

# Mo Shahdloo

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## Academic Experience

### Research

- 2020–present **Postdoctoral Researcher**, Physics Group, FMRIB, University of Oxford.  
2014–2020 **Graduate Researcher**, ICON Lab, Bilkent University.

### Teaching

- 2020–present **Tutor**, FMRIB Graduate Course, University of Oxford.  
2021 **Lead Project TA**, Neuromatch Academy Summer School.  
2014–2020 **Teaching Assistant**, EE Department, Bilkent University.

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## Education

- Jan 2017 **Ph.D.**, Bilkent University, Ankara, *Electrical and Electronics Engineering Department*.  
Feb 2020 Electrical and Electronics Engineering  
Advisor: Tolga Çukur  
Dissertation title: *Optimization and Machine-Learning in MRI: Applications in Rapid MR Image Reconstruction and Encoding Models of Cortical Representations*  
Sep 2014 **M.Sc.**, Bilkent University, Ankara, *Electrical and Electronics Engineering Department*.  
Dec 2016 Electrical and Electronics Engineering  
Advisor: Tolga Çukur  
Sep 2007 **B.Sc.**, Amirkabir University of Technology, Tehran, *Electrical Engineering Department*.  
Jun 2011 Electrical Engineering/Control Engineering  
Advisor: Behzad Samadi

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## Publications

### Articles

- [7] **M. Shahdloo**, U. Schüffegen, D. Papp, K. Miller, and M. Chiew, “Model-based dynamic off-resonance correction for improved accelerated fMRI in awake behaving non-human primates,” *Magnetic Resonance in Medicine*, Jan. 2022. DOI: 10.1101/2021.09.23.461491.
- [6] I. Kiremitci, O. Yilmaz, E. Celik, **M. Shahdloo**, A. G. Huth, and T. Çukur, “Attentional Modulation of Hierarchical Speech Representations in a Multi-Talker Environment,” *Cerebral Cortex*, vol. 31, no. 11, pp. 4986–5005, Nov. 2021. DOI: 10.1093/cercor/bhab136.
- [5] **M. Shahdloo**, E. Çelik, B. A. Urgan, J. L. Gallant, and T. Çukur, “Task-Dependent Warping of Semantic Representations During Search for Visual Action Categories,” *bioRxiv*, Jul. 2021. DOI: 10.1101/2021.06.17.448789.
- [4] S. U. H. Dar, M. Yurt, **M. Shahdloo**, E. Ildiz, B. Tinaz, and T. Çukur, “Prior-Guided Image Reconstruction for Accelerated Multi-Contrast MRI via Generative Adversarial Networks,” *IEEE Journal of Selected Topics in Signal Processing*, vol. 14, no. 6, pp. 1072–1087, Oct. 2020. DOI: 10.1109/JSTSP.2020.3001737.
- [3] **M. Shahdloo**, E. Çelik, and T. Çukur, “Biased Competition in Semantic Representation During Natural Visual Search,” *NeuroImage*, vol. 216, no. 1, p. 116383, Aug. 2020. DOI: 10.1016/j.neuroimage.2019.116383.

- [2] **M. Shahdloo**, E. Ilicak, M. Tofighi, E. U. Saritas, A. E. Cetin, and T. Çukur, “Projection onto Epigraph Sets for Rapid Self-Tuning Compressed Sensing MRI,” *IEEE Transactions on Medical Imaging*, vol. 38, no. 7, pp. 1677–1689, Jul. 2019. DOI: 10.1109/TMI.2018.2885599.
- [1] S. U. H. Dar, M. Yurt, **M. Shahdloo**, and T. Çukur, “Synergistic Reconstruction and Synthesis via Generative Adversarial Networks for Accelerated Multi-Contrast MRI,” *arxiv*, 2018. eprint: 1805.10704v1.

#### Peer Reviewed Conference Publications

- [9] D. Papp, U. Schüffegen, **M. Shahdloo**, *et al.*, “Imaging performance of a multi-channel non-human primate coil,” in *ISMRM*, Online, May 2021, p. 3224.
- [8] **M. Shahdloo**, D. Papp, U. Schüffegen, K. Miller, M. Rushworth, and M. Chiew, “Highly accelerated fMRI of awake behaving non-human primates via model-based dynamic off-resonance correction,” in *ISMRM*, Online, May 2021, p. 257.
- [7] S. U. H. Dar, M. Yurt, **M. Shahdloo**, and T. Çukur, “Joint recovery of variably accelerated multi-contrast mri acquisitions via generative adversarial networks,” in *ISMRM*, Montreal, Jun. 2019, p. 0666.
- [6] **M. Shahdloo**, M. Acar, and T. Çukur, “Attention during story listening modulates tempo-ral receptive windows across human cortex,” in *CCN*, Berlin, Sep. 2019, PS-1A.52.
- [5] **M. Shahdloo** and T. Çukur, “Trade-off between fat-suppression and partial-voluming in weighted combination alternating repetition-time (ATR) balanced SSFP,” in *ESMRMB*, Rotterdam, Oct. 2019, p. L06.09.
- [4] **M. Shahdloo**, B. Ürgen, E. Çelik, and T. Çukur, “Attention to action categories shifts semantic tuning toward targets across the brain,” in *OHBM*, Rome, Jun. 2019, T661.
- [3] **M. Shahdloo**, E. Ilicak, M. Tofighi, E. U. Saritas, A. E. Cetin, and T. Çukur, “Rapid self-tuning compressed-sensing MRI using projection onto epigraph sets,” in *ISMRM*, Paris, Jun. 2018, p. 0251.
- [2] **M. Shahdloo** and T. Çukur, “Biased competition in semantic representations during category-based visual search,” in *OHBM*, Vancouver, Jun. 2017.
- [1] **M. Shahdloo**, E. Ilicak, M. Tofighi, E. U. Saritas, A. E. Cetin, and T. Çukur, “Adaptive wavelet thresholding for profile-encoding reconstruction of balanced steady-state free precession acquisitions,” in *ESMRMB*, Barcelona, Oct. 2017.

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#### Invited Talks

- 2021 k-space and MR image reconstruction, educational talk at British and Irish chapter of ISMRM
- 2021 Voxelwise modelling: unraveling natural perception, NeuroTRACT symposium
- 2020 Mapping language representation in the brain using deep models, 7th Iranian Human Brain Mapping Congress
- 2019 Biased competition in semantic representations during visual search, Institute for Advanced Studies in Basic Sciences (IASBS)

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#### Honors and Awards

- 2014–2021 Full scholarship granted by Bilkent University for graduate studies
- 2012 Ranked 28th among 100k participants in Iranian national higher education examination in Electrical Engineering
- 2006 Bronze medal in the Iranian National Physics Olympiad

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#### Community Service

- Editorial Frontiers in Neuroinformatics
- board OHBM Aperture

Ad-hoc reviewing IEEE Transactions on Medical Imaging  
Signal, Image and Video Processing (SIVP)  
ISMRM  
OHBM  
CCN

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## Scientific Organization Memberships

- International Society for MR in Medicine (ISMRM)
- Organization for Human Brain Mapping (OHBM)
- European Society for MR in Medicine and Biology (ESMRMB)

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## Experience in Industry

2014-2014 **Hardware developer**, *Farineh Fanavar*, Tehran, Iran.  
2013-2014 **Senior software developer**, *K.A.G.*, Tehran, Iran.  
2011-2013 **RnD Engineer**, *Kerman Tablo*, Tehran, Iran.

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## References

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