



复旦大学数学科学学院
数学综合报告会

报告题目: **Nonsmooth Feedback Control of Nonlinear Systems with Time-Delay: A Dynamic Gain Based Approach**

报告人: Professor Wei Lin
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报告时间: 2016-07-20 星期三 11:00-12:00

报告地点: 光华东主楼 1801

摘要: This talk presents some recent results on global regulation of a class of uncertain nonlinear systems with time-delay. Under a homogeneous growth condition on the system nonlinearities, a delay-independent, non-smooth dynamic state compensator is constructed by developing a dynamic gain based design method. With the help of appropriate Lyapunov-Krasovskii functionals, it is shown that all the states of the time-delay nonlinear system can be regulated to the origin while maintaining global boundedness of the closed-loop system. Extensions of this result and some interesting corollaries are also discussed in the lecture. Benchmark examples are given to illustrate the effectiveness of the proposed dynamic state feedback controller.

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