Royal HaskoningDHV
Enhancing Society Together

Curriculum Vitae

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Structural Engineer

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I am confident that a comprehensive collaboration between architecture and engineering significantly enhances design outcomes for our clients and the environment. With my knowledge of Structural Engineering and Computational Design, I facilitate this collaboration in my projects. Furthermore, a commitment to sustainable building design has been central to my work. I use my expertise in both computational design and sustainable building design to inspire my colleagues.

For my TU Delft master's thesis, I focused on this interdisciplinary approach by performing a multidisciplinary design optimization for timber high-rise buildings. One of the optimization criteria was the environmental impact of the building's structure, measured using shadow costs. As part of the company's sustainable design team, I gained valuable insights into sustainable structural design decisions and developed innovative tools to assess the sustainability of structures. This expertise enables me to propose more sustainable design alternatives for the client.

Degree
ir.

Years of experience
3

Years with Royal HaskoningDHV
3

Special skills
Sofware: Grasshopper, SCIA, Technosoft
Sustainable design,

Professional experience – a selection

OLVG-west hospital

> 2024 - present

This project focuses on the preliminary design of a multifunction hospital building.

- In this project I worked both as a computational designer and a structural engineer. I developed a parametric model using Grasshopper, which I utilized for structural calculations and could also export to Revit for generating structural drawings. Modifications to the parametric model led to real-time updates in both the structural model and the corresponding drawings in Revit.

Parametric Design Hands-on sessions

> 2023 – present

Monthly sessions are held to enhance parametric and computational design skills for structural engineers and modellers within the company.

- As the organizer and host, I am tasked with developing design assignments, delivering live demonstrations, and overseeing each session's proceedings.

ADE Sustainability Team

> 2022 - present

Research and development team focused on sustainability in structural design.

- A colleague and I developed the structural carbon tool, which calculates the embodied CO emissions of a structure based on user-defined building properties.
- A colleague and I developed the floor design tool that takes load and span inputs to calculate optimal floor types for concrete, timber, and steel systems. The tool provides users with the maximum span, thickness, weight, cost, and environmental score for each optimal floor type, offering valuable insights to help in selecting a suitable floor system.

Groninger Maatregelen Catalogus

> 2024 – now

The Groninger Maatregelen Catalogus is a website dedicated to strengthening measures designed for existing buildings in the Groningen area, subject to earthquake-induced loads.

- In my role for this project, I am responsible for updating and enhancing these strengthening measures, monitoring website updates, engaging with the community, and addressing specific requests from our client, the Nationaal Coordinator Groningen.
- A primary focus for the client is the integration of sustainability measures into the strengthening strategies.. For this, with the help of the team, I to develop an approach that incorporates these sustainability initiatives throughout the entire process of reviewing, designing, and applying measures to buildings.

Dag van de Constructeur 2024

> 2024

Annual event for structural Engineers with lectures hosted by VNConstructeurs.

- I contributed to the success of this event as a member of the organizational committee.

Smart Mobility Hub

> 2023

Mobility Hub featuring various sports facilities atop a two-storey parking garage.

- A structural model was created using SCIA-3D software, which enabled a structural analysis of the building, resulting in a comprehensive structural report.

INIT

> 2022

Preliminary design of renovation and repurposing of an office building. The new design contained a timber top-up construction and roof garden.

- In this design I re-evaluatied the existing structure with the new loads in accordance with NEN8700. This project required a distinct structural design approach due to its focus on renovation.

Pier A, Schiphol

> 2021-2022, Schiphol (NL)

Schiphol halted the construction of the Pier A building during the construction phase due to concerns about its quality. They have requested RoyalHaskoningDHV to assess the current condition of the building and review the original structural calculations prepared by a different engineering consultant.

- As the manager, I led a 10-person inspection team that used Snagstream software to thoroughly inspect all structural elements of the Pier A building, resulting in the generation of multiple comprehensive reports detailing the building's current state.
- I assisted in designing custom-made strengthening measures for failing connections.

Royal HaskoningDHV

- I used SCIA-3D software to create a structural model and performed a structural analysis of the building using this model.

Working experience - previous employers

Arcadis
> 2020-2021
- Master's Thesis internship

Betonson, Van Nieuwpoort prefab beton
> 2019-2020
- Calculator of concrete floors

TU Delft
> 2015-2016
- Student Mentor

Education

2018-2021 TU Delft, Master Building Engineering
2017-2018 Czech Technical University, Bachelor Architecture
2015-2018 TU Delft, Bachelor Civil Engineering