Sebastian Reymert

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18.05.1995 | Eidsvolls gate 16, 7030, Trondheim, Norway
Citizenship: Norwegian | CV Updated: 8th October 2023

Education

PhD
Structural Engineering
Norwegian University of Science and Technology (NTNU)
Full-time, April 2019 to February 2023 | Trondheim, NO

MEng | First Class Honours
Aeronautical Engineering
Imperial College London (ICL)
Full-time, October 2013 to May 2017 | London, UK

Background

Wind Engineering • Aerodynamics • Numerical Analysis • Structural Analysis, Dynamics & Design • Vehicle Dynamics

Skills

Competencies
Instrumentation & Testing
Data Analysis & Visualisation
Signal Processing
Numerical Modelling
Project Management
Independent Research
Technical Presentation & Writing
Proposal Writing
Engineering Workflow Optimisation

Software
Simulink/Simscape • OrcaFlex • CAD (multiple) • FEA (multiple) • Illustrator • Office

Programming
MATLAB • Python • VBA • Fortran (Elementary) • LaTeX

Languages
English | First Language
Norwegian | Mothertongue
Dutch | Elementary

Interests

Triathlon • Skiing • Woodworking • Hiking

Relevant Experience

PhD Candidate, Researcher & Postdoc | NTNU
Full-time, April 2019 – Present | Trondheim, Norway
Field investigations of crosswinds and vehicle-driver response on bridges

- Characterisation of wind environment on Norwegian road bridges
- Planning & execution of full-scale studies (driving & measuring on bridges under strong crosswinds)
- Specification & setup of instrumentation (ultrasonic anemometer/pressure tappings/GPS/accelerometer/gyroscope)
- Processing wind and GPS data and plotting on topographical maps (includes manipulation of road map data and Digital Terrain Maps)
- Aerodynamic load identification using augmented Kalman filter (Simulink/MATLAB)
- Validation of load identification model
- Presentations at conferences on wind engineering
- Vehicle, driver and vehicle-bridge interaction (VBI) modelling (MATLAB)

Stress Engineer | Bristol Aero
Full-time, September 2017 – April 2019 | Bristol, UK

- Structural validation of aircraft interior components & compilation of stress reports
- Ideation and compilation of research grant proposals
- Development of Python and VBA tools with the FEMAP API to enable complex modelling as well as improve and automate internal procedures
- FEA, optimisation and hand calculations for aerospace, automotive and general engineering components
- Development of new modelling methodologies for materials processed by fused deposition modelling (3D printing)

MEng Degree Work | Imperial College London
2017 | London, UK
Final Year Project - *Design Optimisation of Variable Stiffness Composite Beams*

- Design and implementation of highly efficient adjoint/FE solver and optimisation method for FRP beams with curvilinear fibre paths and full anisotropic behaviour

Other Project Work

- Development of Blade Element Momentum (BEM) code and subsequent optimisation of blade geometry of wind turbine (MATLAB)

Mechanical Design Intern | Kongsberg Defence & Aerospace
Full-time, Summer 2016 | Kongsberg, NO

- Design for manufacture, machining, sheet metal work, wiring of electronics, general fabrication (foams, CFRP) & field testing of unmanned aerial vehicle

Computational Project | 4Subsea
Full-time, Summer 2015 | Hvalstad, NO
Implementation and testing of aerodynamic loading module in OrcaFlex

- Development of Python interface between a structural/hydrodynamics code (OrcaFlex) and wind turbine aerodynamics code, AeroDyn (Fortran)
- Enabled full dynamic multi-physics simulations of floating wind turbines