LOIS ELIZABETH BAKER

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EDUCATION

2018 - Present **Imperial College London**
Centre for Doctoral Training in Mathematics of Planet Earth (4 years)

MRes Research Project (Year 1): *Superharmonics of internal tides in non-uniform stratification*
Advisors: *Professor Bruce Sutherland, Dr Ali Mashayek*

PhD Project (Years 2-4): *Transition to turbulence in topographically induced wave breaking. An investigation into the mechanisms of lee wave turbulence and implications for the buoyancy and momentum budget of the Southern Ocean.*
Advisors: *Dr Ali Mashayek, Dr John Taylor, Professor Martin Siegert*

2012 - 2016 **Queens' College, University of Cambridge**
BA + MMath Mathematics Degree (4 years)

2016	Part III:	Distinction (81%) Masters Essay: *Submesoscale Instabilities of an Ocean Jet* Supervisor: *Dr John Taylor*
2015	Part II:	1st Class (73%)
2014	Part IB:	1st Class (80%)
2013	Part IA:	1st Class (77%)

2010 - 2012 **Parkstone Grammar School**

2012	A Levels	Maths (A*) Further Maths (A*) Physics (A*) French (A*)
	STEP Maths	I (S) II (S) III (1) , AEA Maths (Distinction)

PUBLICATIONS

L.E. Baker and B.R. Sutherland, 2020: The evolution of superharmonics excited by internal tides in non-uniform stratification, *J. Fluid Mech (in press)*

CONFERENCES

L.E. Baker and B.R. Sutherland, 2020: The evolution of superharmonics excited by internal tides in non-uniform stratification, *Oral presentation, AGU Ocean Sciences Meeting, San Diego, Feb 2020*

L.E. Baker and A. Mashayek, 2020: Overturning lee waves and hydraulic jumps in the Drake Passage, *Poster presentation, AGU Ocean Sciences Meeting, San Diego, Feb 2020*

AWARDS

2019 **Woods Hole Geophysical Fluid Dynamics Program Fellowship**
10 week intensive summer program and research project *'The Evolution of Superharmonics Excited by the Internal Tide in Non-Uniform Stratification'* supervised by Professor Bruce Sutherland.

2015 **Bridgwater Summer Research Studentship - University of Cambridge**
Eight week computational research project simulating the effect of internal waves and convection on reactive biogeochemical tracers. Supervised by Dr John Taylor.

EMPLOYMENT

2019 - Present **Graduate teaching assistant, Department for Civil and Environmental Engineering, Imperial College London**

2016 - 2017 **Account Manager - Brainlabs Digital**

2015 - Present **Private Maths Tutor (A-level)**

POSITIONS OF RESPONSIBILITY

2017 **Watch Officer - Transatlantic Tall Ships Race**

2014 - 2016 **Vice-President**, **Emmy Noether Society for female mathematicians**

2014 **President, Queens' College Cambridge Maths Society**

2012 **-** Present **Watch Leader / Officer, Rona Sailing Project**

2014 **Student Representative, Maths Faculty Curriculum Committee**