

# Assistant/Associate Professor AI-based Modeling, Signal Processing, and/or Control with Applications in Health

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**Challenge:** Harnessing and leveraging health data for analysis, interpretation, and decision making.

**Change:** Combining conventional, data-driven, and AI-based methods.

**Impact:** Drive the development of **advanced AI-based modeling, signal processing, decision making, and/or control methods for health applications**

## Job description

Personalized and AI-driven health care has the potential to enrich people's lives in an extraordinary manner. To get there, we need to gain an in-depth understanding of and insight in massive amounts of health data. As an Assistant or Associate Professor at the Delft Center for Systems and Control (DCSC) of Delft University of Technology (TU Delft) you will conduct fundamental research on novel modeling, signal processing, and/or control methods for analysis, data mining, and interpretation of health data or for decision making in health care. You will be developing innovative models, data-driven algorithms, and/or machine learning-based approaches with the goal of profoundly impacting health care applications, which can include e.g. improved diagnostics, predictive medicine, and advanced AI-driven control to improve health care.

You are expected to define and develop an innovative research program, and to attract funding from the Dutch Research Council (NWO), EU funding organizations, or the health care industry. You will be building your own team of PhD candidates and postdocs whom you will supervise and coach to become successful and independent researchers. To expand your network, you will play an active role in relevant communities and organizations, such as Convergence Health & Technology and Medical Delta. Furthermore, education is a key part of your role, as you will teach at the BSc and MSc level, and supervise BSc and MSc thesis projects.

At DCSC you will be joining a highly motivated, international team of 26 professors, and our growing group of postdocs and PhD candidates. We offer you an open, friendly, and highly supportive environment, in which you will get all the training and coaching you need to successfully develop your academic career. We do not distinguish between hierarchical levels and we have a strong collaborative culture, in which we interact on a daily basis. Sharing a drive to strengthen the position of DCSC as a whole, we combine and harness TU Delft's expertise in systems and control.

## Requirements

You thrive on taking the lead in developing impactful research geared to processing and analyzing data in a medical context, and using it for improved decision making for health care and personalized health. Leveraging your communication and networking skills, you convince stakeholders of your proposals and work towards solid team results. Moreover, you enjoy teaching, mentoring, and interacting with students.

Besides you have:

- A PhD in Systems and Control, Electrical Engineering, Physics, Applied Mathematics, Computer Science, or another relevant engineering subject.
- Previous experience in health-related applications.
- An outstanding track record in conducting innovative academic research, demonstrated by the ability to publish in leading international journals.
- A good command of written and spoken English, as you will be working in an international academic and medical community.

## Conditions of employment

The position is at the level of assistant professor (Academic Career Track) or associate professor, depending on background, experience and leadership (potential).

### *Assistant Professor*

During the Academic Career Track, we expect you to grow towards an Associate Professor position within a maximum of eight years, for which a position will be available. With other Academic Career Track colleagues, you will participate in the Academic Career Track Development programme, where you are offered ample opportunities to develop yourself in the areas of Education, Research, Societal Impact & Innovation, and Leadership & Organisation. You will regularly discuss your development and results with senior staff based on a personalized development and performance criteria agreed upon at the start of your Academic Career Track. You will start with a temporary contract that will be converted to a permanent contract no later than 12 -18 months after a positive evaluation, based on continuous confidence in your development potential and fit in the organisation.

Salary scale 11-12: €4.332,-- to € 6.737,-- per month gross.

### *Associate Professor*

For an Associate Professor position, we offer an initial temporary position with the prospect of a permanent contract. The duration of the temporary position is a maximum of 1 year. After a positive performance assessment, you will be employed in a permanent Associate Professor position.

Salary scale 13-14: € 6.002,-- to € 8.025,-- per month gross.

Salary and benefits are in accordance with the Collective Labor Agreement of the Dutch Universities, plus 8% holiday allowance and an end-of-year bonus of 8.3%. Besides the salary, TU Delft offers the following:

- An excellent pension scheme via the ABP.
- The possibility to compile an individual employment package every year.
- Discounts with health insurers.

## TU Delft (Delft University of Technology)

Delft University of Technology is built on strong foundations. As creators of the world-famous Dutch waterworks and pioneers in biotech, TU Delft is a top international university combining science, engineering and design. It delivers world class results in education, research and innovation to address challenges in the areas of energy, climate, mobility, health and digital society. For generations, our engineers have proven to be entrepreneurial problem-solvers, both in business and in a social context.

At TU Delft we embrace diversity as one of our core [values](#) and we actively [engage](#) to be a university where you feel at home and can flourish. We value different perspectives and qualities. We believe this makes our work more innovative, the TU Delft community more vibrant and the world more just. Together, we imagine, invent and create solutions using technology to have a positive impact on a global scale. That is why we invite you to apply. Your application will receive fair consideration.

Challenge. Change. Impact!

## Faculty Mechanical Engineering

From chip to ship. From machine to human being. From idea to solution. Driven by a deep-rooted desire to understand our environment and discover its underlying mechanisms, research and education at the ME faculty focusses on fundamental understanding, design, production including application and product improvement, materials, processes and (mechanical) systems.

ME is a dynamic and innovative faculty with high-tech lab facilities and international reach. It's a large faculty but also versatile, so we can often make unique connections by combining different disciplines. This is reflected in ME's outstanding, state-of-the-art education, which trains students to become responsible and socially engaged engineers and scientists. We translate our knowledge and insights into solutions to societal issues, contributing to a sustainable society and to the development of prosperity and well-being. That is what unites us in pioneering research, inspiring education and (inter)national cooperation.

Click [here](#) to go to the website of the Faculty of Mechanical Engineering. Do you want to experience working at our faculty? These [videos](#) will introduce you to some of our researchers and their work.

## Additional information

If you would like more information about this position, please contact Prof. Bart De Schutter, email: [b.deschutter@tudelft.nl](mailto:b.deschutter@tudelft.nl).

## Application procedure

Are you interested in this vacancy? Please apply before August 5, 2024 via the application button and add the following documents to your application: :

1. Motivation letter.
2. Detailed CV, including a list of publications.
3. Research statement.
4. Teaching statement.
5. Electronic copies of two of your most relevant scientific papers.
6. Names and contact information of three relevant references.

After the first selection, the process foresees online interviews at in the weeks of August 19 to September 6, followed by site visits for successful candidates. The interviews at TU Delft will take place in Fall 2024.

If you would like more information about the selection procedure, please contact our HR advisor at [recruitment-ME@tudelft.nl](mailto:recruitment-ME@tudelft.nl).

Please note:

- A pre-employment screening can be part of the selection procedure.
- You can apply online. We will not process applications sent by email and/or post.
- Please do not contact us for unsolicited services.

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