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Suppression of anomalous synchronization and nonstationary behavior of neural network under small-world topology

B.R.R. Boaretto, R.C. Budzinski, T.L. Prado, J. Kurths, S.R. Lopes

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Highlights

- A Hodgkin-Huxley like network of thermally sensitive neurons, in a small-world topology is studied.
- For weak coupling regime, suppression of anomalous synchronization and nonstationary behavior are obtained.
- Experimental protocols to suppress anomalous synchronization such as external stimulus are considered.
- Kuramoto's order parameter and recurrence quantification analysis are employed to quantify phase synchronization and nonstationary behavior of the time series.

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