Title:	Taming Explosive Growth through Dynamic Random Links
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Abstract:	We study the dynamics of a collection of nonlinearly coupled limit cycle oscillators relevant to a wide class of systems, ranging from neuronal populations to electrical circuits, over network topologies varying from a regular ring to a random network. We find that for sufficiently strong coupling strengths the trajectories of the system escape to infinity in the regular ring network. However when a fraction of the regular connections are dynamically randomized, the unbounded growth is suppressed and the system remains bounded. Further, we find a scaling relation between the critical fraction of random links necessary for successful prevention of explosive behavior and the network rewiring time-scale. These results suggest a mechanism by which blow-ups may be controlled in extended oscillator systems.
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