

# Aditya Narayanan

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Born: May 14th, 1988  
Nationality: Indian

## Current position

Graduate Student, [Indian Institute of Technology, Madras](#);  
Senior Project Scientist, [Industrial & Consultancy Centre, IIT Madras](#)

## Areas of specialization

Shelf sea processes • Southern Ocean dynamics • Dense Shelf Water formation processes • Circumpolar Deep Water dynamics • Fluid Dynamics • Marine Turbulence

## Education

2014-	Ph.D., currently ongoing, in Physical Oceanography, IIT Madras
2013-2014	MS program, converted to direct PhD in 2014, 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”, <i>Journal of Geophysical Research: Oceans</i> , doi: <a href="https://doi.org/10.1029/2018JC014907">https://doi.org/10.1029/2018JC014907</a>
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### Under preparation

Aditya Narayanan, Sarah Gille, Matthew Mazloff, Murali K, “Antarctic Slope Front: Shelf Water and Circumpolar Deep Water interaction”

### Conferences

2019	Aditya Narayanan, Sarah T. Gille, Matthew Mazloff, Murali K, (2019), “Antarctic Shelf Break Processes and Circumpolar Deep Water Intrusion”, <i>AGU Fall Meeting, San Francisco</i>
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- 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 2019-2020 to be conducted by ESSO-NCPOR, Goa.

## Academic achievements & awards

- 2020 Student participant in the Indian Southern Ocean Expedition, January to March 2020.
- 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.

## 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 Internation 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.
- Climate and ocean data analysis: handling large data sets larger than RAM, analysing data sets on cluster computing platforms across distributed memory
- Scientific computing in Python, including Scipy, Numpy
- Climate tools: Python Xarray, Cartopy, GSW toolbox etc...
- Parallel computing
- Bash scripting

## Appointments held

2019-	Senior Project Scientist, IC <del>SR</del> SR, IIT Madras
2013-2019	Half time teaching assistant, IITM
2010-2013	Project Engineer, Flowline Systems Pvt Ltd
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