

Aditya Narayanan

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Born: May 14th, 1988
Nationality: Indian

Current position

Senior Project Scientist, [Department of Ocean Engineering, IIT Madras](#)

Areas of specialization

Shelf sea processes • Southern Ocean dynamics • 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 preparation

Aditya Narayanan, Sarah Gille, Matthew Mazloff, Fabien Roquet, K. Murali, “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”, *AGU Fall Meeting, San Fransisco*
- 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.*

Teaching

- 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.

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

- 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 Francisco.
- 2019 1st 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 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

2019- Senior Project Scientist, IC²SR, 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.
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