Praveen Kumar

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Center for Coastal Physical Oceanography.
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Norfolk, VA 23508.

Education

Old Dominion University — Norfolk, VA.
Doctor of Philosophy, Physical Oceanography. — 2014–present

- Dissertation: "Identifying the Effect of Internal Climate Variability on Sea Level in the Indian Ocean."
  Advisor: Dr. Benjamin Hamlington (NASA-JPL) & Dr. Tal Ezer (Old Dominion University).
  (Expected Graduation: Spring 2021)

Goa University — Goa, India.
Master of Science, Marine Sciences, Physical Oceanography (specialization). — 2010–2012

- Thesis: "Spatial Variability of the Seasonal Cycle of Temperature and Salinity in the Arabian Sea."
  Advisor: Dr. Aftab A.S. Can, Assistant Professor, Department of Marine Science, Goa University.

Goa University — Goa, India.
Bachelor of Science, Physics (Major). — 2007–2010

- Final Year Project: "Seasonal Variation of Sea Surface Temperature, Sea Level Height, and Oceanic Chlorophyll in the Indian Ocean Using Remote Sensing Data."
  Advisor: Dr. P. Vethamony, Chief Scientist, Physical Oceanography Division, CSIR- National Institute of Oceanography (CSIR-NIO), Goa – India.

Research Experience

Old Dominion University — Norfolk, VA.
Graduate Research Assistant, Center for Coastal Physical Oceanography. — 2014-present

- Tropical Indian Ocean sea level response to Indian Ocean Dipole (IOD) and ENSO events using Reconstructed and Reanalysis sea level data.
- Reconstruction of 20^{th} century Indian Ocean sea level using tide gauge, sea surface temperature and sea level pressure data (developed a new Multivariate Approach).
- Using Cyclostationary Empirical Orthogonal Functions to reconstruct and understand interannual to decadal sea level variability in the Indian Ocean.

CSIR-National Institute of Oceanography (NIO) — Goa, India.
CSIR/UGC NET Junior Research Fellow (JRF). — 2012-2014

- Understanding the spatio-temporal and vertical variability of the seasonal cycle in the Northern Indian Ocean using sea surface temperature as a proxy.
- Setup and use of Regional Ocean Modeling System (ROMS) in the Northern Indian Ocean.

Teaching Experience

Old Dominion University — Norfolk, VA.
Graduate Teaching Assistant, Department of Ocean, Earth, & Atmospheric Science. — 2016-2017

- Introduction to Global Climate Change (Two Semesters). Supervisor: Dr. Benjamin Hamlington.
- Introduction to Oceanography. (One Semester). Supervisor: Dr. Shannon Wells.

Conducted weekly laboratory sessions. Graded homework problems and exams. Held office hours, help sessions and provided help to students on course content questions.

Scholarships and Awards

- Qualified CSIR-UGC National Eligibility Test (NET) in Earth, Atmospheric, Ocean & Planetary Sciences and awarded Junior Research Fellowship. [December 2011]

Key Technical Skills

- **Statistical/Computing:** MATLAB, R, FERRET
- **Programming:** Fortran, Python, Shell Script
- **Operating System:** Mac, Linux (Ubuntu), Windows
- **General Tools:** LaTeX, MS Office

Publications

1. **Kumar, P.**, Hamlington, B., Cheon, S.-H., Han, W., & Thompson, P. (2020). 20th century multivariate Indian Ocean regional sea level reconstruction. Journal of Geophysical Research: Oceans, 125, e2020JC016270. https://doi.org/10.1029/2020JC016270
   Reconnstructed data available at https://doi.org/10.6084/m9.figshare.12609908.

2. **Kumar, P.** (2013). Installation Guide: A simple Ferret installation manual. Available via NOAA PMEL. (ftp://ftp.pmel.noaa.gov/ferret/pub/docs/ferret_installation_example.pdf)

3. **Kumar, P.** (2012). Spatial Variability of the Seasonal Cycle of Temperature and Salinity in the Arabian Sea. *Master of Science Thesis, Goa University*.

4. **Kumar, P.** (2010). Seasonal Variation of Sea Surface Temperature, Sea Level Height, and Oceanic Chlorophyll in the Indian Ocean Using Remote Sensing Data.
   Bachelor of Science Final Year Project, Goa University

Conference Presentations

1. **Kumar, P.**, Hamlington, B.D., Cheon, S.-H., Thompson, P., Han, W. 20th Century Trivariate Indian Ocean Regional Sea Level Reconstruction. Poster Presentation at the American Geophysical Union, Fall Meeting, San Francisco, California. [December 2019]

2. **Kumar, P.**, Hamlington, B.D., Thompson, P., Han, W., Cheon, S.-H. Improved Reconstructed Sea-Level Dataset for the Indian Ocean. Poster Presentation at the Ocean Sciences Meeting, Portland, Oregon. [February 2018]

3. **Kumar, P.**, Hamlington, B.D., Thompson, P., Han, W. Uncovering the Anthropogenic Sea Level Change using an Improved Sea Level Reconstruction for the Indian Ocean. Poster Presentation at the American Geophysical Union, Fall Meeting, San Francisco, California. [December 2016]

4. **Kumar, P.**, Can, A.A.S. Spatial Variability of the Seasonal Cycle of Temperature and Salinity in the Arabian Sea. Poster Presentation at the Pan Ocean Remote Sensing Conference (PORSEC), Kochi, India. [November 2012]

Oceanographic Cruise

- **Cruise No: SN-053.** 20 May 2011- 23 Jun 2011
  Retrieval and deployment of RAMA buoys, deployment of ARGO floats, drifting buoys and XBTs in the Tropical Indian Ocean on board O.R.V. Sagar Nidhi.