

# Curriculum Vitae

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## CONTACT INFORMATION

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## EDUCATION

- Ph. D.(1999) Indian Institute of Technology, Kharagpur (Paleoceanography & Paleoclimatology)
- M. Sc.(1995) Cochin University of Science & Technology, with first class & First Rank (Marine Geology)
- B. Sc.(1992) Calicut University, with First class (Geology)

## RESEARCH EXPERIENCE

**Scientist-B**

**INCOIS,  
Hyderabad, India.  
2001–present.**

Member of an international team of scientists who are developing the Delayed Mode Quality Control protocols for Argo Data as a part of International Argo Project. Following are major functions under this capacity:

- Delayed Mode Quality Control of Argo data form Indian Ocean region.
- Involved in further development of MATLAB based statistical quality control suite, taking care of the specific needs of Indian Ocean.

Working as Co-PI in a project funded by DOD in collaboration with IISc Bangalore. Area of work involves Argo data analysis, quality control, studying the mixed layer & hydrographic variability in Arabian Sea and Bay of Bengal using Argo Data with following highlights.

- Developed FORTRAN codes for computation of derived parameters form the basic variables measured using Argo floats and storage in Net Common Data Format(NETCDF).
- Developed visualization tools for the basic & derived parameters interfacing FORTRAN and graphical softwares like Ferret/GMT/GRI.
- Developed a software tool for integration of MOM model output and Argo derived Dynamic height in order to obtain an improved near real real time scenario of the Circulation in Indian Ocean.

### Deputation Abroad:

- Deputed for participation in Argo Data Management meeting held at Southampton Oceanographic Centre UK, from 29-09-2004 to 01-10-2004.
- Recipient of POGO fellowship for 2004 and worked with Dr. Howard Freeland at Institute of Ocean Sciences, Sidney, Canada availing this fellowship form 2-10-2004 to 18-12-2004.

- Deputed for the Delayed Mode Quality Control workshop held at Scripps Institution of Oceanography from 07-04-2005 to 13-04-2005.

***Post Doctoral Fellow &  
Project Scientist***

**National Institute of  
Oceanography, Goa, India.  
1999-2001.**

Worked as a postdoctoral fellow for ~ 2 years for ISRO's project, Indian Ocean Experiment (INDOEX) & also for Indo-French project at National Institute of Oceanography (CSIR), Goa, since August 1999. Nature of Work:

- Interpretation of the Dimethyl Sulphide(DMS) and Dimethyl sulphoniopropionate(DMSP) data collected during INDOEX.
- Collection of water samples and short core samples from Goa coast and analysis of nutrient contents from the same.

Worked as PI of an independent project under young scientist scheme of Department of Science & Technology Govt. of India (awarded in 2001) with a total budget of Rs.10 Lakhs. High lights:

- Analysis of box core samples from western continental shelf of India and evaluation of geochemical, faunal and isotopic(collaborative) responses to the past events of anoxia.
- Lead isotopic dating of the core samples.

**Cruise Experience:**

Participated in the 148, 149 and 158<sup>th</sup> Cruises of ORV SAGAR KANYA in the Arabian Sea and the Bay of Bengal and have experience in the following offshore Techniques:

- Operation and collection of water samples using CTD
- Analysis of sea water samples for nutrients (Nitrate, Nitrite, Phosphate and Silicate), using Auto Analyzer.
- Analysis of dissolved oxygen using Winkler's method.
- Preparation and analysis of sediment samples obtained from cores and grabs for paleoclimatic and paleoceanographic studies.
- Preparation and Geochemical analysis of core samples for major, minor and trace elements and for organic carbon.

***Institute Research Fellow***

**I.I.T, Kharagpur  
W. B, India.  
1996-1999.**

- ⇒ Worked on Ocean Drilling Program (ODP) cores from North Indian Ocean analyzing the faunal and Isotopic composition.
- ⇒ Used Advanced Multivariate Statistical methods (Factor analysis and Cluster analysis) for the data analysis and Interpretation.

COMPUTER  
EXPOSURE

Obtained Certification in C and FORTRAN programming languages from I.I.T Kharagpur.

Operating systems : DOS & UNIX  
Programming Languages : FORTRAN, C, HTML  
Graphic packages : GRI, GMT, Ferret, Origin, Grapher, Surfer  
Statistical packages : STATISTICA, SPSS  
Word processors : MS-WORD, L<sup>A</sup>T<sub>E</sub>X  
Other packages : MATLAB, dbase, Excel, Access, Lotus &  
- basic knowledge of GIS Packages.

PUBLICATIONS

1. Salinity variability in the Arabian Sea. **Sudheer Joseph** and Howard J. Freeland, *Geophysical Research Letters*, Vol. 32, doi: 10.1029/2005GL022972., 2005. (in press)
2. Indian Ocean high-productivity Event (10-8 Ma): Linked to Global Cooling or to the Initiation of the Indian Monsoons? Anil K. Gupta, Raj K. Singh, **Sudheer Joseph** and Ellen Thomas. *Geology*, Vol. 32, 753-756., 2004.
3. First results from the Argo Programme in the Arabian Sea, Ravichandran M., Vinayachandran P.N., **Sudheer Joseph**, and Radhakrishnan K. *Current Science* Vol. 86, No. 5, 651-659, 2004.
4. Control and interannual variability of dimethyl sulfide in the Indian Ocean, Shenoy, D. M., **Joseph S.**, Dileep Kumar M., and George M.D., *Journal of Geophysical Research* Vol. 107, doi: 10.1029/2001JD000371, 2002.
5. Species diversity of Miocene deep-sea benthic foraminifera and water mass stratification in the Northeastern Indian Ocean, Gupta A.K., **Joseph S.** and Thomas E. *Micropaleontology*, Vol. 47, 111-124, 2001.
6. Increased marine production of N<sub>2</sub>O due to intensifying anoxia on the Indian continental shelf. Naqvi S.W.A., Jayakumar D.A., Narvekar P.V., Naik H, Sarma V.V.S.S., D'Souza W., **Joseph S.** and George M.D., *Nature*, Vol. 408, 346-349, 2000.
7. New benthic foraminiferal species from Neogene sequence of ODP sites 757B & 758A, Northeastern Indian Ocean. **Joseph S.** and Gupta A.K., *Micropaleontology*, Vol. 45, 1999.
8. Alkaline nature and Taphrogenetic affinity of felsic volcanic rocks of St. Mary's Islands, off Mangalore coast. **Sudheer Joseph** and Nambiar C.G., *Current science*, Vol. 70, No. 9, 858-860, 1996.

RECENT  
PRESENTATIONS

1. Argo - It's potential for Acoustics and Water Mass studies. **Sudheer Joseph**, Ravichandran, M., Radhakrishnan, K., *METOC -2004, National Symposium on Emerging Trends in the fields of Meteorology & Oceanography*, Cochin-Feb 5-7, 2004.
2. Development and Utilization of Remote Sensing, GIS & GPS Tools in Ocean Information Sciences, Radhakrishnan K. and **Sudheer Joseph**

*National Seminar on Remote Sensing and Geographical Information System in Natural Resources Management - Current Status and Emerging Trends* Feb 5-7, 2003.

AWARDS

★ Academic:

- National Competative Exams: NET & GATE.
- Dr. S. Laksmanan Endowment award -1995.
- Prof. C.V Kurian Endowment prize-1995.

★ Cultural:

- First prize in Kavia keli in state school youth festivals in 1984,1986.
- First prize in Kavia keli in M.G. University youth festival 1992.

REFERENCES

1. Dr. M. Ravichandran,  
Head, MOG, INCOIS, P.O. Box-21,  
IDA Jeedimetla S.O., Hyderabad,  
A. P, India, Pin: 500055., E-mail: ravi@incois.gov.in
2. Dr. S. W. A. Naqvi,  
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3. Dr. M. Dileep Kumar,  
Scientist-F, National Institute of Oceanography,  
Dona Paula, Goa, India Pin: 403004., E-mail: dileep@darya.nio.org
4. Dr. Anil K. Gupta,  
Professor, Department of Geology & Geophysics,  
Indian Institute of Technology,  
Kharagpur, West Bengal - 721302., E-mail: anilg@gg.iitkgp.ernet.in