UNIVERSITÄT PASSAU
Fakultät für Informatik und Mathematik

EINLADUNG

Herr Prof. Dr. Fabian Wirth
lädt herzlich
zu folgendem Gastvortrag ein:

**Am Dienstag, den 12.07.2016
um 18.00 Uhr
im Hörsaal 13, Innstr. 33**

spricht

Professor Girish Nair
(Department of Electrical and Electronic Engineering
at the University of Melbourne in Australia)

über das Thema:

A Randomised Approach to Set Membership Filtering

Siehe Abstract

A Randomised Approach to Set Membership Filtering

Prof. Girish Nair
(University of Melbourne in Australia)

Abstract: A set membership filtering algorithm for nonlinear state estimation problems with bounded noise is presented. Inspired by the particle filter, which demonstrates excellent performance in Bayesian filtering problems, the proposed algorithm uses a set of random samples for recursively estimating the feasible solution set of the state vector over a period of time. The proposed algorithm can be efficiently applied to multidimensional nonlinear filtering problems and it offers higher flexibility and scalability compared to existing set membership filtering techniques. Theoretical analysis using the theory of random closed sets proves the weak convergence of the proposed algorithm under reasonable conditions. (Joint work with Dr. Pei Hua Leong)

Speaker biography: Girish Nair was born in Malaysia and is currently a professor in the Department of Electrical and Electronic Engineering at the University of Melbourne in Australia. He has previously held visiting positions at Università di Padova, Italy, Boston University, USA, and ETH Zurich, Switzerland.

He has received several prizes, including the IEEE CSS Axelby Outstanding Paper Award in 2014, a SIAM Outstanding Paper Prize in 2006, and the Best Theory Paper Prize at the UKACC Int. Conf. Control, Cambridge University, 2000.