



Einladung zum Oberseminar Dynamische Systeme und Kontrolltheorie

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Existence of Solutions to Control Problems of Semilinear Partial Differential Equations?

joint work with Eduardo Casas (Santander)

We study optimal control problems of semilinear elliptic and parabolic equations. A tracking cost functional, quadratic in the control and state variables, is considered. No control constraints are imposed. We prove that the corresponding state equations are well-posed for controls in L^2 . However, it is well-known that in the L^2 framework the mappings involved in the control problem are not Frechet differentiable in general, which makes any analysis of the optimality conditions challenging. Nevertheless, we prove that every L^2 optimal control belongs to L^∞ , and consequently standard optimality conditions are available.

Ort: Mathematik Ost, Seminarraum 01.003

Zeit: Freitag, 26.01.2024 14:00

Zu diesem Vortrag laden wir Sie herzlich ein.

gez. Sergey Dashkovskiy