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Social inertia in collaboration networks JOSE J. RAMASCO, Emory University, STEVEN A. MORRIS, Oklahoma State University — This work is a study of the properties of collaboration networks employing the formalism of weighted graphs to represent their one-mode projection. The weight of the edges is directly the number of times that a partnership has been repeated. This representation allows us to define the concept of *social inertia* that measures thetendency of authors to keep on collaborating with previouspartners. We use a collection of empirical datasets to analyze several aspects of the social inertia: 1) its probability distribution, 2) its correlation with other properties, and 3) the correlations of the inertia between neighbors in the network. We also contrast these empirical results with the predictions of a recently proposed theoretical model for the growth of collaboration networks.

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