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University of Massachusetts
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SMAST Affiliate Faculty, Dept. of Estuarine and Ocean Sciences
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HIGHER EDUCATION:

1990-1992	Cornell University	Ph.D., Mechanical Engineering,	1992
1987-1990	Cornell University	M.S., Mechanical Engineering,	1990
1983-1987	IIT Kanpur, India	B. Tech., Mechanical Engineering	1987

Academic Appointments:

University of Massachusetts Dartmouth:

AY 2010-Present. *Professor*, College of Engineering; 2004- 2010, *Associate Professor with Tenure;* 1999-2004, *Assistant Professor*. 1999-Present, Joint faculty with School of Marine Sciences (SMS) University of Massachusetts (intercampus); 2015-16, Mechanical Engineering Graduate Program Director; 1999-Present Affiliate Faculty (Dept of Estuarine and Ocean Sciences) SMAST.

Woods Hole Oceanographic Institution:
2013-present *Adjunct Scientist*.

University of California, Santa Cruz:
January 1997 - June 1999. *Assistant Researcher*, Institute for Nonlinear Sciences.
University of Victoria (UVic):
1992-1994, 1994-1996,UCAR postdoctoral fellowships (prestigious, only two awarded throughout USA)

Leadership/Awards:

UMass Scholar of the Year award 2018.

USA Lead for ONR funded India-US Arabian Sea program **EKAMSAT/ASTraL**('22-'27))

Chief Scientist MISOBOB 2017-2021, ASIRI- 2013-2017: U.S. Office of Naval Research Air-Sea Interactions in the Northern Indian Ocean – Regional Initiative (ASIRI Departmental Research Initiative), as well as Oceanic Control of Monsoon Intra-seasonal Oscillations in the Tropical Indian Ocean and the Bay of Bengal (MISOBOB) Air-Sea interaction initiative. Both ONR DRI teams collaborated with Ocean Mixing and Monsoons (OMM) program of India supported by their Ministry of Earth Sciences. These DRIs bring together the ocean community from ten major US research institutions and nine Indian institutions.

Co-Chair, Second International Indian Ocean Expedition (IIOE-2, 2015-Current), Theme 4: Circulation, climate variability and ecosystem response.

Fulbright-Nehru Scholar award, 2017-2018: This award allowed me to work with multiple scientists and institutions in India 11/17 to 03/18, while mainly hosted at the Indian Institute of Science Bangalore.

Fulbright Specialist Scholar, July 2014: Organized and taught workshop on Upper Ocean Physics with applications to the Bay of Bengal at Indian Institute of Science Bangalore.

University Corporation for Atmospheric Research (UCAR) Climate System Modeling Fellowship, **01/1995 - 12/1996:** One of the two fellowships awardees throughout USA, tenable at UVic Canada.

UCAR Ocean Modeling Postdoctoral Fellowship, 11/1992 - 10/1994: One of the two fellowships awardees throughout USA, tenable at UVic Canada.

REFEREED PUBLICATIONS **since 2014** (complete list at **http://bit.ly/tandonpubs**)
Student advisees and **postdoc** co-authors appear in bold font.

Rihimakii and 36 co-authors including A. Tandon (2024), Ocean Surface Radiation Measurement Best Practices, Frontiers in Marine Science, Volume 11, https://www.frontiersin.org/articles/10.3389/fmars.2024.1359149 doi: 10.3389/fmars.2024.1359149

Phadtare, J., Fernando, H. J., Black, G., McLaughlin, K., Dehart, J., Krishnamurthy, R.,Bhat, G. S., Shroyer, E., Tandon, A., **Pérez Valentín, J. M.**, & Jinadasa, S. U. P. (2024). Aircraft observations in a tropical supercluster over the equatorial Indian Ocean during MISO-BOB field campaign. NATURE, Scientific Reports, 14(1), 2182. https://doi.org/10.1038/s41598-024-51527-4

Mallary, C., **C. J. Berg**, J. R. Buck, A. Tandon. (2023). Listening for rain: Principal component analysis and linear discriminant analysis for broadband acoustic rainfall detection, *J. Acoust. Soc. Am.* 154, 556–570. https://doi.org/10.1121/10.0020295

Luko, C. D., Lazaneo, C. Z., Silveira, I. C. D., **Pereira, F.**, & Tandon, A. (2023). Topographically-generated submesoscale shear instabilities associated with Brazil Current meanders. Journal of Physical Oceanography.https://doi.org/10.1175/JPO-D-22-0122.1

Wu, Y., Kunze, E., Tandon, A., & Mahadevan, A. (2022). Reabsorption of Lee-Wave Energy in Bottom-Intensified Currents. Journal of Physical Oceanography. https://doi.org/10.1175/JPO-D-22-0058.1

Simoes-Sousa, I. T., Tandon, A., **Pereira, F., Lazaneo, C. Z.**, & Mahadevan, A. (2022). Mixed layer eddies supply nutrients to enhance the spring phytoplankton bloom. Frontiers in Marine Science, 2097. https://doi.org/10.3389/fmars.2022.825027

Martin, M.V., Venkatesan, R., Weller, R.A., Tandon, A.,Joseph, K. J. Seasonal temperature variability observed at abyssal depths in the Arabian Sea. Sci Rep 12, 15820 (2022). https://doi.org/10.1038/s41598-022-19869-z

Kerhalkar, S. , Tandon, A., Hormann, V., & Centurioni, L. (2022). Using drifter observations to unearth the mysteries of Monsoons in the Bay of Bengal. In OCEANS 2022-Chennai (pp. 1-7). IEEE https://ieeexplore.ieee.org/abstract/document/9775481

Effects of the seasonality of mesoscale eddies on the planktonic dynamics off eastern Brazil, **Caique D. Luko**, **Filipe Pereira**, Ilson C.A. da Silveira, Amit Tandon, Glenn R. Flierl, Dynamics of Atmospheres and Oceans, Volume 98, 2022,101299, ISSN 0377-0265, https://doi.org/10.1016/j.dynatmoce.2022.101299.

Submesoscale coherent vortices in the South Atlantic Ocean: A pathway for energy dissipation. **Lazaneo, C. Z.**, Calil, P. H. R., Tandon, A., & da Silveira, I. C. A. (2022), Journal of Geophysical Research: Oceans, 127, e2020JC017099. https://doi.org/10.1029/2020JC017099

Longwave Radiation Corrections for the OMNI Buoy Network. Joseph, K. J., Tandon, A., Venkatesan, R., Farrar, J. T., & Weller, R. A. (2021), Journal of Atmospheric and Oceanic Technology . https://doi.org/10.1175/JTECH-D-21-0069.1

Progress in understanding of Indian Ocean circulation, variability, air-sea exchange and impacts on biogeochemistry. Phillips, H. E., Tandon, A (*and 21 other authors*), Ocean Sci. Discuss. https://doi.org/10.5194/os-2021-1, 2021 (*An extensive Review Paper*)

The Kuroshio flowing over seamounts and associated submesoscale flows drive 100-km-wide 100-1000-fold enhancement of turbulence. Nagai, T., Hasegawa, D., Tsutsumi, E., Nakamura, H., Nishina, A., Senjyu, T., Endoh, T., Matsuno, T., Inoue, R., & Tandon, A. (2021), *Nature: Communications Earth & Environment*, 2(1), 170. https://doi.org/10.1038/s43247-021-00230-7

Revisiting the Atlantic South Equatorial Current. **Luko, C. D.**, da Silveira, I. C. A., **Simoes-Sousa, I. T.**,

Araujo, J. M., & Tandon, A. (2021), Journal of Geophysical Research: Oceans, 126, e2021JC017387. https://doi.org/10.1029/2021JC017387

Bay of Bengal Intraseasonal Oscillations and the 2018 Monsoon Onset. Shroyer, E., Tandon, A., Sengupta, D., Fernando,……**Simoes-Sousa, I. T**….., & others (2021). *Bulletin of the American Meteorological Society*, 1-44. https://doi.org/10.1175/BAMS-D-20-0113.1

The Barreirinhas Eddies: Stable energetic anticyclones in the near-equatorial South Atlantic. **Simoes-Sousa, I. T.,** Silveira, I. C. A., Tandon, A., Flierl, G. R., Ribeiro, C. H., Martins, R. P., 2021. Frontiers in Marine Science - Physical Oceanography, 10.3389/fmars.2021.617011.

Submesoscale phenomena due to the Brazil Current crossing of the Vitória-Trindade Ridge, **Napolitano, D. C.**, da Silveira, I. C. A., Tandon, A., & Calil, P. H. R., 2020. Journal of Geophysical Research: Oceans, 125, e2020JC016731. https://doi.org/10.1029/2020JC016731

Generation of submesoscale temperature inversions below salinity fronts in the Bay of Bengal, **Ramachandran, S.** & Tandon, A. , 2020, Journal of Geophysical Research: Oceans, 125, e2020JC016278, https://doi.org/10.1029/2020JC016278

Fuel for Cyclones: Quantification of Ocean-Atmosphere Energy Exchange during Tropical Cyclones in the Bay of Bengal Using Indian Ocean Moored Observatories, Venkatesan, R; Vedachalam, N; Vengatesan, G; Weller, R; Tandon, A; Atmanand, M A, 2020 Marine Technology Society Journal, https://doi.org/10.4031/MTSJ.54.4.4

Spiro Jaeger, G., J. MacKinnon, A. Lucas, E. Shroyer, J. Nash, A. Tandon, J. Farrar, and A. Mahadevan, How spice is stirred in the Bay of Bengal. 2020, J. Phys. Oceanogr. https://doi.org/10.1175/JPO-D-19-0077.1

Pereira, F., Silveira, I. C. A., Flierl, G. R., Tandon, A. , NPZ response to eddy-induced upwelling in a Brazil Current ring: A theoretical approach. Dynamics of Atmospheres and Oceans, 87, 2019 https://doi.org/10.1016/j.dynatmoce.2019.101096

The impact of lateral advection on SST and SSS in the northern Bay of Bengal during 2015, **Buckley, J. M.**, **B. Mingels**, A.Tandon, Deep Sea Research Part II: Topical Studies in Oceanography, Volume 172, 2020, https://doi.org/10.1016/j.dsr2.2019.104653.

(http://www.sciencedirect.com/science/article/pii/S0967064519300906)

On the role of turbulent mixing produced by vertical shear between the Brazil Current and the Intermediate Western Boundary Current, **Lazaneo, C. Z., Napolitano, D. C.,** da Silveira, I. C. A., Tandon, A., MacDonald, D. G., Ávila, R. A., Calil, P. H. R., 2020, Journal of Geophysical Research: Oceans, 125, e2019JC015338. https://doi.org/10.1029/2019JC015338

NPZ response to eddy-induced upwelling in a Brazil Current ring: A theoretical approach. **Filipe Pereira**, da Silveira, I., Flierl, G. and A. Tandon, Dynamics of Atmospheres and Oceans

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Ocean observations to improve our understanding, modeling, and forecasting of subseasonal-to-seasonal variability, Subramanian A.C., Balmaseda M. A., Centurioni L., Chattopadhyay R., Cornuelle B., DeMott C., Flatau M., Fujii Y., Giglio D., Gille S. T., Hamill T. M., Hendon H., Hoteit I., Kumar A., Lee J., Lucas A. J., Mahadevan A., Matsueda M., Nam S., Paturi S., Penny S.., Rydbeck A., Sun R., Takaya Y., Tandon A., Todd R.E., Vitart F., Yuan D., Zhang C., Frontiers in Marine Science 6, 427, 2019,https://doi.org/10.3389/fmars.2019.00427

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9780128130827, https://doi.org/10.1016/B978-0-12-409548-9.10952-2.

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Subseasonal dispersal of freshwater in the northern Bay of Bengal in the 2013 summer monsoon season. **SreeLekha, J.**, **Buckley, J. M.**, Tandon, A., & Sengupta, D. (2018). Journal of Geophysical Research: Oceans, 123. https://doi.org/10.1029/2018JC014181

Sustenance of phytoplankton in the subpolar North Atlantic during winter. **Karimpour, F.**, Tandon, A. and Mahadevan, A. (2018). Journal of Geophysical Research Oceans. https://doi.org/10.1029/2017JC013639

Submesoscale Processes at Shallow Salinity Fronts in the Bay of Bengal: Observations during the Winter Monsoon, **Sanjiv Ramachandran** and Amit Tandon and nine others, Journal of Physical Oceanography, 48, 479-509, 2018, https://doi.org/10.1175/JPO-D-16-0283.1

[Book] Observing the Oceans in Real Time, Venkatesan, R., Tandon, A., D'Asaro, E., Atmanand, M.A. (Eds.), DOI 10.1007/978-3-319-66493-4, 323pp, 2018, Springer pub.,

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Recent Trends in Ocean Observations, R. Venkatesan, Amit Tandon, Debasis Sengupta, **K. N. Navaneeth**, 3-13, book chapter in Observing the Oceans in Real Time, Venkatesan et al. eds. 2018.

The impact of vertical eddy viscosity parameterizations on forced submesoscale eddy-resolving simulations, **Sonaljit Mukherjee, Sanjiv Ramachandran**, Amit Tandon and Amala Mahadevan. Ocean Modelling, September 2016. http://www.sciencedirect.com/science/article/pii/S1463500316300737

Introduction to the Special Issue on the Bay of Bengal: From Monsoons to Mixing. Mahadevan, A., T. Paluszkiewicz, M. Ravichandran, D. Sengupta, and A. Tandon. 2016. Oceanography 29(2):14–17, http://dx.doi.org/10.5670/oceanog.2016.34.

A Tale of Two Spicy Seas, MacKinnon, J.A., J.D. Nash, M.H. Alford, A.J. Lucas, J.B. Mickett, E.L. Shroyer, A.F. Waterhouse, A. Tandon, D. Sengupta, A. Mahadevan, M. Ravichandran, R. Pinkel, D.L. Rudnick, C.B. Whalen, M.S. Alberty, **J. Sreelekha**, E.C. Fine, **D. Chaudhuri**, and G.L. Wagner. 2016. Oceanography 29(2):50–61, http://dx.doi.org/10.5670/oceanog.2016.38.

Adrift Upon a Salinity-Stratified Sea: A View of Upper-Ocean Processes in the Bay of Bengal During the Southwest Monsoon. Lucas, A.J., J.D. Nash, R. Pinkel, J.A. MacKinnon, A. Tandon, A. Mahadevan, M.M. Omand, **M. Freilich**, D. Sengupta, M. Ravichandran, and A. Le Boyer. 2016. Oceanography 29(2):134–145, http://dx.doi.org/10.5670/oceanog.2016.46.

The Interplay Between Submesoscale Instabilities and Turbulence in the Surface Layer of the Bay of Bengal. Sarkar, S., H.T. Pham, S. Ramachandran, J.D. Nash, A. Tandon, **J. Buckley**, A.A. Lotliker, and M.M. Omand. 2016. Oceanography 29(2):146–157, http://dx.doi.org/10.5670/oceanog.2016.47.

Decay Mechanisms of Near-Inertial Mixed Layer Oscillations in the Bay of Bengal.Johnston, T.M.S., **D. Chaudhuri**, M. Mathur, D.L. Rudnick, D. Sengupta, H.L. Simmons, A. Tandon, and R. Venkatesan. 2016. Oceanography 29(2):180–191, http://dx.doi.org/10.5670/oceanog.2016.50.

Large-Scale Air-Sea Coupling Processes in the Bay of Bengal Using Space-Borne Observations. Sharma, R., N. Agarwal, A. Chakraborty, **S. Mallick, J. Buckley**, V. Shesu, and A. Tandon. 2016. Oceanography 29(2):192–201, http://dx.doi.org/10.5670/oceanog.2016.51.

Technological Advancements in Observing the Upper Ocean in the Bay of Bengal: Education and Capacity Building. Tandon, A., E.A. D'Asaro, K.M. Stafford, D. Sengupta, M. Ravichandran, M. Baumgartner, R. Venkatesan, and T. Paluszkiewicz. 2016. Oceanography 29(2):242–253, http://dx.doi.org/10.5670/oceanog.2016.56.

ASIRI: An Ocean-Atmosphere Initiative for Bay of Bengal, by Hemantha W. Wijesekera, Emily Shroyer, Amit Tandon, M. Ravichandran, Debasis Sengupta and co-authors including **Sanjiv Ramachandran** and **Sonaljit Mukherjee**. Bulletin of American Meteorological Society, DOI: http://dx.doi.org/10.1175/BAMS-D-14-00197.1 March, 2016

Evidence of enhanced double-diffusive convection below the main stream of the Kuroshio Extension by Takeyoshi Nagai, Ryuichiro Inoue, Amit Tandon, Hidekatsu Yamazaki, Volume 120, Issue 12 December 2015, Pages 8402–8421, Journal of Geophysical Research Oceans. http://onlinelibrary.wiley.com/doi/10.1002/2015JC011288/full

Majumder, S., A. Tandon, D. L. Rudnick, and J. Thomas Farrar, 2015, Near-inertial kinetic energy budget of the mixed layer and shear evolution in the transition layer in the Arabian Sea during the monsoons, Journal of Geophysical Research Oceans, 120, *http://dx.doi.org/10.1002/2014JC010198*.

Takeyoshi Nagai, Amit Tandon, Eric Kunze, and Amala Mahadevan, 2015: Spontaneous Generation of Near-Inertial Waves by the Kuroshio Front. *J. Phys. Oceanogr.*, 45, 2381–2406. doi: *http://dx.doi.org/10.1175/JPO-D-14-0086.1*

Sanjiv Ramachandran, Amit Tandon and Amala Mahadevan, Enhancement in vertical fluxes at a front by mesoscale-submesoscale coupling, Journal of Geophysical Research: Oceans, Volume 119, Issue 12 (December 2014), pages 8495–8511,*http://onlinelibrary.wiley.com/doi/10.1002/2014JC010211*

Robert A. Weller, **Sudip Majumder,** Amit Tandon, Diurnal Restratification Events in the Southeast Pacific Trade Wind Regime, 2569-2587, Journal of Physical Oceanography, Volume 44, Issue 9 (September 2014).*http://journals.ametsoc.org/doi/abs/10.1175/JPO-D-14-0026.1*

A. J. Lucas, E. L. Shroyer, H. W. Wijesekera, H. J. S. Fernando, E. D'Asaro, M. Ravichandran, S. U. P. Jinadasa, J. A. MacKinnon, J. D. Nash, R. Sharma, L. Centurioni, J. T. Farrar, R. Weller, R. Pinkel, A. Mahadevan, D. Sengupta and A. Tandon, Mixing to Monsoons: Air-Sea Interactions in the Bay of Bengal. Eos, Transactions American Geophysical Union Volume 95, Issue 30, pages 269–270, 29 July 2014. *http://onlinelibrary.wiley.com/doi/10.1002/2014EO300001*

PATENT

UMass Dartmouth US Application No. 63182267 (04/21) based off the Invention Disclosure UMD16-09 "Autonomous Submersible Sensor Apparatus with Piston Dive Control." (Inventor: Patrick Pasteris, Mentoring PI: Amit Tandon, supported by ONR and UMassD). Regular international patent filed May 2022, In process.

Conference publications and non-refereed publications not listed (too numerous, available on request)

MUST/UMassD awards:

2024-2027: PI for MUST V: "Optimizing the Design of a Novel Upper Ocean Variable Buoyancy Vehicle (Aurelia)", Ruolin Zhou co-PI, $318,183.00 in direct costs, ONR.

2021-2024: PI for UMassD MUST Multi-Investigator Team Grant: Submesoscale and Mesoscale Interactions Study (SubMIST) This grant established CAOO and partly funds two research faculty (Buckingham and Pietri), $ 1,336,152, ONR.

2020-2024: PI for UMassD MUST Multi-Investigator Team Grant: Acoustic Rainfall Measurement on Global Drifters, $1,253,847, ONR

2020-2024: Co-PI (Altabet PI) for UMassD MUST Multi-Investigator Team Grant: Regional Ocean Turbulence from Long-Duration, Autonomous Observations, $1,043,691, ONR

2012: MOPE: Multi-scale Ocean Modeling in Support of the Pioneer Array, MGHPCC Seed Fund, UMass President's Office. $20,000.

Office of Technology Commercialization and Ventures (UMass President's Office)

2021-2023: Aurelia: Low- cost user-friendly depth changing vehicle for ocean sensors. Technology development Fund, Office of Technology Commercialization and Ventures (OTCV), $22,000

EXTRAMURALLY FUNDED RESEARCH AWARDS (amounts listed are awarded to Tandon):

2023-2027: The Arabian Sea ocean-atmosphere MIxed Layers Exchange (ASMILE), $1,065,804, 01/23-12/27, Tandon is the sole PI of this 5 year grant (ONR ASTraL DRI).
2023-2026: REvisiting MIXed layer baroclinic instability for curved fronts (REMIX), $467,647, 05/23-04/26.
2023-2025: Internal waves in Angular Momentum Stratification (INTRINSIC), NSF, $480,694 (Tandon is PI effective December 2023; co-PI before this with Christian Buckingham as PI until 01/12/23)
2020-2023: Early Student Support for Understanding the ocean-atmosphere coupling in the Northern Indian Ocean: Developing a new profiling platform Aurelia, $119,825, ONR
2018-2024: The role of sub-mesoscale eddies and fronts in NIW generation, propagation and dissipation (NISKINE DRI), ONR $401,979
2019-2022: Understanding the ocean-atmosphere coupling in the Northern Indian Ocean, ONR, $387,836
2018-2023: Collaborative research: Internal lee-wave dissipation in oceanic flows with mean shear, NSF, $173,686
2017-2022: Understanding the ocean-atmosphere coupling in the Northern Indian Ocean, ONR, $753,841
2016-2019: Competition between mixed-layer instabilities in shallow fronts at subtropical latitudes in the ocean, NSF, $223,297.
2014-2018: Collaborative Research: Role of mixed layer eddies on phytoplankton productivity in seasonally variable regimes, NSF, $324,615.
2013-2018: Coastal and Submesoscale Process Studies for ASIRI, ONR $647,173.
2014-2018: Data serving for ASIRI participants, ONR, $149,988.00.
2012-2013: Interpreting the ocean's interior from surface data, NASA, $129,318.
2010-2011: Interpreting the ocean's interior from surface data, NASA, $155,538.
2009-2013:On the importance of submesoscale processes for ocean productivity, NSF, $328,384.
2008-2013: Submesoscale routes to lateral mixing in the ocean (LATMIX),ONR, $349,641.
2008-2009: From Stirring to Mixing: Submesoscale Routes to Lateral Dispersal of Tracers in Upper Ocean. ONR, $21,369.
2006-2010: The effect of submesoscale processes on property fluxes and distributions in the upper ocean, NSF, $177,110.
2006-2010: Exploiting laboratory experiments in the teaching of Meteorology, Oceanography and Climate: Phase II (MIT), NSF, $31,745.
2006-2008: Interaction of Eddies with Mixed Layers, NSF, $32,800.
2003-2006: Interaction of Eddies with Mixed Layers, NSF, $47,446.
2002-2005: Diapycnal fluxes in the Southern Ocean, NSF, $173,782.
1999-2003: Large scale property fluxes in the North Atlantic, NSF, $140,000.
2001-2002: REU Supplement to Large Scale fluxes, NSF, $20,000.
1997-2001: The Significance of time dependence and entrainment fluxes to water mass formation, NSF, $168,713.

Oceanographic Cruises:

Senior Scientist (Jennifer Mackinnon Chief Scientist), ASIRI Cruise in Bay of Bengal November 10-27th, 2013.
Co-Chief scientist (with Jonathan Nash) Roger Revelle, RR1513, ASIRI Cruise in Bay of Bengal, August 23-September 21, 2015.

Co-Chief scientist (with Emily Shroyer) Thomas G Thompson, TN355, MISOBOB Cruise in Bay of Bengal, June 04-23, 2018.
Senior Scientist (Craig Lee Chief Scientist), Roger Revelle RR2306, EKAMSAT cruise in the Arabian Sea, June 6-26, 2023.
Lead Principal Investigator and Senior Scientist (Craig Lee Chief Scientist), R/V Thomas G Thompson, EKAMSAT cruise in the Bay of Bengal, April 24-May 15, 2024.

Highlights of invited and contributed presentations (2014-current only)

2023-2024:

- Organizer 2024 EKAMSAT Seminars and Pilot Cruise Hotwash meeting, July 2024.
- Organizer 2023 EKAMSAT Pilot Cruise Hotwash meeting, August 2023.
- Ocean Sciences Meeting Feb 2024: Seven talks from my group (one form me) and collaborations were presented. More details at https://agu.confex.com/agu/OSM24/meetingapp.cgi/Person/6593
- Co-organzier and presenter at the International conference "Geophysical Flows: From the Field to the Lab - Workshop & Discussion" at IIT Madras, India, January 5, 2024 – January 12, 2024. Both my PhD students and an ex-PhD student also presented.
- Co-author of my student's plenary talks and posters at UMass Intercampus Marine Science Research Symposium at SMAST on March 5, 2024.
- Co-author of my student's Sigma-Xi Poster at UMassD, April 17-18, 2024
- Organzier of two Pre-Cruise Meetings: one between USA and India at IIT Madras (Chennai India), and one for the Indian particpants, in April 2024.

2022-2023:

- Seminar by Tandon at University of South Carolina, Fall 2022, "Air-sea interactions and sub-mesoscale ocean processes in the Bay of Bengal".
- Filachange conference (3 Tandon lab group student led posters and one Plenary talk by PhD student Iury Simoes-Sousa, all led by my students as first authors https://www.swot-adac.org/news-and-events/filachange-workshop/providence/
- Gordon research conference on Ocean Mixing : 4 Posters by my students Filipe Pereira, Siddanth Kerhalkar, Iury Simoes-Sousa, Caique Luko, and invited discussion leader talk by Tandon; see https://www.grc.org/ocean-mixing-conference/2022/
- Mesoscale and Frontal-Scale Air-Sea Interactions Workshop https://usclivar.org/meetings/mesoscale-and-frontal-scale-poster-gallery first author posters by Siddanth Kerhalkar and Iury Simoes-Sousa. Tandon was a primary discussion leader in one of the sessions
- IMS research symposium: First author posters by Patrick Pasteris, Siddanth Kerhalkar and Nicholas Monroes https://imssymposium2023.sites.umassd.edu/posters/
- Mass URC conference: First author talks by REU students Viktoriya Balabanova and Nicholas Monroe: https://www.youtube.com/watch?v=kcXHYdE8wa8 and https://www.youtube.com/watch?v=XL8N6BYCPLc

2021-2022:

- Ocean Sciences Meeting (Feb) 2022 -Organizer and Program Chair for International session PL04 Indian Ocean circulation and its impact on air-sea interactions, biogeochemistry and ecology. Ten papers from my group and collaborators were presented at this international meeting in various sessions.

- Organizer and Teacher, MISOBOB-PI Training Workshop and Meeting with participants about 20 institutions from USA and India Oct 1-7, 2021;
- Co-Organizer, ICERM Workshop Brown University, Prediction and Variability of Air-Sea Interactions: the South Asian Monsoon, Aug 23 - 27, 2021.
- Co-convenor and USA leader for Online Workshop on India-US joint program on Arabian Sea Boundary Layer Dynamics (Feb22,23, March 7,8, 2021), attendees from five USA universities, ONR and NOAA and about 10 institutions from India.
- Andonian, A., Simoes-Sousa and Tandon presentation to NCURS, April 2021.

2020-2021:

- Convenor/Organizer, MISOBOB Workshop and All-PI international meeting, December 1,2,8th 2020.
- APS DFD meeting November 2020: Lee waves in shear flow, Y.Wu, A. Mahadevan, E. Kunze and A. Tandon (https://meetings.aps.org/Meeting/DFD20/Session/Q11.6),
- Co-Chair, UMass System Wide Brain Trust on: Sustainability and Climate Resilience: Coastal Communities, Energy, and Transportation (September 2020-March 2021);
- Presentations at IIOE-2 meetings.
- USIEF Fulbright Webinar on The Oceans and The Monsoon June 25th 2020, (https://www.youtube.com/watch?v=BIstm83djBI)
- Vaibhav Summit October 2020: Invited panelist at sessions on Ocean Observation Platforms, and in Ocean Modeling.
- DEOS Seminar, September 2020.
- Attendee, CMR-WHOI 6th Annual Entrepreneurs Forum August 2020.
- Invited panelist to the meeting of the Ambassador of India to USA with select scientists, July 2020.
- Attendee, 2020 NSF Frontiers in Ocean Science Symposium, June 2020.
- 2020 Marine Renewable Energy Conference: On and Off the Grid, November 2020.

2019-2020:

- Primary Chair, session organizer and Teacher for USA-India Workshop and Discussion Meetings on Air Sea interactions in the Bay of Bengal from Monsoons to Mixing July 2019 NIOT Chennai. The training workshops were attended by students from India and USA. The meetings included USA and Indian PIs in addition.
- Primary Chair, session organizer and Teacher for USA-India Workshop and Discussion Meetings on Air Sea interactions in the Bay of Bengal from Monsoons to Mixing January 2020, SAC Ahmedabad ISRO. The training workshops were attended by students from India and USA. The meetings included USA and Indian PIs in addition.
- Invited Seminar at URI Fall 2019.
- Multiple presentations to ONR, NOAA program managers and to Indian MoES senior leadership.
- International Ocean Sciences Meeting 2020: Ten papers presented as primary or co-author at this meeting.

2019:

- Primary Chair, Teacher and Session organizer for Workshop and Discussion Meeting on Air Sea interactions in the Bay of Bengal from Monsoons to Mixing February 2019, at ICTS Bangalore India. The training workshops were attended by students from India and USA. The meetings included USA and Indian PIs in addition.

- Organizer for MOES-NOAA-ONR scoping workshop on Arabian Sea Science at INCOIS Hyderabad, February 2019.

2018:

- Primary Chair and session organizer for Ocean Circulation and Air-Sea Interaction in the Bay of Bengal session, Ocean Sciences Meeting February 2018. Assigned three oral and a poster sessions, co-authored three presentations and a primary author presentation.
- Organized Arabian Sea workshop at NIO Goa.
- Demonstration and Talk at the Annual Fulbright conference, New Delhi, Feb 2018.
- Lecturer at the KITP Program: Planetary Boundary Layers in Atmospheres, Oceans, and Ice on Earth and Moons(Apr 2 - Jun 22, 2018).

2017:

- Naval future force science and technology, July 21 2017, *Task Force Ocean* Panel Discussion — Plenary Session Panelist;
- March 2017 ONR Physical Oceanography Review lead presenter for ASIRI (and MISOBOB);
- MISOBOB PI planning meeting WHOI July 13-14, 2017 (Main Organizer and Presenter);
- IIOE2 USA meeting September 2017, Scripps Institution of Oceanography, Results, status and plans for recent Bay of Bengal and northwestern Indian Ocean physical oceanographic process studies - Eric D'Asaro (APL/UW) and Amit Tandon (UMass/Dartmouth);
- Invited talk on mesoscale/submesoscale eddies and their large-scale impacts, IndOOS Review, IIOE-2 International meeting Perth Australia January 2017.

2016:

- Submesoscale Processes: Mechanisms, Implications and new Frontiers, University of Liège, Belgium, May 23-27, 2016. Seven presentations by myself or collaborators on which I am a co-author.
- Ocean Sciences Meeting AGU/ASLO/TOS, New Orleans, LA, 21-27 Feb. Seven presentations by myself or collaborators on which I am a co-author.
- Teacher and Session organizer for Workshop and Discussion Meeting on Bay of Bengal from Monsoons to Mixing May 9-13, 2016, Oregon State University. The training workshops were attended by students from India and USA. The meetings included USA and Indian PIs in addition.

2015:

- **Dynamics of the Indian Ocean**: Perspective and Retrospective, International Symposium on the Indian Ocean, Nov 30-Dec 4, 2015, Goa India. Session-14 (Mixing to Monsoons: Many scales in the Bay of Bengal Nine presentations by myself or collaborators on which I am a co-author.
- 20th Conference on Atmospheric and Oceanic Fluid Dynamics, 15-19 June 2015, Minneapolis, MN

2014:

- **Ocean Sciences Meeting (OSM 2014)**- Invited Panelist for Dual Careers: Challenges and Opportunities, an evening workshop hosted by the MPOWIR (Mentoring Physical Oceanography Women to Increase Retention), Feb 24, 2014 at the International Ocean Sciences Meeting 2014.
- **OSM 2014**: five presentations by myself or collaborators on which I am a co-author.
- Primary Chair, Teacher and Session organizer for Workshop and Discussion Meeting on Bay of Bengal from Monsoons to Mixing July 2014, IISc Bangalore India. The training workshops were attended by students from India and USA. The meetings included USA and Indian PIs in addition.

DEI Capacity Building and collaborations:

- Host to Spellman College (HBCU) sabbatical faculty Prof. Monica Stephens Fall 2014
- Host to Fulbright Flex Senior Scholar Dr. R. Venkatesan (Fall 2019, Fall 2021);
- Host to Fulbright scholar Ms. Shikha Singh ('19-20)
- Host to multiple graduate students from Brazil, India for weeks-year long visits ('10-present)
- MS and PhD Advisor to current and past minority and BIPOC/LatinX students.

GRADUATE STUDENTS ADVISED: Including current students, 8 PhD (2 current, 6 graduated), and 1 ABD (defense done, final thesis not submitted), and 19 MS students, most of whom are BIPOC/LatinX. The graduation years for PhD students and those after 2014 are noted below. Where graduation years are not mentioned, the Masters students graduated before my transfer to Mechanical Engineering in 2014.

My graduate advisees include (current location in brackets): Current lab students at UMassD: Mr. Siddhant Kerhalkar (PhD-IMS), Mr. Patrick Pasteris (MSME), Mr. Ersen'S Joseph (MSME), Mr. Debarshi Sarkar (PhD-EAS), Ms. Parth Sastry (EAS-PhD-RA). Graduate Alumni: Dr. Filipe Pereira (currently at Scripps Institution of Oceanography PPFP postdoc, 2023 graduate), Dr. Iury Simoes-Sousa (now WHOI Postdoc, 2023 graduate), Dr. Caue Lazaneo (now postdoc Stanford University, 2021), Dr. Dante Napolitano(Postdoc Legos France, 2020), Mr. Jared Buckley (ABD, Industry, PhD defense passed Jan 2019), Dr. Sonaljit Mukherjee (Danish Meteorological Institute Scientist 2024), Dr. Sudip Majumder (Director, Bank of America, 2014), Mr. Alan Andonian (MSME,SIMULIA R&D App Quality Engineering Specialist, 2023), Mr. Brian Mingels (MSME, 2017), Mr. Peter Khoury (MSME, 2016), Mr. Jared Buckley (MS-Phy, later Phd student), Ms. Danielle Tinkham (MS-Phy, Somerset Berkley Regional High School, Winner of 2017 PhysTEC Teacher of the Year Award), Mr. Brandon Green(MS-Phy), Mr. Eric Holmes(MS-Phy, Coastal Scientist at Woods Hole Group), Ms. Xianquin Yao (MS-Phy), Mr. Michael Desmarais (MS-Phy), Mr. Krishna Aryal (MS-Phy), Mr. Sudip Majumder (MS-Phy 2009; later PhD), Mr. Barry Martin (MS-Phy), Mr. Tinu Thomas (MS-CIS), Mr. G. Srinivas (MS-CIS), Mr. Alex Gigler(MS-Phy), Mr. Ao Yi (MS-Phy), Mr. Zhibiao Zhang (MS-Phy)

REU advisees include : Nicholas Monroe (REU-Honors thesis), Victoria Balabanova (REU-Physics thesis), Kareem ElWakil (REU-BSME, Partner PwC), Mr. Carter Chamberlain (REU- Phy), Mr. Jason Olejarz (BS-Phy), Mr. David Beesley (BS-Phy), Ms. Sarah Couillard, (BSME, Rayhteon), Mr. Derek Chace, (BS-Phy), Ms. Katerina Zarrillo (Special student/UMassD/Stanford), Caique Luko (UMassD/MS-USP now at Scripps for PhD), Rafael Couto Martins (USP/UMassD), Dan Kelleher (REU-Phy), Carter Chamberlain (BS-Phy), Chris Luebke (BSME), George Emmanuel (BSME).

Additionally co-advised or served on committees of about 12 graduate students including in Physics, Electrical and Computer Engineering, Computer Science and Department of Estuarine and Ocean Sciences.

POSTDOC MENTOR: Dr. Takeyoshi Nagai (Faculty Tokyo Univ.), Dr. Liuzhi Zhao (Research Associate, SMAST, UMassD), Dr. Jorge Mesias(Chile), Dr. Sanjiv Ramachandran (VP Climate Science Bank of America), Dr. Farid Karimpour (nvironmental Scientist at San Francisco Estuary Institute), Dr. Suraj Singh(Stockholm University), Dr. Patibandla Ramana (current).

TEACHING: Two to four courses per year, many new courses introduced: EGR 301 Advanced Engineering Mathematics (with lab), MNE 101 Introduction to Mechanical Engineering, MNE 504 Advanced Fluid Mechanics, MNE 557/PHY557/MAR 557 Geophysical Fluid Dynamics, PHY 234 Mathematical Physics, MNE 500 (Topics) Atmosphere and the Environment, PHY 515 Physics of Ocean boundary layers (graduate), PHY 554 Physics of Fluids (graduate), PHY 182 An Introduction to Weather, PHY 183 Climate Change (General education, undergraduate), PHY 111 Freshman Engineering course in Mechanics (in the Integrated Studio mode), PHY 115 Freshman Physics course in Waves, Thermodynamics and Optics, SUS 201-Topics in Sustainability: Coastal Zone (team taught), PHY 421 Physics Senior Lab (team taught).

OTHER PROFESSIONAL ACTIVITIES AND HONORS:

Panel reviewer, GOMRI, Physical Oceanography panel, NASA. National Science Foundation Physical Oceanography Panel (6 times), National Ocean Partnership Program, Panel Reviewer, NSF Arctic Natural Sciences – Arctic System Science panel.

Associate Editor, Limnology, 2021-Present

Editor, Atmosphere-Ocean Dynamics of Bay of Bengal - Volume 1, (Edited by Arnold Gordon, Emily Shroyer, Harindra J. Fernando, Amit Tandon, Manikandan Mathur, Sinhalage Udaya Priyantha Jinadasa), Volume 168, October 2019, https://www.sciencedirect.com/journal/deep-sea-research-part-ii-topical-studies-in-oceanography/vol/168/suppl/C

Editor, Atmosphere-Ocean Dynamics of Bay of Bengal - Volume 2, Edited by Arnold Gordon, Emily Shroyer, Harindra J. Fernando, Amit Tandon, Manikandan Mathur, Sinhalage Udaya Priyantha Jinadasa, contributed to editing and publication of 11 papers, Volume 172, 2020 https://www.sciencedirect.com/journal/deep-sea-research-part-ii-topical-studies-in-oceanography/vol/172/suppl/C

Editor for the Oceanography Special Issue: Bay of Bengal: From Monsoons to Mixing June 2016 issue. Solicited articles and conducted the editorial process for the articles for which I did not have any conflicts of interest.

MPOWIR Steering Committee member.(Mentoring Physical Oceanography Women to Increase Retention), 2014-2016.

Reviewer for Journal of Physical Oceanography published by Amer. Met Society, Journal of Fluid Mechanics published by Cambridge Univ Press, Ocean Science published by EGU, JGR-Oceans published by AGU, Oceanography published by the Oceanography Society, Climate Dynamics, J. of Climate, American Journal of Physics, The Physics Teacher, Ocean Systems Engineering, Limnology

Select UMass Service Roles: Chair Scholar of the Year Committee (AY 23-24), Chair Faculty Senate Research Committee (AY23-24), Faculty Senate Member (since 2015), Faculty Senate Research committee (since 2014), Coordinator Marine System Initiative (AY12-13),Chair UMassDTranform2020 research committee (AY 14-15), Chair Research Scholarship and Innovation Faculty Senate University Research Committee (AY 15-16), Chair Mechanical Engineering Fluids search committee (resulted in 2 faculty hires, AY 18-19), Co-Chair UMassD Systemwide Brain trust on Sustainability and Climate Resilience: Coastal Communities, Energy, and Transportation (AY 20-21) https://www.massachusetts.edu/research/next-frontiers-applied-sciences/next-frontiers-sustainability-and-climate-resilience
https://www.massachusetts.edu/research/next-frontiers-applied-sciences/next-frontiers-aerospace
UMassD representative Systemwide Endless Frontiers Committee (AY 21-22), Lead faculty for establishing UMassD Collaboratory for Autonomous Ocean Observation (CAOO) (AY 21-22), College Academic Council (2015-2021; 2023-Present), Organizer ICERM Bown University meeting on Prediction and Variability of Air-Sea Interactions: the South Asian Monsoon, Aug 23 - 27, 2021(virtual), June 13-15, 2022 (in-person)

For more details see: https://tandonlab.sites.umassd.edu
Other Public Outreach, University Service, Honors, and activities during 1983-2014 are omitted for brevity, available on request.