CURRICULUM VITAE

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Academic

BE (*Civil Engg*)	KREC Surathkal	7th Rank, 1985
MTech (*Hydraulics & Water Resources Engg*.)	KREC Surathkal	1987
PhD (*Water Resources Engg.*)	IIT Bombay	1993
Postdoctoral Research (Civil Engg)	IIT Bombay	1993-95
Postdoctoral Research (*Water Resources Engg*)	Technical University, Halifax, CANADA	1995-96

Professional experience

Teaching at NITK Surathkal since 1996

Areas of Research Interest

Water Resources Engineering, Groundwater Engineering, Numerical Modelling, Seawater Intrusion, Climate Change, Conjunctive Use.

Research Publications - Journals

1. Sourab R. Desai, Vinod, Degavath and Amai Mahesha (2026). Urban India's vulnerability to compound climate extremes: a dependence perspective. *Acta Geophysica,* 74:289. https://doi.org/10.1007/s11600-026-02031-y

2. Degavath Vinod and Amai Mahesha (2026). Modeling Nonstationary Extreme Rainfall for Updating Intensity–Duration–Frequency Curves across Indian Cities under Changing Climate. ***ASCE J. Hydrologic Engg***. https://doi.org/10.1061/JHYEFF.HEENG-6676.

3. Swarna Latshmi, S.P., Degavath Vinod and Amai Mahesha (2026). Assessment of non-stationarity in meteorological drought across India under changing climate. *Acta Geophysica*, 74:233. https://doi.org/10.1007/s11600-026-01939-9

4. Neenu, K. and Amai Mahesha (2026). Numerical investigation of pumping-induced seawater intrusion risks under varying well configurations in a hypothetical coastal aquifer. *Modeling Earth Systems and Environment*, 12:145, 1-14. https://doi.org/10.1007/s40808-026-02794-9

5. Sharannya, TM, Venkatesh, K. and A.Mahesha (2026). Assessment of river flow due to anticipated climate and land use changes in the Western Ghats, India. *Earth Systems and Environment*. 1-21. https://doi.org/10.1007/s41748-026-01058-x

6. Renuka S., Degavath Vinod and Amai Mahesha 2025. Modeling of short-term meteorological drought under changing climate in Gujarat, India. ***Theor Appl. Climatol.*** 156, 641, 1-18. https://doi.org/10.1007/s00704-025-05882-5.

7. Mamidi HariKrishna, Vinod, D., S. Desai and Amai Mahesha (2025). A multivariate index-flood approach for flood frequency analysis of ungauged watersheds: A case study on the state of Kerala in India. *Acta Geophysica, 73, 4691-4708.* *https://doi.org/10.1007/s11600-025-01640-3*

8. Praveen Kumar, G., Vinod, D., Dwarakish, G.S. and Amai Mahesha (2025). Multi-criteria decision-making and machine learning based CMIP6 general circulation model ensemble for climate projections in a tropical river basin in India. *Acta Geophysica*, 73, 4999-5018. https://doi.org/10.1007/s11600-025-01623-4

9. Vinod, D. and Amai Mahesha (2025). Characterizing extreme rainfall using Max-Stable Processes under changing climate in India. ***J. Hydrology***, 655 (2025), 132922, 1-18. https://doi.org/10.1016/j.jhydrol.2025.132922

10. Vinod, D. and Amai Mahesha (2025). Modeling non-stationary 1-hr rainfall for Indian river basins under changing climate. ***J. Hydrology,*** 652(80), 132669, 1-17. https://doi.org/10.1016/j.jhydrol.2025.132669

11. Vinod, D. and Amai Mahesha (2024). Spatial-Dependence of Extreme Rainfall and Development of Intensity-Duration-Frequency Curves using the Max-Stable Process Models. ***J. Hydrologic Engg., ASCE,*** 30(1), 04024053 https://doi.org/10.1061/JHYEFF.HEENG-6326

12. Archana, T.R., Vinod, D. and Amai Mahesha (2024). Decadal Trends and Climatic Influences on Flash Droughts and Flash Floods in Indian Cities. ***Urban Climate,*** 58(2024), 102143. https://doi.org/10.1016/j.uclim.2024.102143

13. Vinod, D. and Amai Mahesha (2024). Modeling nonstationary intensity-duration-frequency curves for urban areas of India under changing climate. ***Urban Climate,*** 56, 102065, 1-22.

https://doi.org/10.1016/j.uclim.2024.102065

14. Gautham Jagrathi, O. Sungmin, Vinod D. and Amai Mahesha (2024). Evaluation of GPM IMERG satellite precipitation for rainfall-runoff modelling in Great Britain. ***Hydrological Sciences Journal***
https://doi.org/10.1080/02626667.2024.2394172

15. Rajendra Raj, Degavath Vinod and Amai Mahesha (2024). Downscaling algorithms for CMIP6 GCM daily rainfall over India. *J. Earth Syst. Sci*., 133, 104.
https://doi.org/10.1007/s12040-024-02323-1

16. Besty Benny, D. Vinod and A. Mahesha (2024). Fortnightly Standardized Precipitation Index Trend Analysis for Drought Characterization in India, ***Theoretical and Applied Climatology,*** *155, 4891-4908*.
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17. Vinod, D. and Amai Mahesha (2024). Large-Scale Atmospheric Teleconnections and Spatiotemporal Variability of Extreme Rainfall Indices Across India. ***J. Hydrology***., 628, 130584, 1-17. https://doi.org/10.1016/j.jhydrol.2023.130584

18. Surajit Deb Barma and Amai Mahesha (2023). Discussion of "Innovative approaches to the trend assessment of stream flows in the Eastern Blac Sea basin, Turkey", ***Hydrol. Sci. J***., 68(5), 731-732. https://doi.org/10.1080/02626667.2023.2185524
19. Chowdari, K.K., Surajit Deb Barma, Nagaraj Bhat, Girisha, R., Gouda, K.C. and Amai Mahesha (2023). Trends of seasonal and annual rainfall in semi-arid districts of Karnataka, India: Application of innovative trend analysis approach. ***Theoretical and Applied Climatology***. *152, 241-264*.
https://doi.org/10.1007/s00704-023-04400-9
20. Chythanya Krishnan and Amai Mahesha, (2023). Assessment of Bi-Decadal Groundwater Fluctuations in a Coastal Region Using Innovative Trends and Singular Spectrum Analysis. *J. Geological Society of India*, 99:111-119. https://doi.org/10.1007/s12594-023-2273-5
21. Dineshkumar, M., B. Sivakumar and Amai Mahesha (2023). Future global concurrent droughts and their effects on maize yield. ***Science of the Total Environment***, 855 (2023), 158860.
http://dx.doi.org/10.1016/j.scitotenv.2022.158860
22. Thieu, N.V., Deb Barma, S., Lam, T.V., Kisi, O. and Amai Mahesha (2023). Groundwater level modelling using augmented artificial ecosystem optimization. ***J. Hydrology***, 617, Part C, 129034.
https://doi.org/10.1016/j.jhydrol.2022.129034

23. Chandre Gowda, C., Amai Mahesha and S.G. Mayya (2022). Development of operation policy for dry season reservoirs in tropical partially gauged river basins. *International Journal of River Basin Management.* https://doi.org/10.1080/15715124.2022.2118280
24. Sharannya T. M., Venkatesh Kolluru, Mahesha Amai and Tri Dev Acharya (2022). Enhanced streamflow simulations using nudging-based optimization coupled with data-driven and hydrological models. ***J. Hydrology: Regional Studies***, 43(10), 101190. https://doi.org/10.1016/j.ejrh.2022.101190'

25. Chythanya Krishnan and Amai Mahesha (2022). "Regional trends and spatiotemporal analysis of rainfall and groundwater in the west coast basins of India", ***J. Hydrologic Engg., ASCE*** 27(8), 05022008-1-20. https://doi.org/10.1061/(ASCE)HE.1943-5584.0002177
26. Surajit Deb Barma, Sameer Balaji U., Prathamesh B., Nagaraj Bhat and Amai Mahesha (2022). Evaluation of ERA5 and IMERG precipitation data for risk assessment of water cycle variables of a large river basin in South Asia using Satellite data and Archimedean copulas. *Water Conservation and Management* 6(1): 61-69. ISSN: 2523-5664 (Print) https://www.watconman.org/wcm-01-2022-61-69/
27. Sharannya, T.M., K. Venkatesh, Amogh Mudbhatkal, M. Dineshkumar and Amai Mahesha (2021). Effects of land use and climate change on water scarcity in rivers of the Western Ghats of India. ***Environ. Monit. Assess***., 193, 820. https://doi.org/10.1007/s10661-021-09598-7
28. Dinesh Kumar M. and Amai Mahesha (2021). "Multivariate analysis of concurrent droughts and their effects on Kharif crops – A Copula-based approach". ***International J. Climatology***, 42(5), 2773-2794. http://onlinelibrary.wiley.com/doi/10.1002/joc.7390.
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30. Dineshkumar, M. and Amai Mahesha (2021). "Copula-based frequency and coincidence risk analysis of floods in tropical, seasonal rivers". ***J. Hydrologic Engg***., ***ASCE,*** 26 (5), 05021007-1-17. https://doi.org/10.1061/(ASCE)HE.1943-5584.0002061.
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33. Sharannya, T. M., Al-Ansari, N., Barma, S. D., and Mahesha, A. (2020). "Evaluation of satellite precipitation products in simulating streamflow in a humid tropical catchment of India using a semi-distributed hydrological model." ***Water***, 12(9),2400:1-25. https://doi.org/10.3390/w12092400
34. Sameer Balaji Uttarwar, S. Deb Barma, and Amai Mahesha. (2020). "Bivariate modeling of the hydroclimatic variables in the humid tropical coastal region using Archimedean copulas." ***J. Hydrologic Engg., ASCE,*** 25(9), 05020026-1 to 18. https://ascelibrary.org/doi/abs/10.1061/(ASCE)HE.1943-5584.0001981
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Conferences

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92. Amogh M. and A.Mahesha. (2016). Performance of bias correction methods for Malaprabha catchment, India. Proc. Int. Conf. Hydrol. Water Resour. (HYDRO 2016), Dec. 8-10, 2016, Indian Society of Hydraulics, Pune.
93. Priyanka BN and A.Mahesha (2015). Parametric studies on saltwater intrusion into coastal aquifers for anticipated sea level rise. Elsevier Aquatic Procedia 4, 103-108. https://doi.org/10.1016/j.aqpro.2015.02.015
94. Lathashri UA and A.Mahesha (2015). Simulation of saltwater intrusion in a coastal aquifer in Karnataka, India. Elsevier Aquatic Procedia 4, 700-705. https://doi.org/10.1016/j.aqpro.2015.02.090
95. Amogh Mudbhatkal, B. Venkatesh, RV Raikar and A.Mahesha (2015). Climate Change Impact on the Small-Scale Western Ghats Catchment, India. Int. Conf. Hydraulics, Water Resources and River Engineering, (HYDRO 2015), IIT Roorkee, 76.
96. Archana K. and A.Mahesha (2015). Studies on climate change impact on west flowing rivers of Karnataka, India. Int. Conf. Hydraulics, Water Resources and River Engineering, (HYDRO 2015), IIT Roorkee, 99.
97. Lathashri U.A. and A.Mahesha, (2014). Solute transport Modelling in tropical, coastal aquifer – A semi-conceptual approach. Proc. 4th Int. Conf. Hydrology and Watershed Management. Eds: K. Ramamohan Reddy and B. Venkateswara Rao, Centre for Water Resources, Institute of Science and Technology, J.N.T.U., Hyderabad, India
98. Lathashri. U.A. Mahesha (2014). Solute transport modelling of saltwater intrusion in coastal aquifers. Proc. International conference on Emerging trends in Engineering, Department of Civil Engineering, NMAM Institute of Technology, NITTE, Udupi District, Karnataka. ISBN: 978-93-83083-80-0.
99. Honnanagoudar, SS., DV Reddy and A.Mahesha (2013). Terrain analysis of pumping test and vertical electrical resistivity test of the southern west coast of Karnataka, India, Int. Conf., 23-24 May, 2013, Chennai.
100. Vyshali and A. Mahesha (2013). An Integrated Approach for the Assessment of Saltwater Intrusion into Coastal Aquifers- A Case Study from Karnataka, India, presented at Int. Conf. Integrated Water, Wastewater, and Isotope Hydrology held during 25-27 July 2013 at Bangalore University, Bangalore. 125-127.
101. Honnanagoudar, SS., DV Reddy and A.Mahesha, (2013). Aquifer characterisation and water quality investigations of the tropical aquifer of the west coast of India. Third Int. Engg. Symposium (IES2013), 4-6 March 2013, Japan.

102. Honnanagoudar, S.S., DV Reddy and A.Mahesha, (2012). Hydrogeological studies along the coastal tracts of Dakshina Kannada district, Karnataka. Nat. Conf. Advances in Earth Sciences, Structural, Geotechnical and Earthquake Engg. (AESG2E-2012), Hyderabad, 4-5 Oct. 2012, 1-9.
103. Ramesh, H. and A.Mahesha, (2011). Groundwater modelling to simulate groundwater levels due to interlinking of rivers in the Varada River basin, India, Proc. 4th Int. Conf. Modelling, Simulation, and Applied Optimisation (ICMSAO), IEEE, ISBN 978-1-4577-0005-7/11. DOI: 10.1109/ICMSAO.2011.5775585
104. Mythri, D.J. and A.Mahesha, (2011). Climate Change Impact on River Hydrological Processes: A Case Study. Proc. Int. Geography Congress on Sustainable Natural Resources Management under Changing Climatic Scenarios, Centre for Water Resources Development and Management, Kozhikode, Kerala, 129-132.
105. Vyshali and A.Mahesha (2010). Tropical, coastal aquifer management – A case study. Proc. Int. Conf. Hydro-Science & Engineering, held at IIT Madras from August 2 to 5, 2010, in collaboration with IIT Madras, IAHR, and ICHE.
106. Mahesha, A., Vyshali, Lathashri, U.A. and Moumitha P. (2010). Studies on saltwater intrusion in Gurpur-Pavanje river basin, Karnataka. Proc. Nat. Seminar on Rainwater Harvesting and Artificial Recharge to Groundwater with special reference to Coastal Areas, Central Groundwater Board, Bangalore and Mangalore University, 53-60.
107. Vyshali and A.Mahesha (2010). Saltwater intrusion into tropical, coastal basins – A case study. Paper presented at the National Conference on Sustainable Water Resources Management (SWARM-2010) held at NITK Surathkal during Jan. 7-8, 2010.
108. Ramesh, H. and A.Mahesha, (2010). Estimation of evapotranspiration and crop water requirement in a semi-humid region. Paper presented at the National Conference on Sustainable Water Resources Management (SWARM-2010) held at NITK Surathkal during Jan. 7-8, 2010.
109. Shetkar, R.V. and A.Mahesha (2010). River water harvesting through vented dams. Paper presented at the National Conference on Sustainable Water Resources Management (SWARM-2010) held at NITK Surathkal during Jan. 7-8, 2010.
110. Vyshali, Moumitha P.C. and A.Mahesha (2008). Saltwater intrusion assessment in the coastal D.K. district, Karnataka, Proc. National Conference on Advances in Civil Engg., ACE, Anjuman Engg. College, Bhatkal, 116-119.
111. Vyshali, U.A. Lathashri, P.C. Moumita and A.Mahesha (2008). Studies on the vulnerability assessment of a coastal aquifer. Proc. International Groundwater Conference on Groundwater Dynamics and Global Change, March 19-22, 2008, University of Rajasthan, Jaipur, 143-144.
112. Shetkar, Rajeev V., and A. Mahesha (2008). Assessment of aquifer vulnerability to seawater intrusion through the tidal river of the tropical region. Proc. International Conference on Water Science and Technology, International Water Association, KCT Coimbatore and INRA, France, p.77.
113. Shetkar, R.V. and A.Mahesha (2007). Tropical river basin development – A case study. Proc. Nat. Conf. Hydraul. Water Resour., HYDRO 2007, 32-38.
114. Shetkar Rajeev V. and A. Mahesha, (2007). Hydrological Analysis of the Netravathi River Flow for Sustainable Development, Proc. Indian National Conference

on Harbour and Ocean Engineering, INCHOE, Dept. of Applied Mechanics & Hydraulics, NITK, Surathkal and NMPT Panambur, Vol II, 667-673.

115. Lathashri. U. A. and A. Mahesha (2007). Assessment of Aquifer Vulnerability to Saltwater in Coastal Karnataka, Proceedings Indian National Conference on Harbour and Ocean Engineering, INCHOE, Dept. of Applied Mechanics & Hydraulics, NITK, Surathkal and NMPT Panambur, Vol I, 9-17.

116. Vyshali, Moumita Palchaudhury and A.Mahesha (2007). Simulation of saltwater intrusion in the coastal aquifer of Karnataka, Proc. Indian National Conference on Harbour and Ocean Engineering, INCHOE, Dept. of Applied Mechanics & Hydraulics, NITK, Surathkal and NMPT Panambur, Vol I, 34-41.

117. Shetkar R.V. and A.Mahesha (2006). Vented dam: An effective water harvesting structure across the river Netravathi, Karnataka, Proc. Int. Symp. Desalination and Water Purification: Water Resources and their Management, MNIT Jaipur & Indian Desalinization Association, p.99.

118. H. Ramesh and A.Mahesha (2006). Steady groundwater flow modelling of Varada aquifer systems using the finite element method, Proc. Int. Speciality Conf. Env. & Water Resour., EWRI of ASCE, New Delhi, pp.125.

119. H.Ramesh, M. R. Y. Putty and A.Mahesha (2005). Computation of aquifer parameters using a step drawdown pumping test. National Conf. on Hydraulics, Water Resources, Coastal & Environmental Engg (HYDRO 2005), SIT Tumkur, India, 171-179.

120. Mahesha A., and H. Ramesh (2004). The role of participatory rural appraisal in water supply and sanitation project, Proc. Of National Symposium on Natural Resources Management for Sustainable Development, December 3-4, UVCE, Bangalore, 108-113.

121. Ramesh, H. and A.Mahesha, (2004). Watershed planning and management- an integrated approach, Proceedings of LAKE 2004, Int. Conf. on Conservation, Restoration and Management of Lakes and Coastal Wetlands, 9-13 December 2004.

122. B.M. Doddamani, A. Mahesha and M.K. Nagaraj (2003). Groundwater quality monitoring in aquifer management: A case study. Proc. 2nd International Conference on Water Quality Management, CBIP, held at New Delhi, I–77 to I-83.

123. B.M. Dodamani, M.K. Nagaraj and A. Mahesha (2003). Aquifer zonation based on electrical resistivity testing. Proc. National Conference on Hydraulics and Water Resources, HYDRO 2003, ISH Pune and CWPRS, Pune, pp 152-154.

124. M.K. Nagaraj, A. Mahesha and B.M. Doddamani (2002). Spatial variability of aquifer parameters in a regional groundwater system. Proceedings of National Conference on Hydraulics, Water Resources and Ocean Engineering (HYDRO 2002) held at IIT, Bombay, 151-153.

125. A. Mahesha and M.G. Satish, (2001). Performance of a battery of injection wells in coastal aquifers. International Conference on Civil Engineering, IISc, Bangalore, July 23 – 25.

126. M.K. Nagaraj, A. Mahesha, K. Subrahmanya and K.M. Shivananda (2000). Sea Water Intrusion in Gurupur River – A Case Study. Proc. Of the International Conference on "Innovative Technologies for Rural Water Supply and Environmental Sanitation" RUWATSS-2000 Vol. I, University of Roorkee, Roorkee, 159-172.

127. A. Mahesha and S.H. Nagaraja, (1993), Studies on advancing interface in coastal aquifers, Proc. 12th Sea Water Intrusion Meeting, Barcelona, Curso International de Hydrologia Subterranea, pp.333-341.

128. A. Mahesha and S.H. Nagaraja, (1993), Control of seawater intrusion through a battery of injection wells, Int. Conf. Hydrology and Water Resources, New Delhi, National Institute of Hydrology, Roorkee.

Book Chapters

1. Mahesha A. and Nagaraja, S.H. (1996). Control of seawater intrusion through a battery of injection wells. In: Singh, V.P. and Kumar, B. (Eds.) Water Quality Hydrology, Water Science and Technology Library, Vol 16, Springer, Dordrecht. https://doi.org/10.1007/978-94-011-0393-0_12
2. Ramesh, H. and A.Mahesha, (2011). Sustainable Water Resources Management. 1-40. In: Sustainable Development by C. Ghenai (Ed), INTECH Publishers, Croatia. http://dx.doi.org/10.5772/29493
3. Sharannya, T.M., Mahesha, A. (2024). Assessing Hydrological Changes in Response to Climate and Anthropogenic Factors. In: Satheeshkumar, S., Thirukumaran, V., Karunanidhi, D. (eds) Modern River Science for Watershed Management. Water Science and Technology Library, vol 128. Springer, Cham. https://doi.org/10.1007/978-3-031-54704-1_5

Other Publications

1. Ramesh, H. and A. Mahesha, 2006. Conjunctive use of groundwater and surface water-An overview, NITK Research Bulletin, 14(2), 1-6.
2. S.G. Mayya, N. Lakshman, M.K. Nagaraj, A. Mahesha, Mr. Manu, 2003. Rural water supply scheme under Rajiv Gandhi Drinking Water Mission for Eleven Villages of Mangalore Taluk, Final Design Report, 264 pp.
3. S.G. Mayya, N. Lakshman, M.K. Nagaraj, A. Mahesha, 2002. Rural water supply scheme under Rajiv Gandhi Drinking Water Mission for eleven villages of Mangalore Taluk, Conceptual Design Report, 178 pp.
4. S.G. Mayya, N. Lakshman, M.K. Nagaraj, A. Mahesha, 2001. Pre-feasibility report for the vented dam across the Gurupur River. D.K.Zilla Panchayath, Mangalore, 28 pp.

Doctoral Research Supervision

Completed – 13; Ongoing-3

Sl No	Name of the Scholar	Title of the Thesis	Year of award
1.	Vinod, D.	Development of seasonal non-stationary IDF relationships at river basin scale under changing climate	2025
2.	Surajit Deb Berma	Evaluation of the water budget components of the Brahmaputra River basin using satellite data	2023
3.	Chythanya Krishnan	Spatio-temporal analysis of rainfall and groundwater modeling in the west coast basins of India	2023

4.	Sharannya T.M.	Hydrological Impact of Land Use and Climate Change on the West Coast River Basins of Karnataka	2022
5.	Dineshkumar M.	Multivariate Analysis of Hydro-Meteorological Extreme Events	2022
6.	Amogh M.	Assessment of climate change impacts on river basins originating in the Western Ghats of India	2017
7.	K. Subrahmanya	Hydro-geological studies on coastal wetland – A case study	2017
8.	Lathashri U.A.	Predictive Simulation of Flow and Solute Transport for Managing the Coastal Aquifer of Dakshina Kannada District, Karnataka, India	2016
9.	Chandre Gowda C. (co-guide)	Stream flow modeling technique for ungauged catchments and operation policy for vented dams in series	2015
10.	S.S.Honnana Goudar Co-guide)	Studies on aquifer characterization and seawater intrusion vulnerability assessment of coastal Dakshina Kannada District	2015
11.	Vyshali	Studies on saltwater intrusion in coastal D.K. district.	2009
12.	Rajeev Shetkar	Studies on the efficacy of vented dams across the rivers of the DK district	2009
13.	B.M. Dodamani	Groundwater assessment and management for a coastal aquifer system	2008
14.	H. Ramesh	Integrated water resources management for sustainable development	2008
15.	Swarna Latshmi	Climate Change Impact on Droughts in India	Ongoing
16.	Ravichandra M.	Potential of Hydro-Dynamic Models for the Assessment of Flood Risk in Tidal-Influenced Maigue River Catchment, Ireland	Ongoing

R& D Projects

1. *Impact of Climate Change on Water Resources in River Basins from Tadri to Kanyakumari – River Basin Scale Analysis*. Ministry of Jal Shakti, Govt. of India. 2018-22; 34.159 Lakhs. (PI: Prof. Eldho, IIT Bombay; Co-PIs: Amai Mahesha, Amba Shetty, K. Varija and H. Ramesh)
2. *Unravelling Submarine Groundwater Discharge (SGD) zones along the Indian Subcontinent and its islands (Mission SGD)- Pilot Study.* Ministry of Earth Science, Govt. of India. 2018-22. 17.16 Lakhs (Co-PI)
3. *Strengthening PG teaching and research – Spectro radiometer and Random wave generator with accessories*. Dept. of Science & Technology, Govt. of India. 2014-19. 220 Lakhs (Co-PI)
4. *Status report on the efficacy of vented dams across the river Netravathi*. Dept of Science & Technology, Govt of India. 2007-08. 0.4 Lakhs.
5. *Studies on saltwater intrusion in the coastal D.K. district*. Ministry of Water Resources, Govt. of India. 2004-08; 14.5 Lakhs.
6. *Groundwater assessment and management of NMPT area*. New Mangalore Port Trust, Mangalore. 2000-03, 6.5 Lakhs (Co-PI).

Consultancy Works

1. *Feasibility study on coastal reservoir construction to impound Netravathi River flood waters: A sustainable strategy for water resources development for Mangalore*. Chairman, CSSP, Indian Institute of Science, Bengaluru- 12. May – Aug. 2017.
2. *Inspection and assessment of the removable sand quantity in the sand bars of the Netravathi, Gurpur, Nandini and Shambhavi Rivers of DK dist*. Dy. Director, Dept of Mines & Geology, Mangalore. January – May 2017.
3. *Inspection and assessment of the removable sand quantity in the sand bars of the Kali, Gangavali and Aghanashini Rivers of the UK district*. Dy. Director, Dept of Mines & Geology, Karwar. January – February 2017.
4. *Inspection and assessment of the removable sand quantity in the sand bars of Sharavathi, UK dist.* Dy. Director, Dept of Mines & Geology, Karwar. August – December 2016.
5. *Surge analysis for lift 3 of Chintalpudi irrigation schemes.* Superintending Engineer, ISRMC Circle, Eluru, AP. May -September 2013. (Co-PI).
6. *Surge analysis for lifts 2 & 3 of the Chintalpudi irrigation schemes*. Superintending Engineer, ISRMC Circle, Eluru, AP. May-July 2013. (Co-PI).
7. *Surge analysis for lifts 1,2, and 3 of the Chintalpudi irrigation schemes.* Superintending Engineer, ISRMC Circle, Eluru, AP. March – September 2013. (Co-PI).
8. *Comprehensive study for the drainage system for the MSEZ land during the 2012 monsoon.* MSEZ Ltd., Mangalore, February – May 2012. (Co-PI).
9. *Comprehensive study for the effect of river water level during flood conditions due to the strengthening of the river bank of the Gurpur River on the Panambur side.* MSEZ Ltd., Mangalore, February – April 2012 (Co-PI).
10. *Comprehensive drainage system for underground streams in MSEZ-graded plots.* MSEZ Ltd., Mangalore, February – May 2012 (Co-PI).
11. *Stormwater drainage study in MRPL, MSEX Corridor and OMPL areas.* MSEZ Ltd., Mangalore. April – June 2010 (Co-PI).
12. *Adequacy of drainage in the MSEZ area.* MSEZ Ltd., Mangalore. April -June 2009 (Co-PI).
13. *Cost estimation of AMR dam.* MSEZ Ltd., Mangalore. March – May 2009 (Co-PI).
14. *Hydrogeology of Kudur Farm, Kundapur.* Biome Env. Soln. Pvt. Ltd., Bangalore. May – July 2006. (Co-PI).
15. *Consultancy on the adequacy study of the existing raw water system.* MRPL, Mangalore. May -September 2007. (Co-PI).
16. *Depth and yield of the well along the bank of the river Netravathi.* Pavoor Gram Panchayat, Pavoor. February -April 2007.
17. *Yield test of a new open well.* NMPT Mangalore. March – May 2006.
18. *Design of water storage tanks at the ground level.* Mangalore Refineries and Petro Chemicals Ltd., May – September 2005 (Co-PI).
19. *Yield Test for open and bore wells on the campus.* Resident Engineer, NITK, Surathkal. January -May 2005.

20. *Design of effluent treatment plant.* New Pai Sales Corporation, Mangalore. September-November 2003.
21. *Design of Vented Dam at Maravoor for rural water supply project for 11 villages of Mangalore Taluk from Gurupur River under Rajiv Gandhi Drinking Water Mission.* D.K. Zilla Panchayath, Mangalore. 2002-14. (Co-PI).
22. *Investigations on waterlogging and the source of pollution around MRPL.* January – May 2000. (Co-PI)
23. *Design of Oil Catcher.* Mangalore Refinery & Petrochemicals Ltd., Mangalore. January – March 1999. (Co-PI).
24. *Design of Storm Water Drainage.* Mangalore Refinery & Petrochemicals Ltd., Mangalore. 1997-98 (Co-PI).

Administration

Institute Level:

1. Faculty in charge of Guest House (2013 – 2015)
2. Associate Dean (PG & Research) – Aug. 2007 – Aug. 2010.
3. QIP Coordinator – Jan. 2008- Aug. 2010.
4. Member, Implementation Committee, DASA – 2010
5. Presiding Officer for JMET, GATE and JEE during 2008, 09 and 2010.
6. Member, Common Admission Committee for MTech Program for NITs
7. Academic Committee for Convocation during 2008, 2009 and 2010
8. Member, Senate (2007 to date)
9. Convener of Green Engineering during Engineer 2008, 09 and 10.
10. Faculty Adviser for Events during the INCIDENT of 2008, 09 and 10.
11. Member, Anti-Ragging Committee during July – September of 2008, 09 and 10.
12. Counsellor, IGNOU for Open Channel Flow and Hydraulic Structure for Civil Engg Students during 2008, 09 and 10.
13. Member, Institute Water Management Committee

Department Level:

1. Head of the Department: March 2017-March 2019
2. Chairman DRPC, DPGC 2017-19
3. Coordinator for M. Tech. (WREM) Accreditation program 2014-15
4. Departmental coordinator for B.Tech. (Civil) Accreditation 2013-14
5. Departmental TEQIP Coordinator 2004-09.

6. Departmental Academic Affairs Committee during 2004-2009.
7. Secretary, DPGC during 2005-06.
8. Time-table In-charge 2001-2004.
9. Secretary DRPC during 2006-07.
10. Chairman, DUGC- 2011-12.

Awards

Prof. Satish Dhawan State Award 2012- The Department of Science & Technology, Govt. of Karnataka, conferred Prof. Amai Mahesh with Prof. Satish Dhawan Young Engineer State Award 2012.



Prof. Satish Dhawan Young Engineer State Award 2012 was conferred to Dr Amai Mahesh by the Honourable Chief Minister of Karnataka on June 16, 2014, at the Award ceremony held at JN TATA Auditorium, IISc, Bangalore.

Master's Thesis supervision

Sl No	Students	Title of the Thesis	Year
1	R Vishnuraj	Characterization of Max-stable processes and non-linear surface response models for daily rainfall extremes across India	2026
2.	Pooja, S.	Teleconnections and network-based analysis of extreme and total monthly rainfall over India	2026
3.	Anjima, T.	Threshold-based drought classification in India using SPI and SPE indices	2026
4.	Umamalleshwar Rao, M.	Indian monsoon variability and extreme rainfall events influenced by the major climate drivers	2025

5.	J. Raj Kumar	Non-stationary GEV modeling for climate-responsive IDF curves: extreme rainfall analysis across Indian cities	2025
6.	V.V. Navya Laxmi	Detection and attribution of sequential extreme weather events in India	2025
7.	Renuka, S.	Modeling of short-term meteorological drought under a changing climate over Gujarat, India	2024
8.	Sourab Desai	Compound extremes under a changing climate	2024
9.	Harikrishna, M.	A multivariate Index-Flood approach for flood frequency analysis in ungauged watersheds	2024
10.	Archana, T.R.	Decadal trends and climatic influences on flash droughts and flash floods in Indian cities	2024
11.	M. Salim Anser	Multi-Layer Perceptron-Based Groundwater Modeling Using IMERG Precipitation Data: A Comparative Study of Optimization Algorithms	2023
12.	Rajendra Raj	Downscaling algorithms for CMIP6 GCM daily rainfall over India	2023
13.	Jagrathi Gautham	Evaluation of GPM IMERG satellite precipitation for rainfall-runoff modelling in Great Britain	2023
14.	Besty Benny	Fortnightly SPI trend analysis for drought characterization in India	2023
15.	Devi Krishna	Impact of climate change on streamflow of the Kariangode River basin	2022
16.	Aiswarya Jayakumar	Rainfall-runoff simulation approaches for Manimala River basin, Kerala	2022
17.	Jadhav Shivanand	Impact of climate change on lower Krishna basin flow	2022
18.	Roopesh M.	Estimating irrigation water use by high-resolution remote sensing soil moisture	2022
19.	Manikandan S.	Water balance modelling of large rivers using mSIM	2020
20.	Amrutha K.	Characterizing the effects of large-scale climatic phenomena on drought in India using wavelet coherence	2020
21.	Uttarwar Sameer Balaji (M.Tech. by Research)	Risk assessment of hydro-climatic variables on groundwater levels in humid, tropical coastal aquifers using bivariate Archimedean copulas	2019
22.	Krishna S.	Sensitivity analysis of a conceptual, lumped model using VARS-TOOL	2019
23.	Sruthi S. Kumar	Simulation of flow and solute transport for the coastal aquifer of the Pavanje River basin using mSim toolbox and COMSOL multi-physics	2019
24.	B. Suresh	Feature extraction by using MOD 13Q1 data: A case study on the Rayalaseema region	2018
25.	Namitha E.S.	Land use, land cover change and climate change impact on surface water-groundwater interaction at the Netravathi River basin	2018
26.	Arya Sajeev	Temporal bivariate drought characterization of two contrasting climates in India using copula	2018
27.	Sharannya T.M.	Hydrologic impact of climate change on the Gurupura catchment, Karnataka	2017
28.	Anjali V.	Trend analysis of climatic variables and extreme indices for Kerala	2016

29.	Haritha M.	Trend analysis of rainfall and evaluation of standardized precipitation index for Karnataka	2016
30.	Vijay Suryawanshi	Assessment of soil erosion and groundwater potential of Pavanje River basin	2016
31.	Shivali Dubey	A global view of variations in aerosol optical properties using OMI data sets (2005-2014)	2016
32.	Vineeth V.	Evaluation of domestic water tariff	2015
33.	Hima Bindu B.	Design of the proposed rural water supply scheme from Gurpur River	2015
34.	Jibin Joseph	River basin scale hydrological modeling and climate change impact assessment using SWAT	2015
35.	K. Indu Sowmya	Simulation of shallow water waves along the west coast of Karnataka using the SWAN wave model	2014
36.	Neenu K.	Studies on the effect of freshwater draft on saltwater intrusion in coastal aquifers	2014
37.	Pankaj Dhote	Modeling of river-aquifer interactions: A case study	2014
38.	M. Shafeer K.T.	Construction delay analysis	2013
39.	Vysakh A.	Risk management of construction companies in the context of recession	2013
40.	Vijayalaxmi	Cash flow projection refinement using risk analysis	2013
41.	Usha A..	Characterization of large diameter wells in shallow, coastal unconfined aquifers	2013
42.	Priyanka B.N.	Parametric studies on saltwater intrusion into coastal aquifers using SEAWAT	2013
43.	Shashidhar	Watershed characterization of sub-basin of the Gurpur River	2012
44.	Seethalraj	Deficit irrigation management for some major tropical crops	2012
45.	Archana Kumar	Climate change impact on west-flowing rivers of Karnataka	2012
46.	Sumanth Shetty	Studies on instream water storage of the Pavanje River in the marine environment	2011
47.	Arjun Rao	Urban flood modeling using LiDAR data	2011
48.	Santhosh, K.C.	Groundwater flow and transport modeling of the Pavanje basin using GMS	2011
49.	Mythri DJ	Effect of climate change on Netravathi River flow	2010
50.	Archana	Hydrological analysis of Pavanje River	2010
51.	Jugul P. Saldanha	Characterization of coastal aquifer system – A case study	2009
52.	Lathasri UA	Assessment of Vulnerability of Coastal Aquifer to Saltwater Intrusion	2007
53.	Moumita P.C.	Saltwater intrusion modeling using SUTRA	2005
54.	Nageshwara Rao	Draft operation policy for coastal aquifers	2004
55.	Lakshmikanth	Performance of the subsurface barrier under multiple freshwater pumping scenarios against saltwater intrusion in coastal aquifers	2003
56.	Rahim Khan P.	Effect of subsurface barrier for the control of saltwater intrusion under multiple drawdown conditions	2002
57.	G. Nagasekhar Reddy	Subsurface barrier analysis for the control of saltwater intrusion	2001
58.	P.V. Sathyanarayana	Effect of subsurface barrier on saltwater intrusion	2000

59.	Mohan Babu	Effect of spatial variability of hydraulic conductivity on saltwater intrusion	1999
60.	Shivanand K	Studies on water quality around the MRPL area	1998

B.Tech. Project supervision

Sl No	Students	Title of the Thesis	Year
1.	G. Chaurasia, R. Meena and S. Saroha	Interface for groundwater level prediction using deep learning	2022
2.	Mr Niranjan A. (co-guide)	Hydraulic transients in a water conveyance system	2014
3.	Ms. Vinitha C	Effect of fresh water pumping in salt water intruded areas	2003

Courses Organized/ Coordinated

1. National Workshop on "Conservation of West Flowing Rivers in Coastal Karnataka" held at NITK Surathkal during Dec. 14-15, 2012 – Joint Secretary.
2. Deans' (Academic) Meet of NITs held at NITK Surathkal during April 3-4, 2010 – Coordinator
3. **National Conference** on Sustainable Water Resources Management (SWaRM- 2010) held at NITK Surathkal during Jan. 7-8, 2010 – Joint Secretary.
4. Refresher course on **'Irrigation Water Management'** for PWD and Irrigation Engineers of Karnataka held at NITK, Surathkal during Aug.6-10, 2007.
5. **ISTE Winter School on Water Resources Assessment and Management** held at KREC, Surathkal during 8-20 January, 2001 (Joint Organizer).
6. **Finite Element Course** for KPCL Engineers held at SJCE, Mysore, during 15-20 November 1999 (Joint Organizer).
7. **Refresher Course on Hydrology** for Engineers for PWD Engineers held at KREC, Surathkal during Aug. 19 – 23, 1997.

Invited Talks

1. *Impacts of climate change on river basins of Kerala and Karnataka* at the National Symposium on Hydrological Impacts of Climate Change and Land Use Change on Water Resources of River Basins in Kerala held at CWRDM during May 27-28, 2022.
2. *Coastal aquifers of the west coast and seawater intrusion at the conference on Water Resources of Peninsular India, held at Satish Dhawan Auditorium, IISc, Bengaluru,* during Feb. 11-13, 2020.
3. *Impact of climate change on river basins of Karnataka* at the National Workshop on Water Resources of River Basin Scale held at IIT Bombay during November 15-16, 2019.
4. *Saline water intrusion in coastal aquifers* at the three-day workshop on coastal reservoirs as a sustainable strategy for water security held at NITK Surathkal during 22-24 July, 2019.

5. *Storage schemes for water supply projects* at the CCE Course for PWD Engineers held at NITK Surathkal during Aug. 24-28, 2015.
6. *Design of Vented Dams* at the CCE Course for PWD Engineers held at NITK Surathkal during July 27-31, 2015.
7. *Design of Anicuts* at the CCE Course for PWD Engineers held at NITK Surathkal during July 27-31, 2015.
8. *Micro hydel plants along the Netravathi River from a storage perspective at the National Conference on Renewable Energy Systems and Engineering held during November 7-8, 2014,* at the Vivekananda College of Engineering & Technology, Puttur, Karnataka.
9. *Application of Galerkin finite element method* – Short-term course on application of Finite Element Method in Civil Engineering, May 30-June 3, 2011, NMAMIT Nitte.
10. *Galerkin finite element method* – Short-term course on Application of Finite Element Method in Civil Engineering, May 30- June 3, 2011, NMAMIT Nitte.
11. *Canal recharge* – Refresher course for PWD Engineers held at NITK during October 2008.
12. *Coastal aquifer management* – AICTE/ISTE Summer school on 'Water Resources Development and Management' held at NITK Surathkal during July 28- Aug. 8, 2008.
13. *Micro-irrigation system* – Refresher Course for PWD and Irrigation Engineers of Karnataka at NITK Surathkal during Aug. 6-10, 2007.
14. *Coastal aquifers management*- Refresher Course for PWD Engineers at NITK Surathkal during 18-21 December 2006.
15. *Control of seawater intrusion in coastal aquifers* -- UGC/SERC School on Modeling Groundwater Pollution during 2-29 May, 2005 at UVCE Bangalore.
16. *Saltwater-freshwater interfaces in coastal aquifers*- UGC/SERC School on Modeling Groundwater Pollution during 2-29 May, 2005 at UVCE Bangalore.
17. *Urban drainage system*- AICTE/ISTE Winter school on Design and Management of Urban Core Infrastructure in India during Dec. 20-31, 2004 at NITK, Surathkal.
18. *Finite element application to groundwater modeling*- AICTE/ISTE Winter school on Finite Element application to Engineering Problems, during Dec. 6- 18, 2004 at NITK, Surathkal.
19. *Galerkin finite element method*- AICTE/ISTE Winter school on Finite Element application to Engineering Problems, during Dec. 6- 18, 2004 at NITK, Surathkal.
20. *Salt water intrusion problems-data collection, simulation and validation of numerical model.* - Workshop on Latest Trends in Ground Water Assessment and Management held at NITK, Surathkal during 18-20 June, 2002.
21. i)*Numerical techniques in Groundwater modelling; ii) Mathematical modelling of saline water intrusion – at the faculty training course on Groundwater Assessment Techniques held at CWRDM, Calicut,* during October 3 – 20, 2001.
22. *Groundwater Management in Coastal Areas - Methods to Combat Saltwater Intrusion* - at the AICTE/ISTE Winter school on Role of Geology and Geotechnology in Country Planning and development held at KREC, Surathkal during Dec. 27, 1999-Jan. 8, 2000.
23. *Seepage Analysis Under Gravity Dams Using Finite Element Method* - at the Finite Element Course for KPCL Engineers held at SJCE, Mysore during 15-20 November, 1999.

24. *Weighted Residual Methods* - at the Finite Element Course for KPCL Engineers held at SJCE, Mysore during 15-20 November 1999.
25. *Hydrographs* - at the Refresher course on Hydrology for PWD Engineers held at KREC, Surathkal during 9-13 November, 1998.
26. *Well design and maintenance* - at the refresher course on Hydrology for PWD Engineers held at KREC, Surathkal during 9-13 Nov., 1998.
27. *Groundwater Flow Modelling using Finite Elements - at the Course on Finite Element Method on April 24, 1998,* at KREC, Surathkal.
28. *Salt-water intrusion and its prevention* at the workshop on Groundwater Development on Jan. 17, 1998, held at M.I.T., Manipal.

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