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NOISY NONLINEAR SYSTEMS

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During the one-year period 2004-2005 our work continued to focus on nonlinear noisy systems, with special attention to *spatially extended* systems. There is a history of many decades of research in the sciences and engineering on the behavior of nonlinear noisy systems, but only in the past ten years or so has a theoretical understanding of spatially extended systems begun to emerge. This has been the outcome of a symbiosis of numerical simulations not possible until recently, laboratory experiments, and new analytic methods.

PUBLICATIONS THAT ACKNOWLEDGE THIS GRANT

1. Sorting on Periodic Surfaces, A. M. Lacasta, J. M. Sancho, A. H. Romero, and Katja Lindenberg, Phys. Rev. Lett. **94**, 160601 (2005).
2. Generation of Dynamic Structures in Nonequilibrium Reactive Bilayers, R. Reigada, J. Buceta, and K. Lindenberg, to appear in Phys. Rev. E.