

April 1<sup>st</sup> (Friday)

11:30am – 1:00 pm

[WebEx \(Click here\)](#)

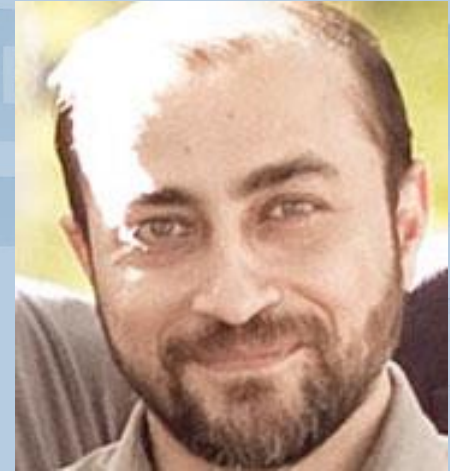
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## Effect of brain physiology on resting-state fMRI

### ***Abstract***

The blood oxygenation level dependent (BOLD) fMRI signal measures brain function indirectly through physiological processes. Therefore, global physiological processes like cardiac and respiratory signals can change the fMRI signal. To accurately map the brain function and connectivity, it is necessary to separate the contribution of the physiological processes from the contribution of the brain function in the fMRI signal. In this talk I will explain how we can model the effect of the physiological processes, how to estimate them from the fMRI signal, and what would be the effect of removing them from the fMRI signal.

### ***About the Speaker***

I received my BSc and MSc in the Electrical Engineering from the University of Tehran, Iran, and my PhD in Biomedical Engineering from the University of Calgary, Canada. I completed my first postdoctoral fellowship at Center for Biomedical Imaging (CBI) in New York University Medical Center, and my second postdoctoral fellowship at Rotman Research Institute at Baycrest, Toronto, Canada. I joined the Department of Psychology at the University of Toronto in April 2016, to establish a new Neuroimaging research center and since then I am working there as an MRI physicist. Recently I joined Alberta health Services as an MRI physicist to establish a new Cancer Center in Calgary. My primary research interest is in the development of acquisition and processing methods and their applications to study human brain physiology, function, and connectivity.