



Nonlinear analysis of the dynamics in the Mexican Pacific seismic region by using visual recurrence plots.

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The subduction in the Mexican South Pacific coast might be approximated as a subhorizontal slab bounded at the edge by the steep subduction geometry of the Cocos plate beneath the Caribbean plate to the east and of the Rivera plate beneath North America to the west. It has been reported a study that takes into account the geometry of the subducted Rivera and Cocos plates beneath the North American lithosphere defining, according their geometry, four regions: Jalisco, Michoacán, Guerrero and Oaxaca. By means of the visual recurrence analysis (VRA), in this work we study some dynamical features of the seismicity occurred for each region. Our analysis shows interesting differences among the recurrence plots of each region indicating a possible correlation between the subduction geometry and the nonlinear dynamical properties of each region.