

A Modified Earthquake Model Based on Generalized Barabási-Albert Scale-Free Networks

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Abstract: A modified Olami-Feder-Christensen model of self-organized criticality on generalized Barabási-Albert (GBA) scale-free networks is investigated. We find that our model displays power-law behavior and the avalanche dynamical behavior is sensitive to the topological structure of networks. Furthermore, the exponent τ of the model depends on b , which weights the distance in comparison with the degree in the GBA network evolution.

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Key words: self-organized criticality, avalanche, GBA scale-free networks

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