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Strong following earthquake forecasting by a pattern recognition approach in California

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During seismic clusters, strong earthquakes (e.g. the mainshocks) are sometimes followed by another strong following earthquake, very dangerous because it strikes already damaged structures. To forecast the occurrence of such subsequent large earthquakes (SLE), we proposed a pattern recognition approach based on seismological features. The method, called NESTORE, has been successfully applied to northeastern Italy and western Slovenia (Gentili and Di Giovambattista, 2020) and to all of Italy (Gentili and Di Giovambattista, 2017). In this study, we will present the results of the application of NESTORE to California seismicity. NESTORE method is adaptive and depends on the region analyzed. During the supervised training phase, some features are selected as the best-performing ones in the analyzed area, which will be used for classification. Tests of this method demonstrate good performance for California seismicity.