, Noorbakhsh F, **Nazeri A**, Sahraian MA. "Cognitive and Neural Correlates of Tnfrsf1a Gene Polymorphism (Rs1800693) in Multiple Sclerosis." *European Federation of Neurological Societies and European Neurological Society Joint Congress (EFNS/ENS)*, 2014.
10. Roostaei T\*, **Nazeri A\***, Sadaghiani S, Abdolalizadeh A, Mohajer B, Javadian N, et al. "The Ratio of T1w/T2w Image Intensities in Deep Grey Matter as Novel Imaging Biomarkers for Multiple Sclerosis." *European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS)*, 2013.
11. Eshaghi A, Riyahi-Alam S, Saeedi R, Aghsaie A, Roostaei T, **Nazeri A**, et al. "Structural Substrates for Resting State Network Changes in Neuromyelitis Optica and Their Distinction from Multiple Sclerosis: A Multimodal Neuroimaging Study." *European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS)*, 2013.
12. Eqlimi E, Riyahi-Alam N, Sahraian MA, Riyahi-Alam S, Roostaei T, **Nazeri A**, et al. "Resting State Functional Connectivity Analysis Based on Mutual Information Graphs for MS Patients." *Organization for Human Brain Mapping Annual Meeting (OHBM)*, 2013.
13. Eshaghi A, Riyahi-Alam S, Roostaei T, Haeri G, Aghsaie A, Aidi MR, Pouretmad, HR, Zarei M, Farhang S, Saeedi R, **Nazeri A**, et al. "Validity and Reliability of Persian Minimal Assessment of Cognitive Function in Multiple Sclerosis." *Congress of European Federation of Neurological Societies (EFNS)*, 2012.
14. Roostaei T\*, **Nazeri A\***, Eshaghi A, Shirazi A, Ganjgahi H. "Determining effects of ApoE4 allele on Alzheimer's disease structural brain network." *Organization for Human Brain Mapping Annual Meeting (OHBM)*, 2011.

## PRESENTATIONS AND INVITED LECTURES

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**Invited Presentation**, "Microstructural underpinnings of schizophrenia and cognitive-aging", Schizophrenia Research Seminar, May 2015.

**Invited Presentation**, "Diffusion-weighted MRI Applications in Disease-associated Microstructural Deficits of Gray matter", Temerty Centre for Therapeutic Brain Intervention, February 2015.

## LANGUAGES

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**English:** Fluent

**Persian:** Native Language

## COMPUTER SKILLS

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**Programming Languages:** MATLAB, BASH (UNIX shell)

**Statistical Applications:** R (Statistical programming language), SPSS (Statistical Package for Social Sciences)

**Image Analysis:** FSL (FMRIB Software Library), SPM (Statistical Parametric Mapping), ANTS (Advanced Normalization Tools), FreeSurfer, Caret, NODDI (neurite orientation dispersion and density imaging), Fusion ICA Toolbox, MRtrix

**Genetic Analysis:** PLINK, GWASTools, SHAPEIT, IMPUTE2

## OTHER

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Canadian Permanent Resident

Iranian Citizen

Date of Birth: June 27, 1987

## REFERENCES

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