

# SOME PROBABILISTIC MODELS FOR BRAIN SIGNAL ANALYSIS

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In this talk, I discuss benefits of probabilistic modeling and Bayesian inference in fMRI brain signal analysis. As illustrative examples I consider the following: 1) modeling and removal of physiological noise in fMRI using DRIFTER, 2) characterization of topographical patterns of temporal cortex activity during perception of naturalistic audiovisual speech and music, 3) classification of emotional responses using videos as stimuli, 4) hyperclassification using shared representation of action execution and observation across two brains.