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Yuanwei Qi* (yqi@pegasus.cc.ucf.edu), 4000 central florida blvd, orlando, FL 32816. *Sharp estimates of minimum speed of travelling wave solutions to autocatalytic chemical reaction systems*. Preliminary report.

In this talk, I shall present some recent results on minimum speed of travelling wave solutions to a class of nonlinear diffusion systems arising in many real-world chain chemical reactions. By combining dynamical system approach and PDE techniques, substantially better results are established than what was obtained previously using invariant region method. (Received August 30, 2006)