Beverley YEO

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EDUCATION

Nanyang Technological University, Singapore

Master of Engineering (Mechanical & Aerospace Engineering)   *Expected Aug 2022*
Thesis: Investigating Galilean invariance assumptions applied to CFD

Bachelor of Engineering (Aerospace Engineering)   *Aug 2017 - Jun 2021*
CGPA: 4.37/5.00 (Honors with Distinction)
CN Yang Scholar, CNYSP Research Award (Gold), Dean's List AY19/20

WORK EXPERIENCE

Nanyang Technological University, Singapore
Project Officer, School of Mechanical & Aerospace Engineering (MAE)   *Jul 2021 - present*
· Perform transient CFD simulation of turbulent flows using OpenFOAM and Ansys Fluent.
· Implementation of transitional turbulence model with overset mesh in OpenFOAM.
· Validation of CFD with flow visualization and force measurements.

Project Manager Intern, School of MAE   *Sep 2020 - Apr 2021*
· Communicated and coordinated schedules of student participants, researchers and instructors.
· Analyzed data in MATLAB and Python and reported statistics obtained from research study.
· Built webapp using Node.js and SQL to automate participant attendance checking.

Temasek Laboratories @ NUS
Research Intern, Center for Aerodynamics & Propulsion   *Jun 2020 - Aug 2020*
· Performed CFD analysis and simulations of unsteady & transient flows using ANSYS Fluent.
· Generated meshes from CAD model and computed flow properties over various rotational flow.
· Professional Attachment Certificate of Distinction for excellent performance during internship.

ACADEMIC PROJECTS

On the flow behavior of confined vortex-rings   *Dec 2020 - Jun 2021*
Final-year project in fulfilment of Bachelor of Engineering requirement
· CFD simulations of vortex-ring behavior in confined domain
· Experimental validation of CFD simulations using dye flow visualization
· Investigation of wall shear stress and pressure induced by vortex-rings on confinement wall

System identification of VTOL UAV   *Jun 2019 - Jun 2021*
· Investigate possibility to reduce wind tunnel usage in aerodynamic analysis and determine
  aerodynamic coefficients from dynamic system response
· Develop least-square regression models combined with usage of MATLAB system identification
  toolbox to determine stability and aerodynamic coefficients from system's response

Investigating flow transitions in vortex-ring collisions   *Dec 2017 - Jul 2020*
CN Yang Scholars Programme undergraduate research
· Design & conduct of flow visualization experiments (planar laser-induced fluorescence, time-
  resolved particle-image velocimetry) to investigate vortex-ring collisions with surfaces
· Presented findings at 17th European Turbulence Conference and 15th Asian Symposium on
  Visualization, achieved Best Presentation Student Award at the latter
· First-author paper published in Journal of Visualization

Purdue University Senior Spacecraft Design - Project Escalator   *Jan 2020 - May 2020*
https://engineering.purdue.edu/AAECourses/aae450/2020/Spring 2020
· Numerical simulation and investigation of propellantless space propulsion technologies and
  cycler vehicle trajectories to and from Mars using MATLAB, Simulink and GMAT
· Investigate cycler vehicle dynamics and design of controller

SKILLS

Programming	MATLAB, C, C++, Bash, Python, Javascript, HTML, CSS, NodeJS, SQL
Software	SolidWorks, ANSYS Fluent, OpenFOAM, Photoshop, Illustrator, Excel
Technical	Arduino, 3D printing, soldering, wind & water tunnel testing
Languages	English (native), Mandarin (fluent), Korean (basic)
Others	Licensed laser operator (NEA N3 license)