

# Aditya Narayanan

Postdoctoral Researcher,  
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Born: May 14th, 1988  
Nationality: Indian

## Current position

*Postdoctoral Researcher*, [Department of Marine Sciences](#), [Gothenburg University](#),  
[Sweden](#)

## Areas of specialization

Shelf sea processes • Southern Ocean dynamics • Weddell Sea Polynya • Fluid Dynamics • Marine Turbulence

## Education

2013-2020 **Ph.D.**, Physical Oceanography, IIT Madras  
2013-2020 **MS.**, Ocean Engineering, IIT Madras  
2006-2010 **BTech** in Civil Engineering, National Institute of Technology, Jalandhar

## Publications

### Journals

2019 Aditya Narayanan, Sarah Gille, Matthew Mazloff, Murali K, “Water mass characteristics of the Antarctic margins and the production and seasonality of Dense Shelf Water”, *Journal of Geophysical Research: Oceans*, doi: <https://doi.org/10.1029/2018JC014907>  
2020 Queste, B. Y., E. P. Abrahamsen, M. D. du Plessis, S. T. Gille, L. Gregor, M. R. Mazloff, A. Narayanan, F. Roquet, and S. Swart, (2020), “Southern Ocean” [in “State of the Climate in 2019”], *Bull. Amer. Meteor. Soc.*, 101, S307-S309, doi:

<https://doi.org/10.1175/BAMS-D-20-0090.1>

## Under review

Aditya Narayanan, Sarah Gille, Matthew Mazloff, Fabien Roquet, Marcel D. du Plessis, K. Murali, “Interaction of Circumpolar Deep Water with large-scale circulation and shelf water masses in the Southern Ocean”

## Conferences

- 2019 Aditya Narayanan, Sarah T. Gille, Matthew Mazloff, Murali K, (2019), “Antarctic Shelf Break Processes and Circumpolar Deep Water Intrusion”, *AGU Fall Meeting, San Francisco*
- 2019 Aditya Narayanan, Sarah T. Gille, Matthew Mazloff, Murali K, (2019), “Antarctic shelf break processes and their role in determining the bottom temperature regime of the shelf seas”, *National Conference on Polar Sciences, National Centre for Polar and Ocean Research, Goa, India.*
- 2018 Aditya Narayanan, Murali K, (2018), “Analysis of Turbulence in the Weddell Sea: Observations and Modeling”, *Ocean Sciences Meeting, Portland.*
- 2016 Aditya, Narayanan (2016), “Mathematical and numerical modeling of the physics of cold water downslope flows”, *CLIVAR Open Science Conference, Qingdao.*

## Grants

- 2019–2021 Co-wrote and defended a grant received from Pacer Outreach Program (POP) under The Polar Science And Cryosphere (PACER) Programme initiative granted by [ESSO-NCPOR \(MoES\)](#) for the project titled, “*Shelf sea and shelf break processes of the Antarctic margins and the production of Dense Shelf Water*”, for the period July 2019 to July 2021, sanctioned for an amount of Rs. 24,03,000/-.
- 2019–2020 Co-wrote and defended successfully a project proposal – “*Antarctic Slope Front dynamics and cross slope exchanges of heat in the Prydz Bay*” – to sail with the Indian Southern Ocean Expedition, 2020 to be conducted by ESSO-NCPOR, Goa.

## Academic achievements & awards

2021	Awarded (but could not accept) the Fulbright-Nehru Postdoctoral Fellowship to work at Scripps Institution of Oceanography, University of California San Diego.
2020	Student participant in the Indian Southern Ocean Expedition, January to March 2020.
2019	AGU Student Travel Grant to attend the Fall Meeting in San Fransisco.
2019	1 <sup>st</sup> runner up for best poster award during Young Polar Scientist Meeting held at the National Conference on Polar Sciences, National Center for Polar and Ocean Research, Goa, 2019.
2018	Erik Berkner travel grant to attend Ocean Sciences Meeting, Portland, 2018 (joint conference of AGU, TOS, and ASLO).
2016	WCRP CLIVAR Open Science Conference, Qingdao, 2016, travel assistance award.

## Teaching

2021	Co-taught MAR440 and MAV110: courses on numerical computing and ocean data analysis at the Department of Marine Sciences, Gothenburg University, Sweden.
2020-2021	Informal mentoring of M.Sc. student's dissertation on the dynamics of the Antarctic Circumpolar Current.
2020-2021	Informal mentoring of M.Sc. student's dissertation on the watermasses of the Antarctic marginal seas.
Feb 2020	Lectured onboard research vessel during NCPOR's Southern Ocean Expedition 2020: on the basics of oceanographic, atmospheric, and climate data analysis and conducted practical workshops on using Python data analysis packages.
Sep 2019	Research seminar on the bottom temperature regime of the marginal seas of Antarctica, Department of Ocean Engineering, IIT Madras.
Oct 2018	Talk on "Climate Systems" as part of the Open Seminar Series, Department of Physics, IIT Madras.
May 2018	Research Seminar on "Downslope Flows in the marginal seas of the Southern Ocean", Department of Ocean Engineering, IIT Madras.
Nov 2017	Lectured in a workshop on numerical and scientific computing using Python, Department of Ocean Engineering, IIT Madras.

## Workshops Attended

2019	Air Sea Interactions in the Bay of Bengal, organised by TIFR-ICTS, Bengaluru
2016	International Summer School on Earth System Modeling, jointly organised by ICTP, Trieste, Italy, and Indian Institute of Tropical Meteorology, Pune

2015	Numerical modeling of free surface flows in coastal and ocean engineering, hands on experience, jointly organised by IITM and NTNU
2015	International Symposium on Antarctic Earth Sciences, Goa
2014	High Performance Computing Workshop, jointly organised by IIT Madras, IIT Bombay, C-DAC Pune, and NVIDIA Corporation

## Skills and tools

- Descriptive and dynamical physical oceanography.
- Ship based measurements: CTD, underway CTD, LADCP etc.
- Climate and ocean data analysis
- Scientific computing and computational fluid dynamics

## Appointments held

2021-	Postdoctoral Researcher, Department of Marine Sciences, Gothenburg University, Sweden.
2019-2020	Senior Project Scientist, IC&SR, IIT Madras.
2013-2019	Half time teaching assistant, IITM.
2010-2013	Project Engineer and Project Manager, Flowline Systems Pvt Ltd.

## Service

2018	Assisted university committee on improving diversity and representation in graduate student selection processes.
2014	Organised a graduate students' research conference.

I follow an open data and open science framework where I make my lecture notes and material and software code and workflow openly available on public repositories along with the scientific manuscripts that I publish. See <https://github.com/adityarn> for more details.

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