

Phase transitions, scale invariance and criticality in self organized systems

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Symmetry methods have been of crucial importance to physics. Group theory and conservation laws have become a fundamental language, all the way from quantum mechanical phenomena to general relativity. However, these ideas have had less impact in the biological domain. In this talk I present a view of self organized biological systems as characterized by and evolving towards critical points, in the language of phase transitions in physical systems. Self similar (or scale invariant) behavior seems to signal homeostatic dynamical equilibrium in living organisms.

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