Loucas Panteli

EU/UK citizen | United Kingdom | LinkedIn

EDUCATION

University of Bath **Bath, UK**
MEng (Hons) Mechanical Engineering [5-year sandwich] **September 2020 - June 2025**
Key modules: Composites, CFD, Advanced Manufacturing, Design, Heat Transfer, Control Systems, Spacecraft Engineering
Final year project: Road vehicle drag reduction using wind tunnel testing
• **First Class Honours** (Grade: 72%)

Pascal English School Larnaka **Cyprus**
• High school diploma | **Grade:** 97.3% **September 2013 - June 2019**

WORK EXPERIENCE

Empel Systems Ltd **Milton Keynes, UK**
Graduate Development Engineer **October 2025 - Present**
• Performed 200+ end-of-line (EOL) dyno sign-offs on high-performance electric motors and inverters (up to 800V, 250+ kW) for high-end motorsport applications
• Automated the full sign-off process using Python, ABAX (dyno control) and Vector CANape (XCP), halving test time from 12 h to 6 h and enabling one engineer to run two test cells simultaneously (effectively 3 h per unit)
• Performed product development dyno testing to validate new hardware and software, including edge-case testing: created test plans, ran tests and investigated root causes of issues
• Developed Python tools for data post-processing and motor/inverter sensor calibration, reducing manual processing and cutting analysis time
• Supported customer track testing, international homologation testing and our end-of-line suppliers in creating production-line test sequences
• HV-authorised test cell operator

Arup **Bristol, UK**
Public Health Engineer (6-week Internship) **June 2024 - July 2024**
• Designed domestic water services and drainage systems schematics for Clothworkers' Hall (7-floor building) at RIBA stage 3
• Calculated domestic water and drainage pipe sizes and updated schematics for 42 Southwark Bridge Road (10-floor building) at RIBA stage 4
• Tagged drainage layouts and updated schematics for CiNER Glass Factory (50,000m^2 factory) at RIBA stage 4

Nissan Technical Centre **Cranfield, UK**
Wheels Design Engineer **August 2022 - September 2023**
• Proposed and led my own cost reduction project, resulting in annual savings of over €20,000
• Collaborated with cross-functional teams to support the design and development of new wheels
• Reviewed physical and FEA test reports, ensuring compliance with design specifications.
• Conducted in-house testing on wheel plastic inserts under high-speed conditions, providing durability and performance insights
• Studied the NVH performance of wheels and its effect on different rim profiles
• Developed a forecasting tool to predict wheel failures based on low-limit physical test data

Alambritis & Mpakaris Garage **Larnaka, Cyprus**

Assistant Mechanic **June 2021 - September 2021**

• Gained hands-on experience with car engineering principles and functionality

• Independently performed a full car service under supervision

Cyprus National Guard **Larnaka, Cyprus**

Corporal **August 2019 - September 2020**

• Achieved Corporal military rank, demonstrating leadership, critical thinking, and teamwork in high-pressure scenarios

• Responsible for the safety and performance of an 8-member unit in simulated wartime conditions.

PROJECT EXPERIENCE

Large road vehicle drag reduction *(Final year project)* **February 2025 - May 2025**

• Investigated the effectiveness of self-excited flags as a passive flow control device in reducing base drag of large road vehicles using wind tunnel experiments

• Designed and tested various flag configurations (length, thickness, placement) and vehicle ground clearances, analysing wake dynamics to optimise drag reduction

• Achieved 2-3% drag reduction and identified insights for further improvement in future research

CFD Simulation of a UAV *(University project)* **November 2024 - December 2024**

• Conducted a CFD study using Ansys CFX to assess the impact of dimple wing modifications on UAV performance

• Performed mesh sensitivity and inflation layer studies to optimise resolution and boundary layer modelling

• Validated simulation results with experimental pressure distribution data, ensuring accuracy

• Demonstrated 25% lower lift-to-drag (L/D) ratio at higher angles of attack for dimpled wings compared to standard design

Machine Design *(University project)* **February 2022 - April 2022**

Automated heat exchanger assembly

• Collaborated within a team to design an automated machine for assembling the core of a shell-and-tube heat exchanger with 85 tubes and 2 shells

• Designed a system to complete assembly in 40 minutes, achieving a 33% reduction off the target

• Delivered the project with a total cost of £69,000, 8% under the budget, using 80% standard components to optimise efficiency

Gearbox Design *(University Project)* **February 2021 – March 2021**

• Designed an engineering assembly for a canoe gearbox featuring one forward speed and a reverse gear

• Produced detailed hand drawings of section views, conforming to engineering standards

ADDITIONAL INFORMATION

Technical Skills *Proficient:* Inventor CAD, Microsoft packages (Excel, Word, PowerPoint, Teams), ABAX, Vector CANape, Python, HV test cell authorised

Intermediate knowledge: Siemens NX (CAD), Spacevertex, Teamcenter PLM, MATLAB, A2MAC1, AutoCAD, Revit, BIM 360, Bluebeam, Ansys CFX, FDM 3D Printing, Vector Tools, CANalyzer, PEAK PCAN

Interests Former football player at regional level up to the age of U19. Strong interest in health, fitness, Formula 1, MMA, Boxing and football

Volunteering Formula Student

Certificates Full European Driving license