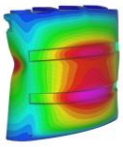
CIRRICULUM VITAE – EE SEONG LING (SEAN)



David Beneke Consulting

Finite Element Analysis for Engineering

NAME: **EE SEONG LING (SEAN)**
Graduate Structural Engineer/Analyst

DATE OF BIRTH: 28 May 2000

PROFESSION: Structural Engineer

QUALIFICATIONS: BE (First Class Honours), University of Sydney (Aeronautical Engineering).

KEY SKILLS: Finite Element Analysis; Structural Design

SUMMARY OF EXPERIENCE:

Sean Ling is a graduate structural analyst and engineer at David Beneke Consulting with expertise in Finite Element Analysis, Light gauge steel structures, Direct strength method, Ceilings and Claddings, Plastic Storage Tanks, Fastener testing, and Structural design. He obtained Bachelor degree in Aeronautical Engineering at The University of Sydney where he achieved First Class Honours.

EMPLOYMENT HISTORY:

05/2023 - Present **David Beneke Consulting Pty Ltd**
Graduate Structural Analyst/ Engineer

Finite Element Analysis (FEA)

- **Storage racking and Conveyor Supports**

  Undertaken the structural design checking on the serviceability and ultimate limit states of various storage racking configurations and logistic systems under dead, live and earthquake loadings. Undertaking non-linear geometric analysis to determine the percentage utilization of rack members and their connections. Projects undertaken include more than 20 racking systems around Australia for Schaefer, Bito, Stow and Vanderlande.

- **Other Projects**

  Conducted FEA assessments for a diverse range of structures including luminaire mounting brackets, steelwork for electrical switches, sheds and plastic storage tanks.

  Proposed strengthening methods for the abovementioned structures should their components exceed their serviceability and ultimate limit state capacity.

Structural Engineering

- Numerous projects involving claddings, weatherboards and ceilings designs for CSR, Weathertex and James Hardie.

- Formulation of various spreadsheets regarding the design capacities of claddings, weatherboards and ceilings.
- Quality assurance checks on technical spreadsheets involving building products.
- Formulation of test regimes for the tension and shear testing of plasterboards and claddings as well as pull-over pull-through tests for various nail and screw fasteners.
- Undertaken site inspections of numerous multi-storey steel storage racks, structural proof-testing of plastic and steel products and specimens.

12/2021 - 02/2022 **Junior Developer**
Precision Autonomy (Full-time internship)

- Learned object-oriented programming with TypeScript while operating an automated insurance underwriting platform for drones and autonomous devices.
- Performed various regression and integration tests on the automated platform while introducing new features.

06/2021 – 08/2021 **Research Intern**
University of Sydney School of Aerospace, Mechanical and Mechatronics Engineering (Full-time internship)

- Analyzed the fluid mechanics of inhalation drug delivery devices under the supervision of a senior lecturer and postgraduate advisor.
- Employed engineering software (ANSYS) for computational fluid dynamics (CFD), finite element analysis (FEA) and turbulence modeling.
- Learned aboyut research practices, routines and literature review in the biomedical field.

ENGINEERING PROJECTS:

2022

- **Honours Thesis** - Implementing a Generalized Dynamic Wake Model which is an analytical model that predicts the perpendicular velocity component of air that flows into a rotorcraft disc.
- **Participated in a client-based industry-level group project with an RFP on designing a UAV sonobuoy delivery system for the Australian Defence Force (ADF) -** Multiple engineering design reports produced, along with iterative design presentations with the client – RAAF Commander Keirin Joyce, and a final design presentation with other industry professionals. My role entails designing a mission for the UAV, validating a folding wing

mechanism design, making CAD models and working closely with every subsystem to ensure system integration and compliance with the RFP requirements.

2021

- **AIAA Design/Build/Fly (DBF) Competition -** Team member for the Structures subsystem comprising 12 people and working with 40 members in the Sydney UAV Engineering team in designing, building structural components. Proposal ranked 22 out of 127 in the world for 2021/2022 competition.
- **Tailplane Box Design and Construction -** Worked in a group of 8 people and an industry supervisor from Airbus (Dr Hugh Stone) in designing, constructing, and testing a tail plane box. Undertaken calculations of forces and moments, performing buckling validation for the wing skin, construction of the tailplane box, collecting deflection data and writing test reports.

2019

- **Jabiru J160 and Tailplane Construction –** Worked in a group of four to construct parts of the general aviation aircraft.

EDUCATION

2019 - 2023 **University of Sydney**
Bachelor of Engineering Honours (Aeronautical)

- First Class Honours.
- Dean's List of Excellence in Academic Performance 2020.
- Dalyell Scholar – Leadership courses for high Achieving Students

LANGUAGES

English - *Full Professional Proficiency*,
Malay and Mandarin - *Professional Working Proficiency*