BECS-114.5791 Brain Imaging Principles **EXAM**

2013-05-24

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1. MEG/EEG signals
   a. explain the neurophysiological basis of MEG/EEG signals (3p)
   b. discuss the factors that affect the amplitude of MEG signals at the sensors (3p)
2. Describe the physiological basis of BOLD fMRI (6p)
3. Compare and give examples of appropriate use of
   a. Block design vs. event-related experimental design (3p)
   b. Categorical vs. parametric experimental design (3p)
4. Define (by few sentences)
   a. Equivalent Current Dipole (ECD) in MEG/EEG source modeling (1p)
   b. Larmor frequency (1p)
   c. Gradiometer (1p)
5. Explain field spread and its effect on functional connectivity estimation in MEG (3p)