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Origins of jamming in the zero-temperature dynamics of the Sherrington-Kirkpatrick model PAUL EASTHAM, University of Cambridge, RICHARD BLYTHE, University of Edinburgh, ALAN BRAY, MIKE MOORE, University of Manchester — We consider zero-temperature dynamics of the Sherrington-Kirkpatrick spin-glass model. Such dynamics consistently converges to an energy above that of the ground state. We argue that this jamming cannot be explained solely by the presence of large numbers of metastable states. We elucidate the origins of the jamming by modelling the dynamics as a Markov process in the single-site energies. We discuss the features of this process which cause the jamming, and present an approximate derivation of the dynamics that captures these features.

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