Cillian Frawley

Offshore Wind Engineering Graduate

Email: cillianfrawley@gmail.com **Phone:** +353 85 117 2255 **D.O.B:** 22 / 11 / 2000

Summary

I am a motivated offshore wind engineering graduate, with a research master's in floating offshore wind turbine platform dynamics, seeking to apply and develop my skills gathered to date. College projects on tidal energy and floating wind energy devices have developed my skills and knowledge in the renewable energy sector. My experience as an intern laser research engineer and manufacturing engineer has equipped me to work effectively in technical environments, in diverse teams as part of international companies.

Education

2023-09 - 2024-09 **Civil and Environmental Engineering, Master of Engineering**

University College Cork, Ireland

- Undergoing a funded research masters in floating offshore wind energy in MaREI, Ringaskiddy.
- Thesis title: *Advancement of software in the loop system for current simulation in wave tanks*.

2019-09 - 2023-05 **Mechanical Engineering, Bachelor Of Engineering**

University of Limerick, Ireland

- First-class honour.
- Thesis title: *Optimisation of Turbine Design for Tidal Power*.

Work History

2022-05 - 2022-08 **Manufacturing Engineering Intern**

Microchip, Ennis, Ireland

- Verified compliance with customer specifications for electrical components through rigorous laboratory testing, with a particular emphasis on thermal resistance and life cycle assessments.
- Delivered comprehensive reports outlining the findings and conclusions derived from temperature testing to colleagues.
- Generated drawings of current machine fixtures and engineered prototypes utilizing SolidWorks.
- Utilized an Ultimaker Cura S3 printer to fabricate 3D printed prototypes and test fixtures.

2021-05 - 2022-01 **Laser Research Engineer**

Holst Centre - TNO, Eindhoven, The Netherlands

- Conducted experiments in Laser Induced Forward Transfer (LIFT) of conductive inks and pastes using a nanosecond UV laser in a clean room laboratory.
- Acquired knowledge in fluid mechanics, optics, and laser physics.

- Explored the correlation between experimental setup conditions and material flow properties.
- Successfully finished training programs in chemical and laser safety protocols.

Skills

Software

- Abaqus - FEA study of a bicycle frame under load.
- LaTeX - Report and presentation creation.
- MATLAB/Simulink - 2 DOF robot arm, cam/follower analysis, Turbine optimisation (FYP), SIL control (Master's).
- SIEMENS PLC - Pick and Place conveyor system design for a 2 DOF system.
- SolidWorks - Cam/Follower motion analysis, Vibration analysis of a cantilever beam, modelling for 3D printing, adhering to company drawing standards.
- NREL FAST - Tidal Turbine Analysis (FYP), Wind Turbine Analysis (Master's).
- Ansys Aqwa – Hydrodynamic simulation of Floating Offshore Wind Turbine (Master's).

Initiative

Founded and became team principal of Formula Student UL (FSUL) in January 2021. Managed a team of 40 members from varying courses and year groups, developing skills in team management, sponsorship, marketing, and organization.

Teamwork

From my involvement in FSUL:

- Facilitated weekly meetings, established sub-teams, and assigned students according to sign-up sheets and interviews.
- Enhanced interpersonal skills while recognizing the significance of clarity and clear objectives in sustaining team motivation and cohesion.
- Developed the capacity to adapt goals to optimize the utilization of each team's strengths and available resources.

Hobbies & Interests

- Electronics: Interested in Arduino programming, built an electronic lock for my bedroom using a circuit board, motor, and RFID scanner.
- Renewables: FYP in tidal turbines, pursuing a Master of Engineering in floating offshore wind platforms.
- Sports: Competitive cyclist (road, cyclocross) as well as enjoying multi-day trips. I enjoy the innovation and technical side of cycling as an engineer.