

Education

- **Ph.D. in Environmental Science/Oceanography**, 2013, Anna University, India. Thesis: Seasonal Dynamics of Hydrobiology and Thermal Dispersion of Coastal Waters around Kalpakkam, Southeast Coast of India
- **Post Graduate Diploma in Computer Application** – Bioinformatics, 2009, Bharathiar University, India, Grade: A.
- **Master of Philosophy in Biotechnology**, 2007, Periyar University, India, Grade: A. Thesis: Lactose production through fermentation technology
- **Master of Science in Biotechnology (Marine Specialization)**, 2006, Department of Biotechnology, Alagappa University, India, Grade: B. Thesis: Biodiversity of *Pseudomonas species* utilizing phenol
- **Bachelor of Science in Biochemistry**, 2003, Department of Biochemistry, Periyar University, India, Grade: A.

Experience

Assistant Professor, University of Information Science and Technology “St. Paul the Apostle”, Ohrid, North Macedonia. October 2019 to till now

Senior Modeller, Aqvospace Sdn Bhd, Malaysia. February 2015 to February 2018

Research Associate, Quality Assurance Division (Infrared Thermography Division), Electronics Instrumentation and Radiological Safety Group (EIRSG), Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam, July 2014 to January 2015

Senior Research Fellow, Board for Research in Nuclear Sciences, Bhabha Atomic Research Centre (BARC) / Anna University, June 2011 to March 2012

Junior Research Fellow, Board for Research in Nuclear Sciences, Bhabha Atomic Research Centre (BARC) / Anna University, June 2009 to May 2011

Lecturer for Master of Science in Biotechnology, Periyar University, (Sengunther Arts and Science College), August 2007 – April 2009

Biotech Executive, Rajathi Biotech Private Limited (International Group) October 2006 - July 2007

Research Interests

Genetics & Molecular Biology, Environmental Science and Biotechnology, Oceanography, Geographic Information System, Thermal Ecology Studies, Coastal Water Quality (physicochemical and biological characterization), Hydrodynamic, Ecological Model, Temperature Model, Hydrological Studies, Marine Data Collection (Current, Wind, Wave and Tide), Studies on Plankton and Seabed Sediments, Environmental Impact Assessment

Honors/Awards

- ℓ ‘Prof. U C Kothiyari Best PhD Thesis Award 2015’ The Indian Society for Hydraulics (ISH), India, 2015.
- ℓ University Rank Holder in Bachelor of Science in Biochemistry, 2003.

Licenses & Certifications

- ℓ International Water Law, University of Geneva, Issued June 2019. Credential ID <https://www.coursera.org/account/accomplishments/certificate/GMA9FK4TVZ8Q>
- ℓ Global Warming I: The Science and Modeling of Climate Change, The University of Chicago, Coursera Online Course-Pursuing.

Workshop/Seminars/Training

- ℓ AL. Muthulakshmi, D. Sharath, Ajay Rawat, M. Menaka, B. Venkatraman “Thermal Imaging for Ocular Surface Temperature Evaluations” National Seminar & Exhibition on Non-destructive Evaluation, 4 – 6 December 2014, Pune, India.
- ℓ “MATLAB based training and simulation on supervised learning neural networks and differential evolution algorithm,2012”, Anna University, Chennai, Tamil Nadu.
- ℓ “Biotechnology of Transgenic: Scientific progress and social issues,2004”, Alagappa University, Karaikudi, Tamil Nadu
- ℓ Plankton training at National Institute of Oceanography, Goa
- ℓ MIKE 21 Modelling at Danish Hydraulic Institute, New Delhi
- ℓ Physical and Numerical Modelling at CWPRS, Pune

Conference

- 1) **AL. Muthulakshmi**, Usha Natesan, Vincent A Ferrer, Deepthi K, Venugopalan V. P, Narasimhan S. V “Effects of Environmental Variables on phytoplankton in the Coastal Waters of Kalpakkam with Special Emphasis on Thermal Discharge from a Power Plant, Southeast Coast of India” in 6th International Scientific Conference GEOBALCANICA 2020, Ohrid, Republic of North Macedonia, May **2020**. (In press)
- 2) Goran Chakarevski, Stojce Adjioski, **Muthulakshmi AL**, Ninoslav Marina, “Assessment of Local People Response Toward Social, Economic and Environmental Impacts of Tourism and the Environmental Direction among Tourists Visiting Ohrid and Struga, Republic of North Macedonia” in 6th International Scientific Conference GEOBALCANICA 2020, Ohrid, Republic of North Macedonia, May **2020**. (In press)
- 3) Usha Natesan, K. Deepthi, **AL. Muthulakshmi**, Vincent A. Ferrer, S.V.Narasimhan and V.P.Venugopalan, Long term and short term Sediment Transport Changes Along Kalpakkam, India, AOGS - AGU (WPGM) Joint Assembly 2012, Resorts World Convention Centre, Singapore, 13-17 August **2012**.
- 4) Usha Natesan, K. Deepthi, Vincent A. Ferrer, **AL. Muthulakshmi**, S V. Narasimhan and V P. Venugopalan, “Sediment Dynamics along Kalpakkam, Southeast Coast of India, from Field observations and Numerical Modelling” in ASBPA's 2010 National Coastal Conference: "Celebrating the diversity of the coast", Charleston, South Carolina, USA, 12-15, October **2010**.

Publications

1. **Muthulakshmi AL**, Usha Natesan, Vincent A Ferrer, Deepthi K, Venugopalan V. P and Narasimhan S. V (**2019**) “Impact assessment of nuclear power plant discharge on

- zooplankton abundance and distribution in coastal waters of Kalpakkam, India” *Ecological Processes*, 8:22, doi.org/10.1186/s13717-019-0173-9. [Q2 - Ecology]
2. K Deepthi, Usha Natesan, **AL Muthulakshmi**, Vincent A Ferrer, SV Narasimhan, VP Venugopalan (2018) “Grain Size Analysis for Elucidation of Depositional Environment of Kalpakkam, India”. *Environmental Processes*, Vol. 5, Issue 1, pp.183-199. <http://dx.doi.org/10.1007/s40710-017-0278-z>. [Q2- Environmental Engineering]
 3. **Muthulakshmi AL**, Usha Natesan, K. Deepthi, A. Vincent Ferrer, S.V. Narasimhan and V.P.Venugopalan (2015) “GIS Based Spatial Distribution of Temperature and Chlorophyll a along the Kalpakkam, Southeast Coast of India”. *International Journal of Engineering Research and Applications*, ISSN: 2248-9622, Vol. 5, Issue 5, (Part -5) May 2015, pp.121-126. (IF-5.179)
 4. Deepthi.K., Natesana.U., **Muthulakshmi AL.**, Ferrer V. A., Venugopalan V. P. &Narasimhan S. V (2015) “Mineralogical Characterization in the Marine Environment of Kalpakkam, Southeast Coast of India” *Marine Georesources & Geotechnology* (2015), 33: 496 503, DOI: [10.1080/1064119X.2014.954176](https://doi.org/10.1080/1064119X.2014.954176). (IF-1.207). [Q2 – Geotechnical Engineering]
 5. Usha Natesan, Vincent A Ferrer, Arvind Sahay, Prakash Chauhan, **Muthulakshmi AL**, Deepthi K (2015) “Monitoring Chlorophyll - a concentration in the coastal waters of Kalpakkam (India) Application of a regional algorithm using Oceansat - 2 Ocean Colour Monitor”, ISSN 0255-660X, Volume 43, Number 1, *Journal of the Indian Society of Remote Sensing* (2015) 43:173-179, DOI [10.1007/s12524-014-0390-8](https://doi.org/10.1007/s12524-014-0390-8). (IF-0.869). [Q3 – Earth and Planetary Sciences]
 6. Usha Natesan, **Muthulakshmi AL**, K. Deepthi, A. Vincent Ferrer, S.V. Narasimhan and V.P.Venugopalan (2015) “Impact of Thermal Discharge From a Tropical Coastal Power Plant on Physico-Chemical Properties with Special Nutrients of Kalpakkam Coastal Area, Southeastern Coast of India”, *Indian Journal of Geo-Marine Sciences*, Vol. 44 (11), November 2015, pp. 1750-1761. (IF-0.301). [Q4 – Oceanography]
 7. K. Deepthi, Usha Natesan, **Muthulakshmi AL**, Vincent A. Ferrer, V P Venugopalan, S V. Narasimhan (2014) “Heavy metals in nearshore sediments of Kalpakkam, Southeast coast of India” ISSN 1866-6280, Volume 72, Number 3, *Environmental Earth Sciences*, (2014) 72:717-729, DOI [10.1007/s12665-013-2996-5](https://doi.org/10.1007/s12665-013-2996-5). (IF-1.765). [Q2 – Earth-surface Processes]
 8. K. Deepthi, Usha Natesan, **Muthulakshmi AL**, Vincent A. Ferrer, V P Venugopalan, S V. Narasimhan (2013) “Geochemical characteristics and depositional environment of Kalpakkam, southeast coast of India” *Environmental Earth Sciences*, Vol. 69: 2357–2364, No. 7. <https://doi.org/10.1007/s12665-012-2065-5>. (IF-1.765). [Q2 – Earth-surface Processes]
 9. **AL. Muthulakshmi**, Usha Natesan, K. Deepthi, Vincent A. Ferrer and V. P. Venugopalan, S.V. Narasimhan (2013) “Assessment of Water Quality through Indices around Kalpakkam, Southeast Coast of India”, *Archives of Environmental Science*, Vol.7, pp. 23-32.
 10. **Muthulakshmi, AL.**, Usha Natesan, Deepthi, K., Vincent A. Ferrer, Narasimhan, S.V. and Venugopalan,V.P (2013) “A Novel Technique to Monitor Thermal Discharges

- using Thermal Infrared Imaging”, Environmental Science: processes & impacts, [DOI: 10.1039/c3em00081h](https://doi.org/10.1039/c3em00081h). (IF-2.6). [Q1 – Management, Monitoring, Policy and Law]
11. Usha Natesan, K. Deepthi, **Muthulakshmi AL**, Vincent A. Ferrer, S V. Narasimhan and V P Venugopalan (2012) “Textural and depositional processes of surface sediments of Kalpakkam, Southeast Coast of India” *Frontiers of Earth Science*, 6(4): 392–404, [DOI 10.1007/s11707-012-0330-2](https://doi.org/10.1007/s11707-012-0330-2). (IF- 1.205). [Q1 – Earth and Planetary Science]
 12. **AL. Muthulakshmi**, Usha Natesan, K. Deepthi, Vincent A. Ferrer, S V. Narasimhan and V. P. Venugopalan (2012) “Temporal Variability in Coastal Waters of Kalpakkam, India”, *Archives of Environmental Science*, Vol. 6, pp. 118-131.