Einladung zum Oberseminar Dynamische Systeme und Kontrolltheorie

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Stability and control for nonlinear systems of infinite and varying dimension

The concept of input-to-state stability (ISS) is indispensable for various branches of nonlinear control theory, such as robust stabilization of nonlinear systems, robust nonlinear observer design, nonlinear detectability, stability of nonlinear networks, etc.

We will discuss the recent developments in the input-to-state stability of distributed parameter systems: criteria of input-to-state stability in terms of weaker stability notions, coercive and non-coercive Lyapunov methods for analysis of ISS. Next, we present nonlinear small-gain theorems for stability analysis of nonlinear infinite networks.

We close this talk by discussing the perspectives which ISS brings for the analysis of systems of variable dimension.

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Zu diesem Vortrag laden wir Sie herzlich ein.

gez. Sergey Dashkovskiy