

Stability of traveling waves in parabolic and partly parabolic systems

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Abstract.

This talk will be focused on the stability analysis of traveling waves such as fronts and pulses with marginally stable rest states. In parabolic systems, the main issue is related to the absence of the spectral gap. In partly parabolic systems where some of the participating quantities do not diffuse, an additional issue is that the semigroup generated by the linearization of the system about the wave is not analytic. I will describe a class of systems for which both of these issues can be resolved. This talk is based on joint work with Yu. Latushkin and S. Schechter.