

1032-55-116

Ross E. Staffeldt* (ross@nmsu.edu), Department of Mathematical Sciences, MSC 3MB P.O. Box 30001, New Mexico State University, Las Cruces, NM 88003-8001. *Topology of EEG Data*. Preliminary report.

An EEG experiment typically collects measurements of electrical potential at up to 128 scalp locations and at sampling frequencies up to 1000 Hz, resulting in extremely large data sets. One hypothesis is that the data should show an alternation between synchronous and desynchronous activity. In this talk I want to report on results of searches for patterns of phase-clustering and phase-dissolution in data from certain EEG experiments. Topological methods are used to show phase-clustering and transitions of dynamics. (Received August 17, 2007)