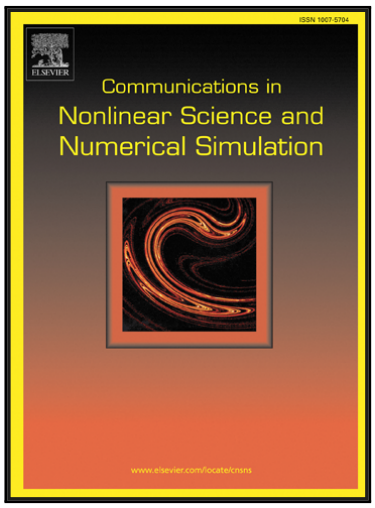


# Predicting seizure by modeling synaptic plasticity based on EEG signals - a case study of inherited epilepsy

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**Highlights**

- We make data processing of a clinical EEG record from an inherited epilepsy patient and analyze the correlation of each EEG channels for some episodes;
- We modify a reasonable epilepsy model based on the clinical EEG data;
- The behavior of model EEG and the clinical EEG match well, such as synchronization and frequency;
- Robustness of our model is verified, including different connected structures;
- Synaptic plasticity and excitatory signals are found to affect the seizure duration.