



## COMPLEXITY ANALYSIS OF FUNCTIONAL NEAR-INFRARED SPECTROSCOPY SIGNALS (MonAmOR2)

### ★ Author(s) :

Koray Ciftci

(Bogazici University, Turkey)

Yasemin Kahya

(Bogazici University, Turkey)

Bülent Sankur

(Bogazici University, Turkey)

Ata Akin

(Bogazici University, Turkey)

### ★ Abstract :

The main hypothesis tested in this study is that cognitive activity causes a change in the complexity of functional near-infrared spectroscopy (fNIRS) signals. We calculated neural complexity (CN) of fNIRS signals obtained during oddball and mental arithmetic tasks. For control, data during a no task, eyes closed condition was also analyzed. We showed that cognitive activity causes a considerable increase in the complexity of the signals. We also present the time course of change of neural complexity during an experimental paradigm.