Video submissions

Network analysis in quantitative encephalography

André Fonseca

Universidade Federal do ABC (São Bernardo do Campo). São Paulo, Brazil. andre.fonseca@ufabc.edu.br

Dear all,

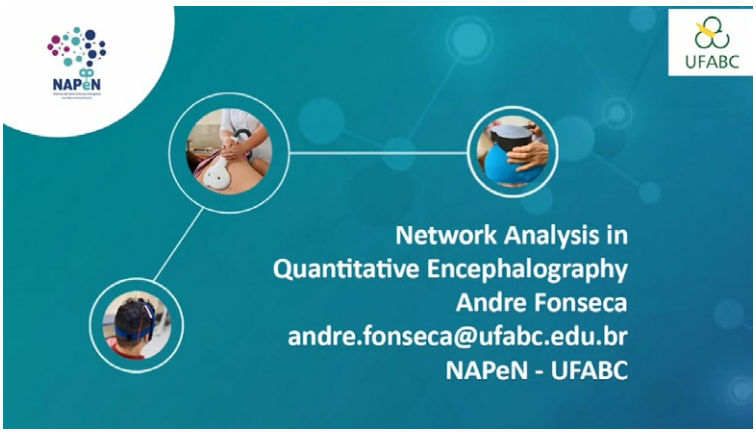
This is a technical video on hands-on format introducing the concepts of neural connectivity and complexity measures with applications to neurostimulation assessment, based on brain network analysis.

The scientific relevance of this submission is the introduction of the small-world parameter, a graph complexity measure considered as a biomarker of brain disorders and used to validate neurostimulation therapies. The small-world is a technical network feature but addressed in this presentation as a brain network efficiency measure, in a concise and assertive way, not common in the literature.

The narrative is didactic and accessible to researchers from several fields, suitable for professional and educational applications, allowing the generalization of the addressed techniques.

The presentation summary is: connectivity matrix, functional connectivity, effective connectivity, adjacency matrix, graph, nodes, edges, clustering coefficient, shortest path length, small-world, hypothesis test.

Figure 1. Network Analysis in Quantitative Encephalography



Available from (Video 1): https://youtu.be/HcWZmEjLIKY

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Competing interests

No financial, legal or political competing interests with third parties (government, commercial, private foundation, etc.) were disclosed for any aspect of the submitted work (including but not limited to grants, data monitoring board, study design, manuscript preparation, statistical analysis, etc.).

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