# Mo Shahdloo

Wellcome Centre for Integrative Neuroimaging Department of Experimental Psychology University of Oxford

FMRIB Centre, John Radcliffe Hospital Oxford 0X3 9DU, UK

- e moshahdloo.com
- scholar.google.com
- **y** twitter.com/MoShahdloo
- in linkedin.com/in/shahdloo
- github.com/shahdloo

# Academic Experience

#### RESEARCH

2020- Postdoctoral Researcher, Physics Group, FMRIB, University of Oxford Graduate Researcher, ICON Lab, Bilkent University

#### **TEACHING**

Tutor, FMRIB Graduate Course, University of Oxford
Lead Project TA, Neuromatch Academy Summer School
Teaching Assistant, EE Department, Bilkent University

# Education

2017-20 PHD in Electrical and Electronics Engineering, Bilkent University, Ankara

Advisor: Tolga Çukur

 $Dissertation\ title:\ Optimization\ and\ Machine-Learning\ in\ MRI:\ Applications\ in\ Rapid\ MR\ Image\ Reconstruction\ and\ Encoding\ Models\ of\ Cortical\ Representations$ 

MSc in Electrical and Electronics Engineering, Bilkent University, Ankara

Advisor: Tolga Çukur

 ${\tt BSc}$  in Electrical Engineering, Amirkabir University of Technology, Tehran

Advisor: Behzad Samadi

### **Publications and Talks**

### ARTICLES

2014-16

2007-11

- [7] **Mo Shahdloo** et al. "Model-based dynamic off-resonance correction for improved accelerated fMRI in awake behaving non-human primates". In: *Magnetic Resonance in Medicine* (Jan. 2022). DOI: 10.1002/MRM.29167.
- [6] Ibrahim Kiremitci et al. "Attentional Modulation of Hierarchical Speech Representations in a Multi-Talker Environment". In: *Cerebral Cortex* 31.11 (Nov. 2021), pp. 4986–5005. DOI: 10.1093/cercor/bhab136.

- [5] **Mo Shahdloo** et al. "Task-Dependent Warping of Semantic Representations During Search for Visual Action Categories". In: *biorxiv* (July 2021). DOI: 10.1101/2021.06.17.448789.
- [4] Salman Ul Hassan Dar et al. "Prior-Guided Image Reconstruction for Accelerated Multi-Contrast MRI via Generative Adversarial Networks". In: *IEEE Journal of Selected Topics in Signal Processing* 14.6 (Oct. 2020), pp. 1072–1087. DOI: 10.1109/JSTSP.2020.3001737.
- [3] **Mo Shahdloo**, Emin Çelik, and Tolga Çukur. "Biased Competition in Semantic Representation During Natural Visual Search". In: *NeuroImage* 216.1 (Aug. 2020), p. 116383. DOI: 10.1016/j.neuroimage.2019.116383.
- [2] **Mo Shahdloo** et al. "Projection onto Epigraph Sets for Rapid Self-Tuning Compressed Sensing MRI". In: *IEEE Transactions on Medical Imaging* 38.7 (July 2019), pp. 1677–1689. DOI: 10.1109/TMI.2018.2885599.
- [1] Salman Ul Hassan Dar et al. "Synergistic Reconstruction and Synthesis via Generative Adversarial Networks for Accelerated Multi-Contrast MRI". In: *arxiv* (2018). eprint: 1805.10704v1.

#### PEER REVIEWED CONFERENCE PUBLICATIONS

- [9] Daniel Papp et al. "Imaging Performance of a Multi-channel Non-human Primate Coil". In: *ISMRM*. Online, May 2021, p. 3224.
- [8] **Mo Shahdloo** et al. "Highly Accelerated fMRI of Awake Behaving Non-human Primates via Model-based Dynamic Off-resonance Correction". In: *ISMRM*. Online, May 2021, p. 257.
- [7] Salman Ul Hassan Dar et al. "Joint Recovery of Variably Accelerated Multi-contrast MRI Acquisitions via Generative Adversarial Networks". In: *ISMRM*. Montreal, June 2019, p. 0666.
- [6] **Mo Shahdloo**, Mert Acar, and Tolga Çukur. "Attention During Story Listening Modulates Tempo-ral Receptive Windows Across Human Cortex". In: *CCN*. Berlin, Sept. 2019, PS–1A.52.
- [5] Mo Shahdloo and Tolga Çukur. "Trade-off Between Fat-suppression and Partial-voluming in Weighted Combination Alternating Repetition-time (ATR) Balanced SSFP". In: ESMRMB. Rotterdam, Oct. 2019, p. Lo6.09.
- [4] **Mo Shahdloo** et al. "Attention to Action Categories Shifts Semantic Tuning Toward Targets Across the Brain". In: *OHBM*. Rome, June 2019, T661.
- [3] **Mo Shahdloo** et al. "Rapid Self-tuning Compressed-sensing MRI Using Projection onto Epigraph Sets". In: *ISMRM*. Paris, June 2018, p. 0251.
- [2] **Mo Shahdloo** and Tolga Çukur. "Biased Competition in Semantic Representations During Category-based Visual Search". In: *OHBM*. Vancouver, June 2017.
- [1] **Mo Shahdloo** et al. "Adaptive Wavelet Thresholding for Profile-Encoding Reconstruction of Balanced Steady-State Free Precession Acquisitions". In: *ESMRMB*. Barcelona, Oct. 2017.

#### INVITED TALKS

2020

- k-space and MR image reconstruction, educational talk at British and Irish chapter of ISMRM Voxelwise modelling: unraveling natural perception, NeuroTRACT symposium
  - Mapping language representation in the brain using deep models, 7th Iranian Human Brain Mapping Congress
  - Biased competition in semantic representations during visual search, *Institute for Advanced Studies* in Basic Sciences (IASBS)

# Honors and Awards

Full scholarship granted by Bilkent University for graduate studies

Ranked 28th among 100k participants in Iranian national higher education examination in Electri-

cal Engineering

Bronze medal in the Iranian National Physics Olympiad

# Community Service

#### EDITORIAL BOARD

- Frontiers in Neuroinformatics
- OHBM Aperture

#### AD-HOC REVIEWING

- IEEE Transactions on Medical Imaging
- Signal, Image and Video Processing (SIVP)
- ISMRM annual meeting
- Conference on Cognitive Computational Neuroscience (CCN)

# **Experience in Industry**

Hardware developer, Farineh Fanavar, Tehran, Iran
Senior software developer, KAG inc., Tehran, Iran
RnD Engineer, Kerman Tablo, Tehran, Iran

### References

Prof. Mark Chiew, Associate Professor, FMRIB Centre, University of Oxford, mark.chiew@ndcn.ox.ac.uk

Prof. Karla Miller, Professor, FMRIB Centre, University of Oxford, karla.miller@ndcn.ox.ac.uk **Prof. Tolga Çukur** EEE Dept. and UMRAM, Bilkent University, cukur@ee.bilkent.edu.tr