

Technikerstraße 13/7
A-6020 Innsbruck
Telefon: +43 512 507 6071 oder 6097

E-Mail: mathematik@uibk.ac.at
<http://www.uibk.ac.at/mathematik/>
Fax: +43 512 507 2920

MATHEMATIKKOLLOQUIUM

Das Institut für Mathematik lädt zu folgendem Vortrag ein:

Mauro Bisiacco
University of Padova, Italy

The dead-beat control problem in the behavioral approach: a new perspective

In this talk, the behavioral approach to discrete-time dynamic systems is considered, and the corresponding (dead-beat, in particular) control problem is formulated and analyzed in a detailed way.

A new approach (w.r. to the literature) to dead-beat control is motivated and discussed. The key concept is the possibility of controlling some variables by means of other ones and, based on this idea, a new definition of (zero-)controllability is introduced and its consequences discussed.

After a preliminary discussion, based on intuitive motivations and numerical examples, some definitions and theorems concerning with various controllability properties are given.

The concept of dead-beat controller is introduced and investigated, in its various aspects concerning admissibility, regularity, minimality, and feedback interpretation.

Finally, the problem of parametrizing all the dead-beat controllers of a given plant is (partially) solved, and a numerical example is proposed for showing the main difficulties (w.r. to the standard case) that make this problem still an open one.

Zeit: Mittwoch, den 14. September 2011 um 16:15 Uhr

Ort: Bauing.-Gebäude, Technikerstraße 13, HSB 7

Ulrich Oberst

Gäste sind herzlich willkommen!