Rachel Kuske

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Will present the Fifth
Virginia L. Chatelain Memorial Lecture

Title of Talk:

"Transients + Instabilities + Noise = Structure?"

Thursday, September 27, 2007
2:30 PM
1014 Throckmorton Hall
Kansas State University
Manhattan, Kansas

All are invited

Transient or unstable behavior is often ignored in considering long-time dynamics in the deterministic world. However, stochastic effects can change the picture dramatically, so that the transients can dominate the long-range behavior. Coherence resonance is one relatively simple example of this transformation, and we consider others such as noise-driven synchronization in networks, disease dynamics in vaccinated populations, and amplitude-driven phase dynamics. The challenge is to identify common features in these phenomena, leading to new approaches for other systems of this type. Some recurring themes include the influence of multiple time scales, cooperation of both discrete and continuous aspects in the dynamics,and the remnants of underlying bifurcation structure visible through the noise.

Rachel Kuske, August 24, 2007

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