

Mathematisches Institut  
der Universität Bayreuth

Prof. Dr. V. Aizinger    Prof. Dr. M. Bebendorf  
Prof. Dr. K. Chudej    Prof. Dr. L. Grüne  
Prof. Dr. A. Schiela

95440 BAYREUTH  
TEL: (0921) 55-3270  
TELEFAX: (0921) 55-5361

BAYREUTH, DEN 03. DEZEMBER 2019

## VORTRAGSANKÜNDIGUNG

Im Rahmen unseres gemeinsamen Oberseminars

„Numerische Mathematik, Optimierung und Dynamische Systeme“

spricht

**Herr Dr. Philipp Braun**

School of Electrical Engineering and Computing, University of Newcastle,  
Australia

am **Montag, 16. Dezember 2019**, 16 Uhr c. t. über das Thema

"Robust stabilizing controllers with avoidance properties for linear systems with  
nontrivial drift"

Abstract:

For linear and nonlinear dynamical systems, control problems such as feedback stabilization of target sets and feedback laws guaranteeing obstacle avoidance are topics of interest throughout the control literature. While the isolated problems (i.e., guaranteeing only stability or avoidance) are well understood, the combined control problem guaranteeing stability and avoidance simultaneously is leading to significant challenges even in the case of linear systems. In this talk we highlight difficulties in the controller design with conflicting objectives in terms of guaranteed avoidance of bounded sets and asymptotic stability of the origin. In addition, using the framework of hybrid systems, we propose a partial solution to the combined control problem for underactuated linear systems with nontrivial drift.

Der Vortrag findet im Gebäude NW II, S 82 statt.

gez. Lars Grüne