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Masoud Yari* (masoud.yari@tamucc.edu), school of engineering and computing sciences, Texas A&M University Corpus Christi, Corpus Christi, TX 78412. *Phase Transition analysis of RD/RDA systems.*

Spatial-bifurcation analysis of time-dependent PDE systems is a suitable method for identifying steady-state bifurcated solutions. It also gives itself more easily to computational tools of bifurcation analysis. By taking this approach, however, we lose many important temporal qualities of the system.

In this talk I will present a spatiotemporal analysis of RD/RDA systems that enables us to identify not only the final steady state solutions but also the missing transient states. I will provide a comprehensive picture of the system's local dynamics in appropriate parametric space where bifurcations happen. (Received September 15, 2014)