

DEEPAK A. CHERIAN

- Education** 2016: Ph.D., MIT-WHOI Joint Program in Oceanography, Physical Oceanography
2010: M.Tech. & B.Tech. (Hons.), Ocean Engineering & Naval Architecture,
Indian Institute of Technology, Kharagpur.
- Positions** 2020 Jan – present: Project Scientist I, National Center for Atmospheric Research
2019 Mar – 2020 Jan: Postdoctoral Fellow, National Center for Atmospheric Research
2017 Jan – 2019 Mar: Research Associate (Post-Doc), Oregon State University
2016 Sep – 2017 Jan: Postdoctoral Investigator, Woods Hole Oceanographic Institution
2010–2016: Graduate research assistant, Massachusetts Institute of Technology
& Woods Hole Oceanographic Institution
- Articles** Rypina, I.I., Pratt, L.J., Entner, S., Anderson, A., **Cherian, D.A.** (*in revision*).
“The Influence of an Eddy in the Success Rates and Distributions of Passively Ad-
vected or Actively Swimming Biological Organisms Crossing the Continental Slope”.
Journal of Physical Oceanography.
Cherian, D.A., Shroyer, E.L., Wijesekera, H.W. and Moum, J.N. (2020). “The seasonal cycle
of upper-ocean mixing at 8°N in the Bay of Bengal”.
Journal of Physical Oceanography 50: 323–342
Cherian, D.A. and Brink, K.H. (2018). “Shelf flows forced by deep-ocean anticyclonic
eddies at the shelfbreak”. Journal of Physical Oceanography. 48 (5): 1117–1138
Cherian, D.A. and Brink, K.H. (2016) “Offshore Transport of Shelf Water by Deep-Ocean
Eddies.”, Journal of Physical Oceanography 46 (12): 3599–3621
Brink, K.H. and **Cherian, D.A.** (2013) “Instability of an idealized tidal mixing front:
Symmetric instabilities and frictional effects.”
Journal of Marine Research 71 (6): 425–450.
Haine, T.W.N. and **Cherian, D.A.** (2013) “Analogies of Ocean/Atmosphere Rotating Fluid
Dynamics with Gyroscopes: Teaching Opportunities.”
Bull. Amer. Meteor. Soc. 94: 673–684.

Funding	<p>2019-2022 NASA Physical Oceanography, lead-PI, \$483k</p> <p>Co-Is: Emily Shroyer (OSU), Jonathan Nash (OSU)</p> <p>“Relating SSHA-derived Eddy Diffusivity to In-situ Estimates from Microstructure and ECCO.”</p>
Invited Talks	<p>2019 Jun: “When a deep-ocean eddy meets shelf-slope topography.”</p> <p>Gordon Research Conference, Coastal Ocean Dynamics.</p>
Talks & Posters	<p>“<i>Horizontal, vertical and temporal structure of vertical mixing modulated by Tropical Instability Waves</i>” — to be presented at</p> <p>2020 : (poster) AGU Ocean Sciences Meeting, 2020 - San Diego</p> <p>“<i>The seasonal cycle of upper-ocean mixing in the Bay of Bengal</i>” — presented at</p> <p>2019 : Massachusetts Institute of Technology, Sack Lunch Seminar</p> <p>Woods Hole Oceanographic Institution, Physical Oceanography Seminar</p> <p>National Center for Atmospheric Research, CGD seminar</p> <p>Oregon State University, CEOAS seminar</p> <p>2018 : (poster) Gordon Research Conference, Ocean Mixing</p> <p>(talk) AGU Ocean Sciences Meeting, 2018 - Portland</p> <p>“<i>Shelf flows forced by mesoscale eddies at the shelfbreak</i>” — presented at</p> <p>2017 : (poster) Gordon Research Conference - Coastal Ocean Dynamics</p> <p>“<i>Offshore export of shelf water by deep-ocean eddies</i>” — presented at</p> <p>2017 : National Taiwan University</p> <p>Oregon State University, CEOAS seminar</p> <p>2016 : Indian Institute of Science, College of Ocean and Atmospheric Sciences</p> <p>(talk) AGU Ocean Sciences Meeting, 2016 - New Orleans</p> <p>“<i>Arresting an eddy’s cross-isobath translation</i>” — presented at</p> <p>2016 : Oregon State University, CEOAS seminar</p> <p>Massachusetts Insitute of Technology, Sack Lunch Seminar</p> <p>2015 : (talk, poster) Gordon Research Conference - Coastal Ocean Modeling</p>
Software	<p>Core developer of Python package <code>xarray</code>.</p> <p>Extensive experience with parallel analysis of large datasets using scientific Python packages on HPC and cloud computing systems e.g. Dask, NumPy, Pandas, <code>xarray</code>; extensive experience with MATLAB</p> <p>Experience with configuring and running the Regional Ocean Modeling System (ROMS)</p>

Outreach & Service	Reviewer for Geophysical Research Letters, Journal of Geophysical Research - Oceans, Journal of Marine Research and Journal of Physical Oceanography.
	Conducted rotating tank lab demonstrations for broad audience (public, scientists, students — graduate and K-12) at WHOI GFD Open Days, 2013.
Teaching	2017 Winter Term: Guest Lecture for “Geophysical Waves” , (graduate level course), Oregon State University
	2014 Fall semester: Teaching Assistant, “Observational Physical Oceanography” (graduate level course), Massachusetts Institute of Technology.
	2013 Jan: Lecturer, Four lectures on “Physical Oceanography”, WHOI Winter Semester for Undergraduates
Additional Training	2014 Coastal and Estuarine Field Methods Summer School, Woods Hole Oceanographic Institution
	2013 Teaching Certificate Program, Massachusetts Institute of Technology
	2012 Estuarine and Coastal Fluid Dynamics Summer School, University of Washington Friday Harbor Laboratories
Fieldwork	2018 Sep: <i>R/V Thomas G. Thompson</i> , Western Pacific. PI: Jim Moum (OSU)
	2017 Feb: <i>R/V Roger Revelle</i> , South China Sea. PI: Lou St-Laurent (WHOI)
	2014 July: <i>R/V Tioga</i> , off Martha’s Vineyard. (student-run cruise for summer school) PI: Deepak Cherian, Jonathan Fincke, Cara Manning (WHOI).
	2013 Nov: <i>R/V Roger Revelle</i> , Bay of Bengal. PI: Emily Shroyer (OSU)
	2011 July: <i>SSV Corwith Cramer</i> , Middle Atlantic Bight. PI: Donglai Gong (WHOI)