Talk announcement

Fredi Tröltzsch

(TU Berlin)

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Optimization of time delays in semilinear parabolicequations

We consider semilinear parabolic delay differential equations, where time delays occur in different ways, discrete or continuously. Delays and associated weights are the subject of optimization and stabilization. In the most general case, the delays are generated by regular Borel measures. An existence and uniqueness theorem for such delay equations and the differentiability of the mapping is discussed that associates the solution of the delay equation to the measure or to a vector of time delays. Optimization problems are discussed for nonlocal and local Pyragas type feedback laws. The issue of stabilization by Pyragas type feedback is briefly addressed. Several numerical examples are presented.