

Robbie van Leeuwen

STRUCTURAL ENGINEER · MSc CANDIDATE

2/51-55 Alt Street, Ashfield NSW 2131, Australia

☎ (+61) 401 740 617 | ✉ robbie.vanleeuwen@gmail.com | 🏠 robbievanleeuwen.github.io | 📱 robbievanleeuwen | 🌐 robbie-van-leeuwen

Education

Delft University of Technology

Delft, The Netherlands

MASTERS OF STRUCTURAL ENGINEERING (STRUCTURAL MECHANICS) *cum laude*

Sep. 2016 - Jun. 2018

- Placed first in the following courses: Timber and Timber Structures 1, Steel Structures 2, Probabilistic Design, Plastic Analysis, Structural Dynamics, Stability of Structures, Prestressed Concrete, Computational Modelling of Structures.
- Graduation Thesis titled 'A Multiphysics Numerical Framework for Epoxy Resins' awarded a 9/10.
- Overall Weighted Average: 9.1/10.
- Delft University of Technology was ranked 4th in the QS World University Rankings for Civil/Structural Engineering in 2018.

The University of Sydney

Sydney, Australia

BACHELOR OF CIVIL ENGINEERING (STRUCTURES) (HONS. I)

Mar. 2009 - Nov. 2012

- High distinction average, with a thesis investigating the crosswind loading and vortex shedding of a building with a unique profile that was inspired by the tubercles on a humpback whale's fin.

Experience

Partridge Structural

Sydney, Australia

DESIGN ENGINEER

Apr. 2013 - Jul. 2016

- Partridge is a medium sized consulting firm that practices in a range of disciplines and specialises in high-end residential projects. In my role as design engineer I was responsible for the detailed structural design and documentation of a variety of building projects including residential, multi-residential, event, commercial and public works.
- I have experience in the structural analysis and design of projects in the following sectors:
 - Unusual Structures
 - Residential Structures
 - Multi-Residential Structures
 - Public Infrastructure
- A portfolio showcasing a selection of my structural design work is available at <https://robbievanleeuwen.github.io>.

The University of Sydney

Sydney, Australia

UNIVERSITY TUTOR

Jul. 2010 - Jun. 2011

- I was a tutor for the second year subject CIVL2201: Structural Mechanics, and the first year subject ENGG1061: Advanced Engineering.
- As a tutor for CIVL2201 I was required to deliver a two hour tutorial to thirty students each week, in which I reinforced the coursework delivered in the lectures and assisted with tutorial questions and assignments.
- As a tutor for ENGG1061 I mentored six advanced engineering students by helping them to deliver a creative solution to an engineering problem.

The University of Sydney

Sydney, Australia

SUMMER RESEARCH SCHOLAR

Dec. 2010 - Mar. 2011

- I was awarded a scholarship to conduct research in a field of my choosing under the supervision of an academic in the School of Civil Engineering.
- In my research, titled 'Validation of the Cobra Probe', I devised a unique method for the calibration of the Cobra Probe anemometer.
- Following an extensive literature review I developed a LabVIEW calibration program, which facilitated the integration of the probe into the wind tunnel at the School of Civil Engineering.

Skills

Structural design

Finite element analysis of structures and structural connections, concrete detailing & design, steel detailing & design, timber detailing & design, glass detailing & design, composite detailing & design, cable detailing & design, foundations and retaining structures, strut and tie modelling.

Engineering software Programming

Strand7, SPACE GASS, RAPT, SLABS, Limcon, Microsoft Excel, AutoCAD, Rhinoceros & Grasshopper.
Python, MATLAB, L^AT_EX, VBA, C++, C# & Javascript

Honors & Awards

2016	Winner , Association of Consulting Structural Engineers NSW: Special/Unusual Projects	Sydney, Australia
2012	Prize , JW Roderick Prize for the Best Thesis in Final Year Civil Engineering	Sydney, Australia
2012	Prize , AS MacDonald Prize of the Association of Consulting Structural Engineers of New South Wales in Structural Engineering	Sydney, Australia
2012	Prize , DG Walkom Prize for First Class Honours in Civil Engineering	Sydney, Australia
2011	Prize , University of Sydney Academic Merit Prize	Sydney, Australia
2010	Prize , University of Sydney Academic Merit Prize	Sydney, Australia
2010	Prize , Civil Engineering Graduates Prize for Structures I and Structural Design I	Sydney, Australia
2010	Prize , Civil Engineering Graduates of 1950 Prize in Soil Mechanics	Sydney, Australia
2009	Scholarship , University of Sydney Entry Scholarship	Sydney, Australia

Other

Arbitrary Cross-Section Analysis in Python

GitHub Repository

DEVELOPER

Sep. 2017 - Nov. 2017

- Developed a finite element program to perform a cross-section analysis on an arbitrary cross-section.
- All relevant cross-section properties are calculated and a stress analysis is implemented.

Structural Engineering Blog

<https://robbievanleeuwen.github.io>

BLOGGER

Nov. 2015 - PRESENT

- Maintaining and updating a personal blog related to structural engineering and in particular, implementations of computational mechanics.

U-Profiel Committee

U-BASE, TU Delft

CHAIRMAN

Sep. 2017 - Apr. 2018

- U-Profiel is the official magazine of the United Building and Structural Engineering Association (U-BASE).
- As the chairman I am responsible for the management of the committee and all communication with internal and external parties.

Memberships

Current **Member of the Institute of Engineers Australia**, [MIEAust]

Current **Student Member of The Institute of Structural Engineers**, [StudIStructE]