

Kolloquium

Biomedizinische Technik und verwandte Gebiete

Sommersemester 2018

Mittwoch, 30. Mai 2018 17:00 – 18:30 Uhr

Professor Tarunraj Singh

Dept. of Mechanical and Aerospace Engineering, University at Buffalo

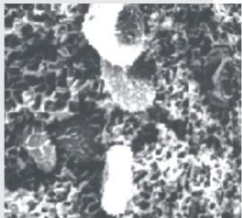
(Moderation: Univ.-Prof. Dr.-Ing. Dr. med. Dr. h.c. Steffen Leonhardt,
Lehrstuhl für Medizinische Informationstechnik (MedIT) im Helmholtz-Institut für
Biomedizinische Technik der RWTH Aachen)

Theodore von Kármán Fellowship, RWTH Aachen,
Seminar Announcement:

**„ Control in an Uncertain World: Artificial Pancreas – A Case
Study “**

ABSTRACT

Albert Einstein is known to have stated “As far as the laws of mathematics refer to reality, they are not certain, and as far as they are certain, they do not refer to reality”. This profound statement has impacted how one understands and models real-world systems. Comprehensive accounting of uncertainties (e.g., model, parameter, or input uncertainties) is paramount for characterizing and quantifying the uncertainties in the evolving outputs of systems. Such characterization of the uncertainties in the output permits forecasting, risk assessment of design and management of uncertainty. This lecture will consider the problem of controlling blood glucose in Type 1 diabetic patients as a case study to illustrate how uncertainty modeling and propagation can be used to design controllers which are robust to prescribed uncertainties.



Veranstalter: Direktorium des Helmholtz-Instituts für
Biomedizinische Technik der RWTH Aachen
Ort: Helmholtz-Institut für Biomedizinische Technik
der RWTH Aachen (Seminarraum 2.70)
Pauwelsstraße 20, 52074 Aachen
Koordination: Univ.- Prof. Dr.-Ing. Klaus Radermacher
Lehrstuhl für Medizintechnik, RWTH Aachen
Kontakt: meditec@hia.rwth-aachen.de; Tel.: +49-(0)241-80 23870