



Modelling the seismicity as weighted complex networks

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In previous works we modelled the seismic clusters near the Itoiz dam as Boolean complex networks. The properties of those networks characterised them. In this work we model the clusters as weighted complex networks, where the links are not Boolean, but have a number that represents the distance between the nodes. This distance is given by the ETAS (Epidemic Type Aftershock Sequence) model. We calculate the node strength, the weight distribution, the averaged path length and the weighted clustering coefficient for all the clusters obtained from the declustering algorithm, and compare them. There seems to be two groups, one around the September 18, 2004, a 4.6 mbLg (magnitude derived from surface amplitude) earthquake and another the remaining seisms.