

## FACULTY POSITION in Self-organizing control systems

### Delft Center of Systems and Control, Delft University of Technology, The Netherlands

The Delft Center for Systems and Control (DCSC) is aiming to strengthen, expand, and renew its international competences through new strategic recruitments sponsored by the Dutch Ministry of Education, Culture, and Science. We are looking for excellent candidates with a proven track record of ground breaking scientific research, a challenging and innovative research program, and a commitment to higher education. As part of this initiative, we are offering either a tenure-track assistant professor position for a period of 6 years, leading to a permanent position assuming excellent performance, or – depending on the current position, background, and expertise of the candidate – a tenured associate professor position.

The complexity of human engineered systems is reaching such high levels that traditional, manual based methods for analysing and controlling them are no longer applicable. This position aims to tackle the challenge of learning to control and/or monitor such complex systems from data. Scientific goals include determining how self-organization, adaptation/evolution, and fragility/resilience can be used to understand, monitor and control such complex systems. This fundamental framework makes it possible to develop control and monitoring systems for demanding industrial application fields such as large-scale mechatronic systems, dynamic positioning systems, ocean and wind energy harvesting systems.

This position is located in the Data Driven Control section within DCSC. Within this section of DCSC the focus is on the analysis and decision making for large-scale (in size) multi-disciplinary dynamical systems. It addresses the question about what model complexity is necessary for all individual system components in order to use data-driven models for reliable and robust model based diagnostics, parameter estimation, monitoring and control.

Cooperation with other members of the scientific staff and establishing relationships with practitioners are important. Moreover, you will contribute to teaching at the MSc and BSc levels. Every new Assistant Professor will be given a Tenure Track position. This process leading up to a permanent appointment with the prospect of becoming an Associate or full Professor, offers young, talented academics a clear and attractive career path. During the Tenure Track, you will have the opportunity to develop into an internationally acknowledged and recognised academic. We offer a structured career and personal development programme designed to offer individual academics as much support as possible.

### Applicants should have the following qualifications:

Applicants should possess the following qualification and attributes:

1. A Ph.D. degree in Systems and Control, Electrical Engineering, Physics, Applied Mathematics, Computer Science or another relevant engineering discipline, with an outstanding scholar record and a strong commitment to excellence in research and teaching.
2. Fundamental knowledge of control systems theory and/or system identification.
3. The capacity to communicate effectively with peers, students and stakeholders in the application field
4. An excellent track record in scientific publications, acquisition and management of externally funded research projects, and a clear view on required future developments, aiming at a high degree of sustainability in the application field, and have experience as a post-doctoral researcher.
5. Fluency in English and the willingness to learn Dutch within three years.
6. An open personality and good communication skills in written and spoken English.

**For more information on the content of the position please contact:**

Prof. Jan-Willem van Wingerden  
J.W.vanWingerden@tudelft.nl

## Conditions of employment

The tenure-track position is offered for six years. The section leader, department leaders and the successful candidate will agree upon expected performance and (soft) skills. Formal feedback on performance and skills will be provided during annual assessment meetings and the mid-term evaluation. Based on the performance indicators agreed upon at the start of the appointment, a decision will be made by the fifth year whether to offer a permanent faculty position. If the performance and skills are evaluated positively at the end of the tenure track, a permanent Assistant Professor position will be offered.

TU Delft offers a customizable compensation package, a discount for health insurance and sport memberships, and a monthly work costs contribution. Flexible work schedules can be arranged. An International Children's Centre offers childcare and an international primary school. Dual Career Services offers support to accompanying partners. Salary and benefits are in accordance with the Collective Labour Agreement for Dutch Universities.

TU Delft sets specific standards for the English competency of the teaching staff. TU Delft offers training to improve English competency. Inspiring, excellent education is one of our central aims. If you have less than five years of experience and do not yet have your teaching certificate, we allow you up to three years to obtain this.

In accordance with the equal opportunity policy of Delft University of Technology female candidates are in particular invited to apply.

Faculty: Mechanical, Maritime and Materials Engineering (3mE)  
Department: Delft Center for Systems and Control (DCSC)  
Level: PhD degree  
Working hours: 32-38 hours per week  
Contract: Tenured  
Salary: €3637—€6738 per month gross

## Information and application

For more information about this position, please contact prof. dr.ir. Jan-Willem van Wingerden, [J.W.vanWingerden@tudelft.nl](mailto:J.W.vanWingerden@tudelft.nl).

To apply, please submit the following by e-mail to Irina Bruckner, [application-3mE@tudelft.nl](mailto:application-3mE@tudelft.nl), please refer to vacancy number 3mE19-45:

- 1) a detailed curriculum vitae that explicitly states your educational record, recent major achievements, list of publications,
- 2) a separate motivation letter stating why the proposed research topic interests you,
- 3) a vision on research and education, and
- 4) the names of three persons who could be contacted for a reference. and other information that might be relevant to your application.

The application deadline is 31th of August, 2019. However, the position will stay open until a suitable candidate has been found.