Functional networks in earthquakes

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Recent work has shown that disparate systems can be described as complex networks, that is, assemblies of nodes and links with nontrivial topological properties, examples of which include technological, biological and social systems. Among them, earthquakes have also been studied from this perspective. In the present work, we divide the seismic region in cells, and calculate the correlation of activity between them to create functional networks for the seismic region. We show that, depending on the discretization intervals chosen, both in space and time, the obtained networks have different behaviors, related to the underlying physics.