

# HEMANT KHATRI

## CONTACT INFORMATION

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## EDUCATION

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2016-Present PhD, Department of Mathematics  
Imperial College London, UK

2013-2015 MSc (Engg.), Centre for Atmospheric & Oceanic Sciences  
Indian Institute of Science (IISc), Bangalore, India  
GPA: 7.2/8

2009-2013 B.E. (Hons.), Chemical Engineering  
Birla Institute of Technology & Science (BITS), Pilani, India  
GPA: 8.3/10

## RESEARCH EXPERIENCE

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2016-Present | PhD Dissertation, Imperial College London  
Advisor: Dr Pavel Berloff  
Studying the impacts of zonally varying bottom topography on the dynamics and stability of alternating jets in the oceans.

2013-2015 | Masters Dissertation, IISc, Bangalore  
Advisor: Dr Jai Sukhatme  
Studied the behaviour of upper ocean turbulence by computing spectral fluxes of kinetic energy and enstrophy using gridded satellite altimetry data.

Jan-June 2013 | Research Assistant, TIFR Centre for Interdisciplinary Sciences, Hyderabad  
Advisor: Prof Rama Govindarajan  
Modelled the behaviour of growth rate and temperature of droplets in clouds as a function of droplet size, size of aerosols (condensation nuclei), and environmental super-saturation.

## TALKS AND POSTERS

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Dec 2017 Invited Talk – “Geophysical Jets: Formation and Existence”  
Queens Mary University, London, UK

Sept 2017 Talk – “Drifting Quasi-Zonal Jets”  
Rotating Fluids Meeting, University of Oxford, UK

July 2017 Talk – “Random to organised motions in the oceans”  
Annual Conference, Imperial College SIAM Chapter, London, UK

June 2017 Poster – “Effects of zonally varying topography on the dynamics of oceanic jets”  
21<sup>st</sup> Conference on Atmospheric and Oceanic Fluid Dynamics, Portland, USA

May 2017 Talk – “Kinetic energy and enstrophy fluxes on the ocean surface”  
Meeting: Energy Transfers in the Atmosphere and Oceans, Hamburg, Germany

## PUBLICATIONS

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Khatri H. & Berloff P. A Mechanism for Jet Drift over Topography, under review.

Khatri, H., Sukhatme, J., Kumar, A., & Verma, M. K. (2017). Surface Ocean Enstrophy, Kinetic Energy Fluxes and Spectra from Satellite Altimetry. arXiv preprint arXiv:1701.07966.

## FELLOWSHIPS AND AWARDS

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June 2017    Travel Grants for 21<sup>st</sup> Conference on Atmospheric and Oceanic Fluid Dynamics  
                  – American Meteorological Society  
Oct 2016    Reserach Grants – Mathematics for Planet Earth CDT, Imperial College London  
Feb 2016    President’s PhD Scholarship – Imperial College London  
Jan 2014    Jeremy Grantham Fellowship – Divecha Centre for Climate Change, IISc, Bangalore  
Aug 2013    GATE Fellowship – Ministry of Human Resource Development (MHRD), India

## SUMMER SCHOOLS

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Aug 2017    Fundamental Aspects of Turbulent Flows in Climate Dynamics  
                  School of Physics, Les Houches, France  
  
July 2014    Global Climate Change: Environment, Technology and Society  
                  University of Exeter, UK

## OTHER

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Reviewer: Journal of Physical Oceanography.

## COMPUTER SKILLS

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MATLAB, Python, Fortran, C, C<sup>++</sup>,  $\LaTeX$