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Signal detection and spike sorting in noisy time series using higher criticism

Abstract

I will talk about a novel and robust method based on making use of higher criticism for detecting signals and sorting peaks in electrophysiological measurements of neuronal activities, which are accompanied with considerable noise. The method relies solely on the intrinsic statistical properties of the data and avoids any preprocessing, which prevents the loss of any invaluable information. This is join work with E. Mitricheva, R. Kimura, N. K. Logothetis and H. R. Noori.