

Dr Adrien Lefauve

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My primary research interest is the fluid dynamics of stratified flows. I enjoy revealing the beautiful structures in these flows using state-of-the-art experimental techniques and strive to understand them using elegant mathematical analysis.

EMPLOYMENT

Sep 2018 – Sep 2019 **Post-doctoral Research Associate (EPSRC Doctoral Prize Fellow, 1 year funding)**
Department of Applied Mathematics and Theoretical Physics, University of Cambridge

EDUCATION

2014 – 2018 **University of Cambridge, Churchill College (UK)**
Degree: PhD, Applied Mathematics and Theoretical Physics • *Supervisor:* Prof. P. F. Linden
Thesis title: Waves and turbulence in sustained stratified shear flows

2013 – 2014 **École Polytechnique (France)**
Degree: MSc, Fluid Mechanics (international program) • *Grades (A-F):* 11 A, 1 B (1st of ~20 cohort)

2008 – 2013 **Université de Technologie de Compiègne (France)**
Degree: MSc, Mechanical Engineering • *Grades:* 37 A, 3 B, 1 C, 1 D

PUBLICATIONS

2018 **The structure and origin of confined Holmboe waves**
[A. Lefauve](#), J. L. Partridge, Q. Zhou, S. B. Dalziel, C. P. Caulfield, P. F. Linden *Journal of Fluid Mechanics* **848**, 508-544

2015 **A three-dimensional map of tidal dissipation over abyssal hills**
[A. Lefauve](#), C. Muller & A. Melet, *Journal of Geophysical Research: Oceans* **120**

2014 **Globally aligned states and hydrodynamic traffic jams in confined suspensions of active asymmetric particles**
[A. Lefauve](#), D. Saintillan *Physical Review E: Rapid Communications* **89**

2016 **Three-dimensional, time-resolved velocity and density measurements of the stratified shear flow in an inclined duct**
[A. Lefauve](#), J. L. Partridge, S. B. Dalziel & P. F. Linden VIIIth International Symposium on Stratified Flows, San Diego

AWARDS & HONOURS

2018 **Young Scientist Award, European Fluid Mechanics Conference (€500)**
One of the two awards for best oral presentations in biennial Europe-wide conference (~850 participants).

2018 **“Focus on Fluids” Article in the Journal of Fluid Mechanics**
My paper was selected (out of ~80/month) for a dedicated review explaining its impact to the broad community.

2017 **EPSRC Doctoral Prize (~£45,000)**
Competitive one-year postdoctoral funding to maximise impact of promising PhD thesis (1/year in the department).

2017 **Osborne Reynolds Award (£500)**
First oral presentation prize in annual UK-wide competition for young researchers in fluid mechanics (~80 entries).

2016 **Smith-Rayleigh-Knight Prize (£100)**
Cambridge Mathematics prize based on an essay submitted during the fourth term of PhD research.

2016,18 **Cambridge Philosophical Society travel grants (£600 in total)**

2015,16,18 **Churchill College travel grants (£950 in total)**

2014 **Cambridge Trust Scholarship (~£20,500)**
Contributing to 3 years of maintenance stipend for my PhD.

2013 **Ecole Polytechnique tuition fee award (€1,400)**
Single scholarship per cohort per year covering the MSc tuition fees, based on merit and academic excellence.