



# JOCHEM BROUWER

## Researcher Integrated Vehicle Safety

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Nationality: Dutch

## SUMMARY

"As a control engineer active in the field of applied vehicle control, I am fascinated by the things technology can achieve and want to be part of the innovation happening at this particular moment. The trainings I followed and experience I gained thusfar in my professional career gave me the opportunity to develop myself to the engineer I am right now. I am a technology freak with a broad basis and wide interests in learning and group processes, but a specific scope within control engineering."

## SKILLS

MATLAB	<div style="width: 100%;"><div style="width: 100%;"></div></div>
SIMULINK	<div style="width: 100%;"><div style="width: 100%;"></div></div>
Linux	<div style="width: 100%;"><div style="width: 80%;"></div></div>
MS Office	<div style="width: 100%;"><div style="width: 100%;"></div></div>
Scripts	C++, HTML, PHP, CSS

## LANGUAGE

Dutch	<div style="width: 100%;"><div style="width: 100%;"></div></div>
English	<div style="width: 100%;"><div style="width: 90%;"></div></div>
German	<div style="width: 100%;"><div style="width: 70%;"></div></div>
French	<div style="width: 100%;"><div style="width: 20%;"></div></div>

## EXTRA INFO

### Training

Introduction to project management (IPMA), Customer-oriented negotiations, Personal Integrity, Personal Effectiveness (MBTI, Behavioural Styles)

**Certificates** Scrum Master (PSM I), TNO test driver licence

**Hobby's** Tennis, Skiing, Sailing, DJ-ing, Piano, Shooting and editing photos and videos

## EXPERIENCE

**Nov 2018 - Present**  
Researcher  
TNO Helmond,  
Department of  
Integrated Vehicle  
Safety (IVS)

### RESEARCHER INTEGRATED VEHICLE SAFETY Control Systems Engineer

My work focusses on research and development as well as implementation and testing of in-vehicle systems for automated driving. I work with both conventional as well as emerging control techniques. Verification and validation is done in dedicated simulation environments (SIL and HIL) as well as our retrofitted prototype vehicles equipped with industry standard hardware.

### Team Lead Control and World Modeling

Responsible for the coordination, road mapping and operation of the control and world modeling team.

**Oct 2016 - April 2017**  
Internship  
Bosch Engineering  
Abstatt, Germany

### INTERN CHASSIS FUNCTION SOFTWARE

My work included expanding the used simulation environment for cross-domain system testing. This enables system developers to test system functionality and intersystem communication during the entire developing phase.

**June 2013 - Present**  
DJ and Co-Founder  
Partners in Shine

### DJ AND CO-FOUNDER

Since I left high school I started making music and mixing with a friend of mine. In 2013 we officially launched our DJ duo Partners in Shine.

## EDUCATION

**Sep 2015 - May 2018**  
Master of Science  
Systems and Control  
TU Delft

Electives: Vehicle Dynamics, Knowledge based control, 3D robot vision

**Sep 2011 - July 2015**  
Bachelor of Science  
Mechanical Engineering  
TU Delft

Minor: Sailing Yachts

### THESIS: DYNAMIC TRAJECTORY GENERATION FOR AUTOMATED MINI-BUSES, GRADE 8.5

Development of a model-based trajectory generator for 2getthere's four-wheel-steered minibus. The generator takes into account the surroundings and preferred nominal trajectory and computes a new optimal trajectory by solving a constrained optimal control problem that runs in the millisecond range.

### THESIS: IMPERFECT PACKING, GRADE 8.5

The goal of this thesis is to map the entire domain of particle fraction and ratio and its corresponding packing fraction using simulations. The final work was very appreciated by the supervisors, who published a paper based on our research.

## EXTRACURRICULARS

**Sep 2013 - Aug 2014**  
Fulltime Councilor  
TU Delft

### CENTRAL STUDENT COUNCIL

Elected as representative of 20,000 students at TU Delft  
Responsibilities: Library and IT management, Marketing and Communication and Marketing 2.0, Organization of research trip to Harvard University and Massachusetts Institute of Technology.