



MECHANICAL ENGINEERING SEMINAR

Wednesday, June 8, 2022 at 12:45, D. Dan and Betty Kahn Building, Auditorium 1

"Challenges in Cooperative and Automated Vehicles"

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Hosted by: Prof. Alon Wolf, Dean and Prof. Oded Gottlieb

This presentation focusses on the contributions that have, among others, resulted from the Dutch I-Cave program. I-Cave stands for Integrated Cooperative and Automated Vehicles and is an academic research program that aims at a variety of aspects emerging from the development of a full-size automated vehicle. I will discuss general aspects regarding computer vision and (radar) localization, software architecture, human machine interaction aspects, demonstrator vehicles, and finally control aspects for automated and cooperative vehicles. A basic question in this regard is to what extent software architecture of a cooperative vehicle can be one to one used in an autonomous vehicle or not. I will also discuss recent experiments for cooperative adaptive cruise control (C-ACC) using cellular networking technology (G5).

H.Nijmeijer & T.J.van der Sande The Future of Moving Forward, I-CAVE, 2021

Bio: Henk Nijmeijer (1955) is a full professor in Dynamics and Control at the Department of Mechanical Engineering of the Eindhoven University of Technology. His research field encompasses nonlinear dynamics and control and applications thereof. He is a fellow of the IEEE since 2000 and was awarded in 1990 the IEE Heaviside premium. He is appointed honorary knight of the 'Golden Feedback Loop' (NTNU, Trondheim) in 2011. Since January 2015 he is scientific director of the Dutch Institute of Systems and Control (DISC). He is recipient of the 2015 IEEE Control Systems Technology Award and a member of the Mexican Academy of Sciences. He has been Graduate Program director of the TU/e Automotive Systems program in the period 2016-2021. He is an IFAC Fellow since 2019 and as of January 2021 an IEEE Life Fellow. He is Chief Field editor of the newly established journal Frontiers in Control Engineering. He chairs the Dutch Mechanical Engineering Council and is a core member of the ICMS with focus area 'Complexity and Soft Robotics'.