

Stabilization and control of PDEs: seminal results and recent extension

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Control of PDEs is about the action that one can have on the solution of a PDE through, for example, a source term in the interior of the domain or at the boundary. The goal is then to drive the solution to a prescribed state or close to it at a given time. Stabilization shares the same goal, yet for an infinite time horizon and in the case of a closed-loop: the action one has on the PDE is through a function of the solution itself. One could think for instance of a damping term for the wave equation.

In this talk, we shall review some seminal results and methods used to address these issues. Such methods vary from one equation type to the other: waves, Schrödinger, heat, etc... We shall also present some recent results that exploit these techniques.

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