Nikolaos Kateris

895 Campus Drive, Stanford, CA 94305, USA
45 Mavromichali, Kifissia, Athens, 14562, Greece

+30 6943629088 • nkateris@gmail.com, nkateris@cantab.net

Education

Stanford University **Stanford, CA**
PhD, Mechanical Engineering *2018–2023*

University of Cambridge, Trinity College **Cambridge**
MEng, BA (Hons) Aerospace and Mechanical Engineering, Honours Pass with Distinction *2014–2018*

Part IIB – *First Class, mark 384/480*

- Molecular Thermo.
- Flow Instability
- Combustion
- Vibration
- CFD
- Turbulence
- Acoustics
- Management

Part IIA – *First Class, mark 668/840*

- Fluid Dynamics
- PDE's & Variational Calculus
- Systems & Control
- Thermodynamics
- Dynamics & Vibrations
- Modelling Risk

Part IB – *First Class, mark 817/965*
Part IA – *First Class, mark 768/900*

- General Engineering

Athens GCE Tutorial College **Athens**
A levels *2011–2014*

- Mathematics, Further Mathematics, Physics A-Levels (A*, A*, A*)
- Chemistry, German AS (A, A)
- Sixth Term Examination Paper 1, 2, 3 (S, S, S)
- Advanced Extension Award (Distinction)

Erasmios Greek-German School **Athens**
Apolytirion *2000–2014*
Apolytirion of Geniko Lykeio (19.8/20), Apolytirion of Gymnasio (20/20)

Previous Employment

Cambridge University Engineering Department **Cambridge**
Carbon Nanotube Modelling *June–September 2017 (10 weeks)*

- This project, which is also part of my final year project, involves the course-grained mesoscale modelling of carbon nanotubes in the gas phase.
- LAMMPS is combined with Python and MATLAB code to simulate collisions, bundling and aerogelation.
- The results are awaiting publication.

Cambridge University Engineering Department **Cambridge**
Nanoparticle CFD and Gas Engine Research in Boies Group *June–August 2016 (10 weeks)*

- I developed a piece of software on OpenFOAM, to simulate aerosol particle coagulation and size distribution evolution in a flow. Thermophoretic effects were also modelled.
- The code was integrated within existing CFD software that simulates the ionisation and recombination of particles under UV light.
- The tools are now being used in pollution sensor design and I am employed as an industry consultant.
- The secondary project involved writing MATLAB code for the calculation of energy dissipation rates due to different causes in an internal combustion engine. This can be used to calculate several engine efficiencies.
- The aerosol project was presented at the 2017 IN[SCI]TE Cambridge conference.

Cambridge University Engineering Department **Cambridge**
Gas Cylinder Vibration Characterisation research project *June–September 2015 (12 weeks)*

- This industrially funded project involved calculating and measuring vibrations on gas cylinders to determine whether electronic circuits on the cylinder will be damaged.
- The project was heavily experimental, following experimental vibration analysis techniques.
- Results were compared with theoretical simulations of impacts or cylinder transport, using Finite Element Methods.
- Presented at the 2016 Trinity College Science Society annual Symposium.

PMA Engineering **Athens**
Intern *August 2013 (2 weeks)*

- Interning in a Structural Engineering Company.
- I learned about metal truss design, designed a steel structure and visited construction sites.
- In this internship I gained structural mechanics knowledge and technical drawing skills.

Technical and Personal skills

- **Programming skills:** C++, MATLAB, Python, FORTRAN, Java, bash.
- **Software Skills:** Experienced in LAMMPS, OpenFOAM, SolidWorks, Fusion 360, Creo, MS Office, LaTeX. Familiar with LTspice.
- **Laboratory Equipment:** FTIR spectroscopy, Laser vibrometer, Wind tunnel flow visualisation.
- **General Business Skills:** Presentation and report writing skills, individual and team work.
- **Languages:** Greek (native speaker), English (fluent speaker), German (fluent speaker), Russian (intermediate), Spanish (beginner).

Awards

- Ricardo Prize in Thermodynamics, Cambridge University Engineering Department *2018*
- Highest Performance in Mechanical Engineering Benefactor Prize, Trinity College *2017*
- Senior Scholar, Trinity College *2016*
- Junior Scholar, Trinity College *2015*
- Highest International Subject Mark (joint), Edexcel *2014*
  Edexcel GCE Further Mathematics
- Progress Distinction, Hellenic Republic, Ministry of Education *2009-2014*
  Highest Grade in School
- Distinction, Mathematical Kangaroo *2013*
- Best Marketing and Sponsors Award, Formula 1 in Schools Greece *2013*
- Mathematics Competition 1st Place, Erasmios Greek-German School *2012*
- 1st Dan, Hellenic Karate Federation *2010*
- "Games and Mathematics" Competition Distinction, Hellenic Mathematical Society *2007, 2008*

Interests and extra-curricular activity

- **Treasurer and Head of Mechanics**: Cambridge Autonomous Underwater Vehicle *2014–2018*
- **Marketing**: Cambridge IN[SCI]TE Conference *2016–2018*
- **University Ambassador**: Reload Greece *2016–2018*
- **Secretary**: Trinity College Engineering Society *2016–2017*
- **Treasurer**: Cambridge University Hellenic Society *2015–2016*
- **Technical Director**: Solar Radiation Management Science Conference *March 2015*
- **Team Leader**: Formula 1 in Schools *2012–2013*

Other interests include cooking, travelling, art.