

Proposal of a half-day workshop on

Symbiotic Driving and Cross-Disciplinary Shared Control

Organizar: Prof. David A. Abbink, Delft University of Technology
Dr. Tom Carlson, University College London

Half-a-day tutorial for dissemination of the findings from my Symbiotic Driving project, which will end in fall this year and for which we recently did real-world experiments together with Nissan. I'd be honoured if I could organize the final scientific event at SMC. This includes lectures by me and my team, discussions, and an interactive demo session (if COVID allows), using a portable driving simulator which we are now constructed and plan to bring to make the workshop truly interactive.

Half-a-day workshop with several key international speakers (who use shared control for different application domains than automotive), to reflect on the automotive findings. We will use workshop techniques to generate discussions in the spirit of our Shared Control paper that aims to find common ground in diversity of application domains (e.g., robotics, intelligent wheel chairs, BMI). The workshop is highly interactive in nature, and will ideally take place physically, if safely possible. If the event is to be virtual, we will create an interactive virtual environment and use several pre-recorded movies to enhance communication and stimulate discussions and exchanges.

Information on Workshop Point of Contact

Name: David Abbink

Title: prof. dr. ir.

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Biography of the Workshop Point of Contact

Prof. dr. ir. David A. Abbink (1977) received his MSc. degree (2002) and PhD degree (2006) in Mechanical Engineering from Delft University of Technology. He is a full Professor at Delft University of Technology, leading the section of Human-Robot Interaction in the department of Cognitive Robotics. His research interests include system identification, neuroscience, haptic assistance, human factors, human-robot interaction and the impact of robotic systems on society. David was voted best teacher of his department for seven consecutive years, best teacher of his faculty twice, and received an international open courseware award for his course "The Human Controller". He has always worked 4 days a week, to ensure enough time for the other pleasures in life, such as drumming in rock bands, cooking, traveling and being a dad.

His PhD thesis on haptic assistance for car-following was awarded the best Dutch Ph.D. dissertation in movement sciences (2006), and contributed to the market release of Nissan's

Distance Control Assist system. David received two prestigious personal grants - VENI (2010) and VIDI (2015) and was co-PI on the H-Haptics programme, where 16 PhD students and 3 postdocs collaborate on designing human-centered haptic shared control for tele-robotics, across various application domain. His research on human-automation interaction has received funding from major industry partners such as Nissan, Renault, Boeing. David is a member of Human Factors and Ergonomics Society, IEEE SMC and is an IEEE senior member. He served as associate editor for IEEE Transaction on Human-Machine Systems, and IEEE Transactions on Haptics. He co-founded the IEEE SMC Technical Committee on Shared Control, which he chaired for many years.