



Invited Talk

A Statistical Method for Analysis of Simultaneous EEG-fMRI Reveals Dynamics of Attentional Networks

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Biography: Aslan obtained his middle and high school education in Allameh Helli. Then, he studied mechanical engineering at the [University of Tehran](#) and [University of Michigan](#) to obtain his bachelor and master degrees in 2009 and 2010, respectively. After graduation, he worked for two years and half at the University of Michigan on two projects related to the collective motion of cellular motor-proteins. In 2013, he was introduced to neuroscience by developing an image processing pipeline for the Brainbow images. After coming back to Iran in 2014, he has been working at IPM on the analysis of simultaneous EEG-fMRI data under the supervision of Prof. Soltanian-Zadeh.

Abstract: Attention is an active area of research in cognitive neuroscience. Separate neuroimaging techniques are not suitable to investigate attentional networks due to insufficient temporal or spatial resolution. To overcome this problem, a multimodal neuroimaging technique, simultaneous EEG-fMRI, is used to reveal the dynamics of attentional networks. This technique combines high temporal resolution of EEG with high spatial resolution of fMRI. The goal of the project is to develop a statistical method with less ad hoc assumptions which captures more information from our event-related auditory and visual oddball task data. We are hoping that the new method advances our knowledge about the temporal dynamics of attentional networks across the brain.

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