



An Overview of Independent Component Analysis of fMRI Data

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Date: Friday, October 12, 2007

Time: 2:00 – 3:00 pm

Place: COOK 3118 A&B

ABSTRACT:

My research project is aimed at finding whether or not there are significant blood flow changes in the brain, specifically the visual and motor cortex, when acupuncture therapy is applied. We propose that through statistical methods to be discussed herein, conclusions can be made about the validity of the aforementioned statement. It was first necessary for me to gain an understanding of basic acupuncture techniques, the basic principles of functional magnetic resonance imaging (fMRI) and its application and finally, independent component analysis (ICA) in order to carry out this research. This presentation will include a brief overview of the following items: acupuncture, fMRI, and ICA. I will then discuss the data that was obtained by Dr. Parrish and the programs used to manipulate the data, including the program used to perform the ICA. Finally, I will discuss the results of my analysis, problems encountered, and possible solutions.