

Dr. Aswini K. K.

Ph.D.in Marine Science

Project Associate II
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Education

- 2015–2021 **Goa University, India, Ph.D.**, Marine Science (Specialization in Marine Geophysics), .
Title "Geodynamics of the Andaman Sea with special reference to the Andaman Back Arc Basin, as inferred from the geophysical data"
Summary.
I have been associated with the first Ocean Bottom Seismometer (OBS) experiment in the Andaman Sea under CSIR- NIO's project "Geodynamics and Earthquake generating processes in NE India and Andaman Subduction Zone (GENIAS)", and analyzed the OBS data to gain insights into the earthquake generating processes and geodynamics of the Andaman backarc basin. The Ph.D. thesis describes the geodynamics of the Andaman backarc basin with special emphasis on earthquake swarms and the influence of arc volcanism, and the present configuration of backarc basin based on geophysical data such as seismological data (based on GSN and the passive OBS data), multibeam bathymetry and magnetic data.
- 2011–2013 **Cochin University of Science and Technology, Kerala, India, M.Sc.**, Marine Geophysics, *First Rank with Distinction, 8.05 CGPA.*
- 2008–2011 **Calicut University, Kerala, India, B.Sc.**, Physics, *Distinction, 94.2%.*
- 2006–2008 **Higher Secondary Board, Kerala, India, Higher Secondary, Science, Distinction, 94%.**

Experience

- 2021–present **Project Associate II, CSIR- National Institute of Oceanography, Goa, India, .**
Research Focusing on geophysical investigation over slow spreading mid-oceanic ridges and Andaman Sumatra subduction zone in Indian Ocean in the project entitled "Tectonic and magmatic processes along the slow-spreading mid-oceanic ridges and subduction zone in the Indian Ocean (TeaM-RiSe)"
- 2017–2020 **Senior Research Fellow, CSIR- National Institute of Oceanography, Goa, India, .**
Continuation of research work entitled "Geodynamics of Andaman Sea with special reference to Andaman Backarc Basin, as inferred from geophysical data".
- 2015–2017 **Junior Research Fellow, CSIR- National Institute of Oceanography, Goa, India, .**
Carried out research work entitled "Geodynamics of Andaman Sea with special reference to Andaman Backarc Basin, as inferred from geophysical data".
- 2013–2015 **Project Assistant II, CSIR- National Institute of Oceanography, Goa, India, .**
Carried out geophysical investigation over Andaman sea and Back arc basin to understand the subduction process and crustal nature. Participated in Scientific cruises.

Achievements

- Successfully completed M.Sc. Marine Geophysics from Cochin University of Science and Technology with 1st Rank (Reg. No:55611002) – Inspire Fellow (2013).
- Awarded for Prof. Jagdeo Singh Memorial Grant at 49th Annual Convection of Indian Geophysical Union Annual Convention (2013).
- Selected for Kerala Physics Talent Search Examination conducted by the Academy of Physics Teachers (APT) (2010).
- Awarded Central Sector Scheme of Scholarship for College and University Students based on Higher Secondary examination result (2008).

Professional Training / Courses/Skills

- Training on SERB, DST**, sponsored training programme on, "Earthquake Hazard: Basic Approaches, Field Investigations and Modeling" at SMVDU, Katra, Jammu, India (2015)..
- Scientific cruise** Spent more than 70 days in the Arabian Sea and Bay of Bengal, through 4 expeditions since 2013, onboard Research Vessels Sindhu Sankalp and Sindhu Sadhana and actively participated in the planning and acquisition of geophysical surveys/data (Multibeam bathymetry, Sub bottom Profiler, Sea-surface Gravity and Magnetic, Ocean Bottom Seismometer (OBS) experiment).
- Skills** SEISAN, HypoDD, ZMAP, Geosoft, Generic Mapping Tool, Matlab, Python, Linux/Unix systems, Latex.

Publications

Journal Articles

- 2022 **K. K. Aswini**, K. A. Kamesh Raju, Pawan Dewangan, V. Yatheesh, Pabitra Singha, and Ramakrushana Reddy. Insights into the long period earthquakes detected by ocean bottom seismometer experiment in the andaman sea. *IEEE Express, Oceans-2022*, 2022.
- 2021 V Yatheesh, **K. K. Aswini**, K A Kamesh Raju, J John Savio, Amol Gawas, and Pawan Dewangan. Morphotectonic signatures and revised timing of opening of the andaman backarc basin, northeast indian ocean. *Tectonophysics*, volume 820, page 229108, December 2021.
- 2021 **K. K. Aswini**, K. A. Kamesh Raju, Pawan Dewangan, V. Yatheesh, Pabitra Singha, and Telluri Ramakrushana Reddy. Seismotectonic evaluation of off nicobar earthquake swarms, andaman sea. *Journal of Asian Earth Sciences*, volume 221, page 104948, November 2021.
- 2020 **K. K. Aswini**, Pawan Dewangan, K. A. Kamesh Raju, V. Yatheesh, Pabitra Singha, Lalit Arya, and T. Ramakrushana Reddy. Sub-surface magma movement inferred from low-frequency seismic events in the off-nicobar region, andaman sea. *Scientific reports*, volume 10, page 21219, December 2020.
- 2020 K. A. Kamesh Raju, **K. K. Aswini**, and V. Yatheesh. Tectonics of the andaman backarc Basin- Present understanding and some outstanding questions. In Jyotiranjana S Ray and M Radhakrishna, editors, *The Andaman Islands and Adjoining Offshore: Geology, Tectonics and Palaeoclimate*, pages 237–259. Springer International Publishing, Cham, 2020.
- 2019 Pabitra Singha, Pawan Dewangan, K. A. Kamesh Raju, **K. K. Aswini**, and T. Ramakrushana Reddy. Geometry of the subducting indian plate and local seismicity in the andaman region from the passive OBS experiment. *Bulletin of the Seismological Society of America*, volume 109, pages 797–811. Seismological Society of America (SSA), April 2019.
- 2018 Pawan Dewangan, Ramakrushana Reddy, K. A. Kamesh Raju, Pabitra Singha, **K. K. Aswini**, V. Yatheesh, K. Samudrala, and M. Shuhail. Nature of the ambient noise, site response, and orientation of ocean-bottom seismometers (OBSs): Scientific results of a passive seismic experiment in the andaman sea. *Bulletin of the Seismological Society of America*, volume 108, pages 248–259. Seismological Society of America (SSA), February 2018.

In Conference Proceedings

- 2021 **K. K. Aswini**, K. A. Kamesh Raju, Pawan Dewangan, V. Yatheesh, Pabitra Singha, and Ramakrushana Reddy. Earthquake swarms in the off nicobar region of andaman sea: Volcano - tectonic implications. In *57th Annual Convention of Indian Geophysical Union (IGU)*, 2021.
- 2020 **K. K. Aswini**, Pawan Dewangan, K. A. Kamesh Raju, V. Yatheesh, Pabitra Singha, Ramakrushana Reddy, and Lalit Arya. Hybrid long-period volcanic events observed in off nicobar region, the andaman sea from a passive OBS experiment. In *22nd EGU General Assembly*, May 2020.
- 2019 **K. K. Aswini**, V. Yatheesh, K. A. Kamesh Raju, Jensen Jacob, and Pawan Dewangan. Revisit to the geophysical characteristics of andaman backarc spreading centre, andaman sea. In *OSICON conference*, 2019.

- 2019 K. A. Kamesh Raju, **K. K. Aswini**, and V. Yatheesh. Andaman backarc basin – tectonic setting and some outstanding questions. In *OSICON conference*, 2019.
- 2018 **K. K. Aswini**, V. Yatheesh, K. A. Kamesh Raju, A. Jourdain, S. C. Singh, and Jensen Jacob. Tale of two sedimented spreading segments of the andaman backarc basin. In *SCOR-InterRidge Workshop*, 2018.
- 2018 J.J. Savio, V. Yatheesh, M. Shuhail, **K. K. Aswini**, F. Badesab, and S. Gullapalli. Geophysical signatures of the raman seamount, eastern arabian sea. In *SCOR-InterRidge Workshop*, 2018.
- 2017 **K. K. Aswini**, K. A. Kamesh Raju, Pawan Dewangan, and D. Srinivas. Characteristics of the off nicobar island earthquake swarm after the 21st march 2014, 6.5 mw event inferred from ocean bottom seismometer data. In *54th Annual Convention of Indian Geophysical Union (IGU)*, 2017.
- 2017 J.J. Savio, V. Yatheesh, M. Shuhail, **K. K. Aswini**, F. Badesab, and S. Gullapalli. Geophysical study of the raman seamount, eastern arabian sea. In *54th Annual Convention of Indian Geophysical Union (IGU)*, 2017.
- 2015 K. A. Kamesh Raju, Pawan Dewangan, **K. K. Aswini**, V. Yatheesh, Pabitra Singha, and K. Samudrala. Initiation of ocean bottom seismometer experiment in the andaman back arc basin. In *OSICON conference*, 2015.

Referees

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