

## PhD position on

# Control of evasive manoeuvres for automated driving

The [Delft Center for Systems and Control](#) (DCSC) of [Delft University of Technology](#) (TU Delft), The Netherlands is seeking qualified candidates for a four-year PhD position within the research area of

### Control of evasive manoeuvres for automated driving

#### Project description

Automated Driving is a promising but also challenging area of innovation in the automotive industry. Despite the recent advances in deep learning for automated driving, hazardous driving scenarios such as evasive manoeuvres are “edge cases” where learning methods are less effective because representative data are statistically rare. In this project we will tackle these edge cases by means of an integrated physics plus data-driven learning approach, especially exploiting recent advances in tyre/road sensing technology to gain real-time information on vehicle states (e.g. tyre forces) and road conditions. The ultimate goal of the project is to develop novel adaptive and pro-active control and robust trajectory planning approaches that can deal with such variable and non-nominal vehicle/road conditions. The position is motivated by a challenging practical problem, yet it requires a strong control-theory approach.

#### What do we ask?

We are looking for a candidate with an MSc degree in Systems and Control, Applied Mathematics, Mechanical Engineering, Electrical Engineering, or a closely related discipline, with a strong background in model-based control, adaptive control, hybrid systems, and/or machine learning. The candidate is expected to work on the boundary of several research domains. A good command of the English language is required.

#### What do we offer?

We offer the opportunity to do scientifically challenging research in a multi-disciplinary research group. This 4-year PhD position is funded within the NWO-TTW proposal EVOLVE (NWO 18484). Salary and benefits are in accordance with the Collective Labour Agreement for Dutch Universities, increasing from € 2395 per month in the first year to € 3061 in the fourth year.

#### How to apply?

Applicants should submit their application along with a detailed curriculum vitae, an introduction letter indicating their background and how it aligns with the position (around one page long), their BSc and MSc course programs and the corresponding marks, title and abstract of their MSc thesis, contact information for at least two academic references and all other information that might be relevant to their application, compiled into a single pdf file called ‘TUD00357\_YourLastName.pdf’, by email to [application-3mE@tudelft.nl](mailto:application-3mE@tudelft.nl)

When applying for this position, please refer to vacancy number TUD00357. Please note that applications may not be processed if all documents required are not compiled into a single pdf document.

The application deadline for the position is September 15, 2020. However, the position will stay open until a suitable candidate has been found. A first selection will be made based on the submitted material, and selected candidates will undergo a Skype interview.

More information on this position can be obtained from prof. Bart De Schutter (email: [b.deschutter -at- tudelft.nl](mailto:b.deschutter-at-tudelft.nl)) and prof. Simone Baldi (email: [s.baldi -at- tudelft.nl](mailto:s.baldi-at-tudelft.nl)).