



Einladung zum Oberseminar Dynamische Systeme und Kontrolltheorie

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Fuzzy Prescribed-Time Control for Uncertain Nonlinear Pure Feedback Systems

This talk focuses on the fuzzy prescribed-time control problem for a class of uncertain pure feedback nonlinear systems. Firstly, a new prescribed-time stability lemma is extended, which plays a critical role in stability analysis. Unlike existing prescribed-time control algorithms, the controlled object has unknown nonlinear terms, and the assumption of satisfying a linear growth condition is removed. To compensate for these unknown factors, fuzzy logic systems are introduced. Based on the extended prescribed-time stability lemma, it is proved that the controller and all states of the system converge to the origin within a prescribed-time and remain there. Finally, the effectiveness of the algorithm is validated through a typical pure feedback model.

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Zu diesem Vortrag laden wir Sie herzlich ein.

gez. Sergey Dashkovskiy