

## PERSONAL INFORMATION



## Dennis Benders

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Gender Male | Date of birth 01/11/1997 | Nationality(-ies) Dutch

## WORK EXPERIENCE

2021 – Present

### PhD Cognitive Robotics

Delft University of Technology, Delft

*Research topic:* Safe Model Predictive Control on drones

*Ancillary activities:* PhD representative in department, supervisor of bachelor and master students, mentor of master robotics students

*Topics of interest:* Model Predictive Control, software engineering, sustainability

2017 – 2018

### Student coordinator Study Choice Check Electrical Engineering

Delft University of Technology, Delft

The Study Choice Check (SCC) is meant to provide high school students more in dept information about the study. The student coordinator of the SCC has the following tasks:

- taking care of the communication from university to student for the SCC days of the study Electrical Engineering
- guiding the students at the SCC days
- designing the SCC online course

2016 – 2017

### Student mentor

Delft University of Technology, Delft

A student mentor is assigned to a group of students to provide a confidential atmosphere and help them in the early phase of the study:

- guiding students during their first days at the university
- organising weekly meetings to discuss recent topics and students' study progress
- being a continuously approachable person in case students encounter difficulties

2014 – 2015

### Helping student

Krimpen aan den IJssel

Working as a helping student, who is available to help other people in society. This includes functions, such as:

- tutoring of high school students
- garden maintenance

2011 – 2015

### Ancillary functions

Krimpen aan den IJssel

Other functions performed are listed below:

- summer job at a construction market (2015): refilling and scanning stock
- "students help students" (2012 – 2015): tutoring of students coming from Krimpenerwaard College (once a week)
- korfbal trainer (2011 – 2015): training (twice a week) and coaching (once a week) a group consisting of 6-10 children at the age of 7-11 years old. This also includes taking care of the communication with parents
- trust pupil (2011 – 2013): being available to students coming from Krimpenerwaard College to listen and give advice in case they are having mental problems or just want to talk about something

## EDUCATION AND TRAINING

2018 – 2020

### Master Embedded Systems

Delft University of Technology, Delft

*Specialisation:* Systems and Control

*Graduation project:* Drone state estimation using brain-inspired parameter estimation theory

2015 – 2018

### Bachelor Electrical Engineering

Delft University of Technology, Delft

*Minor:* Responsible innovation

2009 – 2015

### High School VWO graduate

Krimpenerwaard College, Krimpen aan den IJssel

*Profile project:* "Solar scooter": adding a solar-powered electrical driveline to a normal scooter

## PERSONAL SKILLS

Mother tongue(s)

Dutch

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
German	B2	C1	B2	B2	B2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user  
Common European Framework of Reference (CEF) level

Communication skills

- team work: in teams (technical project teams as well as korfbal teams) I have always been the type of person who is really striving for good communication and interaction between everyone who is involved within the team and outside the team  
- mediating skills: as a trust pupil I was trained to lead discussions between people who were having problems with each other and to work towards a solution in a constructive way

Organisational / managerial skills

- when it comes to project work during my study, in most cases I am the one who takes the lead. This includes organising meetings, creating project plannings and working towards an atmosphere in which every team member is feeling comfortable

**Computer skills** The following skills are rated on a scale from 1 (basic level) to 3 (good level):

- programming languages: C/C++ (3), Python (3), ROS (3), Matlab (2), Java (1)
- tools: Microsoft Office (3), L<sup>A</sup>T<sub>E</sub>X (3), Git (3), GanttProject (1)
- operating systems: Windows (3), Linux (3)

**Driving licence** B, AM (2015)

## ADDITIONAL INFORMATION

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**Hobbies**

- sports: korfbal, running and ice skating
- music: drums and singing

## PUBLICATIONS

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**Pub1** Fred Bas, Ajith Anil Meera, Dennis Benders, and Martijn Wisse. Free energy principle for state and input estimation of a quadcopter flying in wind. In *2022 International Conference on Robotics and Automation (ICRA)*, pages 5389–5395. IEEE, 2022

**Pub2** Anastasios Tsolakis, Dennis Benders, Oscar De Groot, Rudy R. Negenborn, Vasso Reppa, and Laura Ferranti. Colregs-aware trajectory optimization for autonomous surface vessels. *IFAC-PapersOnLine*, 55(31):269–274, 2022