

## Miguel A. Jiménez-Urias

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CONTACT INFORMATION	Department of Earth and Planetary Sciences 328 Olin Hall, Johns Hopkins University 3400 N. Charles Street, Baltimore, MD 21210	206-945-5930 mjimen17@jh.edu
RESEARCH INTERESTS	The study of topographic effects on balanced and unbalanced oceanic flows through the use theory and numerical simulations. Particularly I am interested on the effect processes at the mesoscales ( $O \sim (10 - 100)$ km) and submesoscales ( $O \sim (1 - 10)$ km) have on the large scale ocean circulation.	
EDUCATION	<b>University of Washington</b> , Seattle, WA  Ph.D., Oceanography, 2019 <ul style="list-style-type: none"><li>• Dissertation: <i>Topographic Constraints on Rotating Stratified Throughflows Across Large Amplitude Topography</i></li><li>• Advisor: Luanne Thompson, Ph.D</li></ul> M.Sc. Oceanography, 2014  M.Sc., 2012 Applied Mathematics, 2012  <b>Universidad Autónoma de Baja California</b> , Ensenada, Baja California, México  B.S., Physical Oceanography and Applied Mathematics (Double Major), Dec 2009 Honorific mention.	
RESEARCH EXPERIENCE	Postdoctoral Research Scholar Department of Earth and Planetary Sciences, Johns Hopkins University Supervisor: Thomas Haines, Ph.D	Oct 2019 to Present
	Research Assistant School of Oceanography, University of Washington Supervisor: Luanne Thompson, Ph.D	Aug 2012 to Aug 2019
PEER REVIEWED PUBLICATIONS	<b>Jiménez-Urias, M.</b> , and Thompson, L. “Idealized Study on the Effect of Bottom Topography on the Seasonality of the Stability of the Iceland-Færæ Front”, <i>J. of Phys. Oceanogr.</i> <b>48</b> (12). 2989-3008. 2018. URL <a href="https://doi.org/10.1175/JPO-D-18-0048.1">https://doi.org/10.1175/JPO-D-18-0048.1</a>	
PAPERS IN PREPARATION	<b>Jiménez-Urias, M.</b> and Thompson, L. “On the Asymmetry of Throughflows Across Large Amplitude Topography Part I: Barotropic Circulation”. In preparation, soon to be submitted to <i>Journal of Physical Oceanography</i> .  <b>Jiménez-Urias, M.</b> and Thompson, L. “On the Asymmetry of Throughflows Across Large Amplitude Topography Part II: Injection of Boundary layer PV”. In preparation, soon to be submitted to <i>Journal of Physical Oceanography</i> . .	

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AWARDS	International/Governmental Awards	
	<ul style="list-style-type: none"><li>• Conacyt Jan 2013 - Dec 2017 México's National Council of Science and Technology</li><li>• Fulbright Garcia-Robles Scholarship in Applied Mathematics Sept 2010 - June 2012</li><li>• Mexican Scientific Association June 2009 - Aug 2009</li><li>• Santander Scholarship Sept 2008 - Dec 2008</li></ul>	
	Student Awards — University of Washington, School of Oceanography	
	<ul style="list-style-type: none"><li>• Excellence in Teaching Award (Nominated)</li><li>• Top Scholar Award - Egtvedt Fellowship June 2012 - April 2013</li></ul>	
PRESENTATIONS	<ul style="list-style-type: none"><li>• (Talk) NCAR, Boulder, CO May 2018 <i>A First Look at Exchanges Across the Greenland-Scotland Ridge</i></li><li>• (Poster) Ocean Sciences Meeting, Portland, OR Feb 2018 <i>Downstream Intensification of the Circulation due to Topographic PV Flux in a Two-Basin Model</i></li><li>• (Poster) Atmosphere and Ocean Fluid Dynamics, Portland, OR June 2017 <i>Nonlinear Dynamics of Rotating Homogeneous Exchange Flows</i></li><li>• (Poster) Ocean Sciences Meeting, New Orleans, LA Feb 2016 <i>An Idealized Study of the Seasonality of Frontal Instabilities with Implications for the Polar Front over the Iceland Faroe Ridge.</i></li><li>• (Talk) Ocean Sciences Meeting, Portland, OR March 2013 <i>Frontal Instabilities on an Idealized Representation of the Iceland-Faroe-Front</i></li><li>• (Talk) MS Defense in Oceanography March 2013 <i>Frontal Instabilities on an Idealized Representation of the Iceland-Faroe-Front</i></li><li>• (Talk) MS defense in Applied Mathematics June 2012 <i>Perturbation growth in continuously stratified, rotating flows</i></li></ul>	
SUMMER SCHOOL	Alpine Summer School: <i>Dynamics, Stochastics and Predictability of the Climate System</i>	June 2014
TEACHING EXPERIENCE	Teaching Assistant <i>Amath505/Atm505/Ocean 510: Introduction to Fluid Mechanics</i> Instructor: Charles Eriksen, PhD School of Oceanography, University of Washington	Fall 2019
	<i>Ocean 351: Fundamentals of Ocean Sensors</i> Instructor: Daniel Grunbaum, PhD School of Oceanography, University of Washington	Winter 2018
	<i>Ocean 285/286: Physics Across Oceanography: Fluid Mechanics and Waves</i> Instructor: Susan Hautala, PhD School of Oceanography, University of Washington	Fall 2017

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	<i>Atmos 509/Ocean 512: Geophysical Fluid Dynamics I</i> Instructor: Peter Rhines, PhD School of Oceanography, University of Washington	Winter 2015
	<i>Ocean 210: Introduction to Ocean Circulation</i> Instructor: Paul Quay, PhD School of Oceanography, University of Washington	Fall 2013
	<i>Ordinary Differential Equations</i> Instructor: Beatriz Martín Atienza Facultad de Ciencias Marinas, UABC	Fall 2007
COMMUNITY OUTREACH	NASA's Northwest Earth and Space Science Pipeline. <ul style="list-style-type: none"><li>• Volunteer - Lead an introduction to circuits and digital temperature sensors with microcontrollers (Arduino) to high school students from the Tulalip Tribe.</li><li>• <i>Living Underwater: Fish Biomechanics and Fluid Dynamics</i> Co-Instructor of a weeklong NASA summer day camp for Latino students in Washington state, ages 11-16 all material taught in Spanish. Delivered lectures and facilitated hands-on activities including student-built neutrally buoyant ROVs.</li><li>• Volunteer - lead activities in Spanish with local Latino high school students, introducing basic concepts of physical oceanography and describing my research.</li><li>• Volunteer - lead an introduction to Arduino microcontrollers as a volunteer at a local high school.</li></ul>	Fall 2017  Summer 2017  Summer 2016  Winter 2016
HARDWARE AND SOFTWARE SKILLS	Computer Architecture Unix/Linux, OSX.  Computer Programming Python (OOP), Cython, MATLAB, Latex, Jupyter Lab.  Ocean Modelling ROMS, POP-NCAR.  Microcontrollers Raspberry Pi, Arduino, Pyboard, Wipy (micropython).	

REFERENCES

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