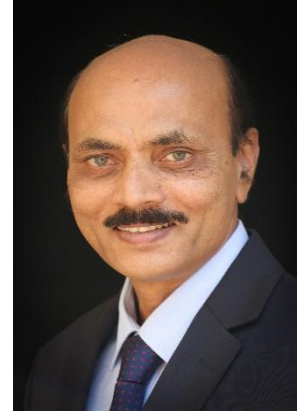


Dr. Dwarakish. G. S.  
Professor [HAG]  
Former HOD, Dean [P &D] & Dean [Academic Programs]  
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National Institute of Technology Karnataka, Surathkal  
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Dr. Dwarakish G. S. hails from Mandya taluk and district, completed his early education in B. Gowdagere and received his B.Tech. degree in Civil Engineering in 1990 and M.Tech.[Hydraulics] in 1993, both from The National Institute of Engineering, Mysore, University of Mysore, Karnataka, and Ph.D. degree in 2001 from Institute of Remote Sensing, Anna University, Chennai, India.

He has started his teaching career during 1993 as Assistant Lecturer and currently he is serving as Professor [HAG], in the Dept. of Water Resources and Ocean Engineering, NITK, Surathkal.

His areas of specialization are Coastal Engineering, Remote Sensing, Digital Image Processing and GIS. He has guided 20 B.Tech. Projects, 64 M.Tech. Dissertations, 8 M.Sc. projects and 19 Ph.D. Scholars and 1 Post-Doctoral Fellow. Currently guiding 2 batches of B.Tech. Students, 4 M.Tech. Students and 4 Ph.D. Scholars.

He has completed 6 R & D projects funded by MHRD, DST, ISRO/RESPOND, ICMAM-PD & MoEF and currently executing 1 project. He has published 320 plus technical papers in International/National journals and conferences. He is a Guest Editor-In-Chief of special issue on *Remote Sensing and GIS Applications* of International Journal of Earth Sciences and Engineering and Guest Editor of Aquatic Procedia, published by Elsevier.

Dr. Dwarakish has also served as Associate Dean [Students' Welfare], Dean Planning and Development, Dean [Academic Programs], Faculty In-charge Testing & Consultancy, Dy. Coordinator NIT Goa, Head of the Department Water Resources and Ocean Engineering, Chairman Institute Grievances Redressal Committee and Chairman Staff Recreation Club.

He is a Fellow of Institution of Engineers, India, Fellow of Indian Water Resources Society, life member of ISTE, ISG, ISRS, IAH, ISH, Environmental Research Foundation, Viveka Sampada and Kannada Sahithya Parishath. He is also one of the four members of Panel of National Experts, to review the ADB coastal erosion protection projects.

He had visited Austria, Canada, Germany, Italy, Japan, Malaysia, Sri Lanka and USA for research interactions and for presenting research papers.

He is recipient of prestigious Prof. Satish Dhawan Young Engineers State Award for the year 2013, instituted by the Government of Karnataka in recognition of outstanding contribution in the field of Engineering Sciences, Indo-US Consortium for Engineering Education [IUCEE] Faculty Award 2016, for the outstanding teaching and academic achievements and Sir. M. Visveswaraya Engineer Award 2019 by Association of Civil Engineers, Mandya.

**Dwarakish G. S.**

Professor (HAG)

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## Education

Ph. D., (Coastal Engineering, Remote Sensing & GIS), Institute of Remote Sensing, Anna University, Chennai, India (2001).

M.Tech. (Hydraulics) (1993), National Institute of Engineering, Mysore University, Mysore, India. Completed in First class with distinction.

B.Tech. (Civil Engineering) (1990), National Institute of Engineering, Mysore University, Mysore, India. Completed in First class with distinction.

College Education, National College, Basavanagudi, Bangalore, India.

High School Education, Ryots Education High School, Hanakere, Mandya, Karnataka, India.

Primary Education, Govt. Higher Primary Boys School, B. Gowdagere, Mandya, Karnataka, India.

## Professional Experience

|            |            |                                                       |
|------------|------------|-------------------------------------------------------|
| 29/10/2024 | Till Date  | Member, Board of Governors                            |
| 07/11/2023 | 07/05/2026 | Dean Academic                                         |
| 01/01/2018 | 31/07/2018 | Dean Planning and Development                         |
| 30/08/2017 | 29/08/2019 | Chairman, Institute Grievance and Redressal Committee |
| 27/03/2015 | 14/03/2017 | Professor and Head of Department                      |
| 09/03/2015 | Till Date  | Professor [4-Tier Faculty Structure]                  |
| 17/02/2010 | 09/03/2015 | Professor                                             |
| 17/02/2006 | 17/02/2010 | Associate Professor                                   |
| 17/02/2003 | 17/02/2006 | Assistant Professor                                   |
| 17/02/2000 | 17/02/2003 | Senior Lecturer                                       |
| 17/02/1995 | 17/02/2000 | Lecturer                                              |
| 08/08/1993 | 17/02/1995 | Assistant Lecturer                                    |
| 1990       | 1991       | Site Engineer                                         |

## Life Membership of Professional Bodies

|                       |                                                            |                                                              |
|-----------------------|------------------------------------------------------------|--------------------------------------------------------------|
| Member                | Indian Society of Remote Sensing (MISRS)                   | <a href="http://www.isrsindia.org">www.isrsindia.org</a>     |
| Member [LM 712]       | Indian Society for Hydraulics (MISH)                       | <a href="http://www.e-ish.net">www.e-ish.net</a>             |
| Member [LM 628]       | Indian Society of Geomatics (MISG)                         | <a href="http://www.isgindia.org">www.isgindia.org</a>       |
| Member [LM 52236]     | Indian Society of Technical Education (MISTE)              | <a href="http://www.isteonline.com">www.isteonline.com</a>   |
| Member [92950546]     | Institution of Electrical and Electronics Engineers [IEEE] | <a href="http://www.ieee.org">www.ieee.org</a>               |
| Member                | Indian Association of Hydrology (MIAH)                     | <a href="http://www.iah/index.html">www.iah/index.html</a>   |
| Member [88543]        | Kannada Sahithya Parishath                                 |                                                              |
| Member [LM 513]       | Ocean Society of India                                     | <a href="http://www.oceansociety.in">www.oceansociety.in</a> |
| Member [LM 2022-7924] | Indian Water Resources Society                             | <a href="http://www.iwrs.org.in">www.iwrs.org.in</a>         |
| Member [F-1276715]    | Institution of Engineers (India)                           | <a href="http://www.ieindia.org">www.ieindia.org</a>         |

## Courses Taught

**Undergraduate Level**

**Post Graduate Level**

Engineering Mechanics

Strength of Materials

Mechanics of Materials

Fluid Mechanics

Irrigation Design and Drawing

Remote Sensing & Geographical Information  
System

Geomatics Applications in Civil Engineering

Digital Image Processing

Strength of Materials Lab.

Fluid Mechanics Lab.

General Oceanography

Principles of Remote Sensing

Geomatics Applications for Water Resources  
Engineering

Geomatics Applications for Coastal Engineering

Digital Image Processing

ICZMP

Digital Image Processing Lab.

Remote Sensing & Geographical Information  
System Lab.

### Sponsored Research Projects Undertaken [7+2]

| Period            | Title of the Project                                                                                                    | Amount (Rupees)<br>and Sponsored Agency                                                                                                              | Status    |
|-------------------|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 1999<br>–<br>2001 | Modelling of Suspended Sediment Concentration off Mangalore Coast<br><b>(As Research Scholar)</b>                       | <b>5.0 Lakhs</b><br>RESPOND Programme Indian Space Research Organisation, Dept. of Space, Govt. of India.                                            | Completed |
| 2003<br>–<br>2005 | Nearshore Processes Information System for Mangalore Coast- A RS and GIS Approach.<br><b>(Principal Investigator)</b>   | <b>10 Lakhs</b><br>Ministry of Human Resources and Development, Govt. of India.                                                                      | Completed |
| 2003<br>–<br>2006 | Management of Tidal Inlets along West Coast of India<br><b>(Co-Investigator)</b>                                        | <b>45 Lakhs</b><br>Integrated Coastal Marine Area Management – Project Directorate (ICMAM-PD), Department of Ocean Development (DOD), Govt. of India | Completed |
| 2004<br>–<br>2011 | Integrated Coastal Zone Management Plan for Karnataka Coast<br><b>(Principal Investigator)</b>                          | <b>23 Lakhs</b><br>Ministry of Environment and Forestry, Govt. of India.                                                                             | Completed |
| 2006<br>–<br>2011 | RS & GIS Application for Sustainable Management of Sacred Grooves in Kodagu District<br><b>(Principal Investigator)</b> | <b>11.65 Lakhs</b><br>DST, Govt. of India.                                                                                                           | Completed |
| 2006<br>–<br>2011 | Analysis of Satellite Derived Wind and Wave Parameters of Karnataka Coast<br><b>(Principal Investigator)</b>            | <b>12.5 Lakhs</b><br>RESPOND Programme<br>Indian Space Research Organisation, Dept. of Space, Govt. of India.                                        | Completed |
| 2014              | To strengthen the post-graduate teaching and research facilities in the Department.<br><b>(As H.O.D)</b>                | <b>220 Lakhs</b><br>DST, Govt. of India.                                                                                                             | Ongoing   |
| 2016              | Coastal Ocean Technology [COT]                                                                                          | <b>29 Lakhs</b><br>Ministry of Earth Sciences (MoES), Govt. of India.                                                                                | Ongoing   |
| 2017              | National Post Doctoral Fellowship [N-PDF]<br><b>(As Mentor)</b>                                                         | <b>19 Lakhs</b><br>DST- SERB, Govt. of India.                                                                                                        | Completed |

## Bachelor' s Degree (B.E./B.Tech.) Project Guided [23]

## Master' s Degree (M.Tech.) Dissertation Guided [78+4]

| Sl. No. | Title of Thesis                                                                                  | Name of the student | Year              | Placement of the Student                                                                         |
|---------|--------------------------------------------------------------------------------------------------|---------------------|-------------------|--------------------------------------------------------------------------------------------------|
| 1.      | Soil Conservation and Watershed Management using Remote Sensing and GIS Techniques: A Case Study | M. Anisha           | 1995<br>–<br>1996 | Assistant Executive Engineer, Govt. Of Andra Pradesh, Hyderabad, India                           |
| 2.      | Beach Sediment Characteristics Along Mangalore Coast                                             | Raghavendra Majaker | 1995<br>–<br>1996 | Working in PWD, Kerala State                                                                     |
| 3.      | A Study of Sediment Characteristics of Netravathi- Gurpur River Estuary and Neighbouring Beaches | V. Raghupal Reddy   | 1997<br>–<br>1998 | Working as a Marine engineer in Royal Haskoning- NewBombay                                       |
| 4.      | Shoreline Change Detection Through an Integrated Approach: A Case Study                          | Mallikarjuna Rao I. | 1998<br>–<br>1999 | Tata Consultancy Services, Present placement at USA                                              |
| 5.      | Modelling of Sediment Dynamics of Mangalore Coast through MIKE 21 and Remote sensing             | Sankar Babu K.      | 2001<br>–<br>2002 | After completing his Ph.D. from IIT, Madras, now working in coastal engg. Deptt. Govt. Of Dubai. |
| 6.      | Harbour Area Information System (HIS) Using RS and GIS                                           | Suresh Naik         | 2003<br>–<br>2004 | Working as a Design Engineer in coastal Engineering Software company, Pune                       |
| 7.      | Coastal Zone Information System for Mangalore Coast using RS, GIS, and V.B.6.0.                  | Rajaram             | 2005<br>–<br>2006 | Working as a Marine engineer in Royal Haskoning, New Bombay                                      |
| 8.      | Integrated Coastal Zone Management Plan for Udupi Coast Through RS and GIS                       | Vinay S.            | 2006<br>–<br>2007 | Working as a Marine engineer in Royal Haskoning, New Bombay                                      |
| 9.      | Effect of Coastal Dams on Coastal Processes                                                      | Babita M. K.        | 2007<br>–<br>2008 | Working for L & T construction company, Chennai                                                  |
| 10.     | EIA Studies in Mangalore Coastal Zone                                                            | Angel Zeba          | 2007<br>–<br>2008 | Working for Chemical Company in Chennai                                                          |
| 11.     | Proximity Analysis for Mangalore City using Remote Sensing, GIS, GPS, and VB 6.0                 | Namratha V.         | 2007<br>–<br>2008 | Working for GIS Company at UK                                                                    |

|     |                                                                                                                 |                  |             |                                                                        |
|-----|-----------------------------------------------------------------------------------------------------------------|------------------|-------------|------------------------------------------------------------------------|
| 12. | Development of Sediment Yield Model for Periyar River Basin Through RS, GIS & GPS                               | Preethi Jacob    | 2008 – 2009 | Working as faculty at Dayanand Sagar College of Engineering, Bangalore |
| 13. | Modelling of Shoreline Configuration Along NITK and Cochin Coast                                                | Indu Shekhar     | 2008 – 2009 | Working for Coastal Structures Construction Company                    |
| 14. | Modelling of Coastal Sediment Dynamics: A Case Study                                                            | Amruth Karjagi   | 2009 – 2010 | Working for L & T, Chennai                                             |
| 15. | Study of Shoreline Configuration Using Multi-date Satellite Data for NITK Beach                                 | Mohan Kumar      | 2009 – 2010 | Working for GIS Company, Bangalore                                     |
| 16. | Numerical Modelling of Shoreline Configuration – A Case Study                                                   | Ms. Arya Ratish  | 2010 – 2011 | Working for L & T, Chennai                                             |
| 17. | Applications of RS GIS and GPS for Sacred Groves Monitoring and Management                                      | Harish Kumar S.  | 2010 – 2011 | Working for ITC, Bangalore                                             |
| 18. | Groundwater Level Fluctuation Along Mangalore Coast Through Conventional and Modelling Approach                 | Suman B. S.      | 2010 – 2011 | Looking after his own construction company, Shimoga                    |
| 19. | Numerical Modelling of Sediment Dynamics: A Case Study                                                          | Pavithra N. R.   | 2011 – 2012 | Working as a faculty in BIT, Bangalore                                 |
| 20. | Shoreline Configuration Through Conventional Methods                                                            | Sabarimon        | 2011 – 2012 | Working as a site Engineer, Kerala                                     |
| 21. | Developments in Capital and Maintainance Dredging : NMPT                                                        | Sameer           | 2011 – 2012 | Working as a site Engineer, Kerala                                     |
| 22. | Study of Sediment Dynamics Around Mulki-Pavanje Rivermouth Through Statistical Analysis                         | Mrinal S. Murali | 2012 – 2013 | Working as Faculty                                                     |
| 23. | Planning of Marine Facilities for an LNG Terminal– A Case Study for the Development of an LNG Terminal in India | Rushith M. D.    | 2012 – 2013 | Working as Site Engineer                                               |
| 24. | Prediction of Tides Along Karwar Coast Using Artificial Neural Networks                                         | Shetty Rakshith  | 2012 – 2013 | Working as Design Engineer for TCE                                     |
| 25. | Flood Risk Assessment in the Bagmathi and Adhwara River Basins, North Bihar Plains, India                       | Tilak N.         | 2012 – 2013 | Working as Faculty                                                     |

|     |                                                                                                                                                   |                           |                   |                                           |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------------|-------------------------------------------|
| 26. | Development of Flood Alert System                                                                                                                 | Uday Kumar                | 2012<br>–<br>2013 | Working as a RS specialist                |
| 27. | Development of Algorithm for the Study of Sediment Dynamics Through Sediment Trend Analysis: A Case Study of Mangalore Coast, West Coast of India | P. Sri Ram Kumar          | 2013<br>–<br>2014 | Working for L & T, Chennai                |
| 28. | Wave Forecasting Along Karnataka Coast Using Artificial Neural Networks                                                                           | Deepthi I. Gopinath       | 2013<br>–<br>2014 | Working as Assistant Professor            |
| 29. | Application of Neural Network Model for LU/LC Classification of Satellite Image                                                                   | Nujuma Nazimudhin         | 2013<br>–<br>2014 | Working as Assistant Professor            |
| 30. | Impact of Regional Economic Growth on Spatial Development, Case Study of Dakshina Kannada and Udupi Districts (Karnataka)                         | S. D. Suman               | 2013<br>–<br>2014 | Working for Software company in Bangalore |
| 31. | Prediction and Analysis of Land Use/Land Cover Dynamics with Respect to Driving Factors in Netravati and Harangi River Basin                      | Gayathri K. Devi          | 2014<br>–<br>2015 | Working as Assistant Professor            |
| 32. | Flood Inundation Mapping for Bangalore Urban Area                                                                                                 | Rajeesh R.                | 2014<br>–<br>2015 | Working as Assistant Professor            |
| 33. | Prediction of Tides along Karnataka Coast Using PSO and Support Vector Machine                                                                    | Akhil M.                  | 2014<br>–<br>2015 | Working as Assistant Professor            |
| 34. | Wave Forecasting Along Karnataka Coast Using PSO and Support Vector Machine                                                                       | Liju K. V.                | 2014<br>–<br>2015 | Working for Software company              |
| 35. | Assessment of Wave Energy Potential Along West Coast of India through Numerical Modelling                                                         | Justin Thomas T.          | 2014<br>–<br>2015 | Working for Software company              |
| 36. | Shoreline Change Configuration and Coastal Protection Along Undivided Dakshina Kannada Coast- An Integrated Approach                              | L. Revanth Reddy          | 2015<br>–<br>2016 | Working as an Engineer in L & T, Chennai. |
| 37. | Coastal Sediment Dynamics through Numerical Modelling                                                                                             | Shabnum Suhura Shamsudeen | 2015<br>–<br>2016 | Working as Assistant Professor            |
| 38. | Hydromechanics Study for Netravathi Catchment Area                                                                                                | Fashamol T. M.            | 2015<br>–<br>2016 | Working as Assistant Professor            |

|     |                                                                                                                                                |                      |                   |                                                                        |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------|------------------------------------------------------------------------|
| 39. | Prediction and Forecasting of Ocean Parameters Through Soft Computing Techniques<br>- A case study                                             | Nithyapriya B.       | 2015<br>–<br>2016 | Pursuing her Ph.D. At IIT Bombay, Mumbai, under IITB-Monash Programme. |
| 40. | Pollutant Identification & Mapping Using RS & GIS                                                                                              | Vineet Kumar Powal   | 2016<br>–<br>2017 | Working in MNC in Delhi                                                |
| 41. | Runoff Estimation Using Advanced Geospatial Hydrologic Modelling Tools                                                                         | Jubina C. K.         | 2016<br>–<br>2017 | Working as Assistant Professor in College of Engineering Vadakara      |
| 42. | Development of a QGIS Plugin for the Application in RS & GIS                                                                                   | Barane Prathamesh K. | 2016<br>–<br>2017 | Working as JRF in Symbiosis Institute of Geoinformatics, Pune          |
| 43. | Hydrodynamic Analysis of Offshore Floating Wind Turbine Along Rameshwaram Kanyakumari Coast of Tamil Nadu                                      | S. Sharad Kumar      | 2016<br>–<br>2017 | Working as Technical Trainee in Chennai                                |
| 44. | Aerosol Optical Studies Using Spaceborne Measurements.                                                                                         | M. Gopika            | 2016<br>–<br>2017 | Working as Business Analyst in Bengaluru                               |
| 45. | Shoreline Monitoring and Management Through an Integrated Approach- A Case Study                                                               | Bhavya               | 2017<br>–<br>2018 | Working as Faculty                                                     |
| 46. | Analysis Climate Impacts on Costal Karnataka                                                                                                   | S. B. Gowthami       | 2018<br>–<br>2019 | Completed                                                              |
| 47. | Application of Geoinformatics for Prioritisation of Watersheds in Netravathi Catchment, Karnataka, India                                       | Waleed Makhdumi      | 2018<br>–<br>2019 | Pursuing his Ph.D. at NIT Karnataka, Surathkal                         |
| 48. | Coastal Vulnerability Assessment of the Kasaragod Coast in Kerala, West Coast of India                                                         | Anjita N. A.         | 2019<br>–<br>2020 | Pursuing her Ph.D. At IIT Bombay, Mumbai                               |
| 49. | Development of Graphical User Interface Spreadsheet to Perform Sediment Trend Analysis: A Case Study of Mangalore Coast                        | Aseem V.             | 2019<br>–<br>2020 | Assistant Engineer at Rashtriya Gram Swaraj Abhiyan                    |
| 50. | Automated Shoreline Detection from Satellite Imagery Using Image Processing Techniques and its Change Analysis Along Mulki-Pavanje River Mouth | Linda Regi           | 2019<br>–<br>2020 | Geo Analytics at WRI Indis's Sustainable Cities and Transport program  |
| 51. | Statistical and Hydrological Evaluation of Satellite Precipitation Products in Two                                                             | M. Satish Kumar      | 2019<br>–<br>2020 | Software Systems Engineer at TATA                                      |

|     |                                                                                                                                              |                    |                   |                                                  |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------|--------------------------------------------------|
|     | Diverse Contrasting River Basins: Nethravathi and Ponnaiyar                                                                                  |                    |                   | Consultancy Services Pvt Ltd                     |
| 52. | Future Land Use Land Cover Prediction of Netravati River Basin Through Cellular Automata Markov Chain Model                                  | Nayana N.          | 2019<br>–<br>2020 | Completed                                        |
| 53. | Port Performance Analysis Using DEA: A Case of NMPT Port                                                                                     | S. Chekatla        | 2019<br>–<br>2020 | Planning Engineer at Meka Infrastructure Pvt Ltd |
| 54. | Flood Frequency Studies of Sita Catchment, Karnataka, India                                                                                  | Soumya S. Nyamathi | 2019<br>–<br>2020 | Working at ATKINS                                |
| 55. | Selection of Algorithm for Land Use Land Cover Classification and Change Detection                                                           | Arnab Chowdhury    | 2020<br>–<br>2021 | Pursuing his Ph.D. at IIT Roorkee, Uttarakhand   |
| 56. | Oil Spill Trajectory Detection by GNOME and SAR                                                                                              | G. Masthan Wali    | 2020<br>–<br>2021 | GeoSpatial Analyst at Satsure                    |
| 57. | Drought Forecasting by Using Support Vector Machine Approach                                                                                 | Molaka Maruthi     | 2020<br>–<br>2021 | Completed                                        |
| 58. | Rapid Mapping of Cyclone Amphan (2020) Induced Flooding in Parts of West Bengal, India Using Automated Thresholding Algorithms on SAR Images | Rasheeda Soudagar  | 2020<br>–<br>2021 | Pursuing his Ph.D. at IIT Roorkee, Uttarakhand   |
| 59. | Ground Subsidence Monitoring with SAR Differential Interferometry in Chennai                                                                 | S. Jyotna          | 2020<br>–<br>2021 | Completed                                        |
| 60. | Oceanic Impact of Cyclone Phailin in The Bay of Bengal                                                                                       | Shrestha Rout      | 2020<br>–<br>2021 | Completed                                        |
| 61. | Shoreline Change Detection Using Coastsat and QGIS along Kasaragod Coastline, Southwest Coast of India                                       | G. Pavan Sai       | 2021<br>–<br>2022 | Completed                                        |
| 62. | Evaluation and Determination of Reliability on Advanced Neural Network models for Prediction of Soil Moisture                                | Nagashree G. E.    | 2021<br>–<br>2022 | Pursuing Ph.D. at IIT Roorkee, Uttarakhand       |
| 63. | Shoreline Change Analysis Along Thrissur Coast, Kerala Using MIKE 21                                                                         | Angayarkkani R.    | 2022<br>–<br>2023 | Working at TechnipFMC                            |
| 64. | Prediction of Groundwater Levels Using MODFLOW                                                                                               | Sagar Agarwal      | 2022<br>–<br>2023 | Completed                                        |

|     |                                                                                                                                      |                           |                   |                                          |
|-----|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------------|------------------------------------------|
| 65. | Impact of Land Use Land Cover Change on Runoff Characteristics of Kali River Basin, Karnataka                                        | Sreejith K. S.            | 2022<br>–<br>2023 | Working at WSP                           |
| 66. | Prioritisation of Sub-Watersheds for Soil and Water Conservation Practices – A Case Study of Upper Swarnamukhi Basin, Andhra Pradesh | Suraga M. R.              | 2022<br>–<br>2023 | Working at WSP                           |
| 67. | Automated Delineation and Species Identification of Individual Tree Crowns Using Mask R-CNN and UAV RGB Imagery                      | Gopalkrishna S.           | 2023<br>–<br>2024 | Working at HSBC bank                     |
| 68. | One Dimensional Flood Modelling of River Kaveri Using HEC-RAS                                                                        | Jyoti Prasad Gupta        | 2023<br>–<br>2024 | Pursuing PhD from IIT Kharagpur          |
| 69. | Study on Influence of Breakwater Structure on Flow Characteristics Using Numerical Modelling.                                        | Nisarga Amin              | 2023<br>–<br>2024 | Technip                                  |
| 70. | Urban pluvial flood modelling through SWMM and MIKE+ for Chennai city                                                                | Sindam Snikitha           | 2023<br>–<br>2024 | Working at ATKINS                        |
| 71. | Tidal Height Prediction Through Numerical Modelling                                                                                  | Sneha Krishnan            | 2023<br>–<br>2024 | Working at OEDEC Engineering Consultancy |
| 72. | Wave Energy Assessment and Wave Tide Dynamics along Central Coast of Kerala                                                          | Amegha Pratheraj          | 2024<br>–<br>2025 | Working at WSP                           |
| 73. | Wave Prediction using Artificial Neural Network                                                                                      | Athena Murali P.          | 2024<br>–<br>2025 | Worley                                   |
| 74. | A Parametric Study on the Effects of Integrating Oscillating Water Columns with a Floating Wind Turbine Semi-Submersible Platform    | Subrahmanian Namboodiri K | 2024<br>–<br>2025 | Technip                                  |
| 75. | Application of Machine Learning and HEC-RAS Model for Flood Inundation Mapping in Harangi Basin                                      | Navya S.                  | 2025<br>–<br>2026 | Working at WSP                           |
| 76. | Dinsar-Derived Glacier Dynamics Using Remote Sensing Data For Uttarakhand Glacier Region                                             | Aniket Yadav              | 2025<br>–<br>2026 | Working at Suhora                        |
| 77. | Design and analysis of an Offshore wind turbine jacket integrated with Oscillating water column                                      | Aswathi K. M.             | 2025<br>–<br>2026 | Working at Eka Infrastructure            |

|     |                                                                                                                         |                     |                   |               |
|-----|-------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------|---------------|
| 78. | Coastal Erosion and Shoreline Change along the Indian Coast: Evidence, Engineering Impacts, and Management Implications | Sreerag P. Kaimal   | 2025<br>–<br>2026 | Site Engineer |
| 79  | Marine Structure                                                                                                        | Anagha Babu         | 2026-<br>2027     | Ongoing       |
| 80  | Offshore structures                                                                                                     | Pranav V<br>Prakash | 2026-<br>2027     | Ongoing       |
| 81  | Climate Resilience assessment of Indian cities using Remote sensing                                                     | P. Anoop<br>Sreevas | 2026-<br>2027     | Ongoing       |
| 82  | Climate change impact                                                                                                   | Vivek S             | 2026-<br>2027     | Ongoing       |

### Master' s Degree (M.Sc.) Dissertation Guided [10]

| Sl. No. | Title of Thesis                                                                     | Name of the student  | Year              | Placement of the Student                     |
|---------|-------------------------------------------------------------------------------------|----------------------|-------------------|----------------------------------------------|
| 1.      | Web Based Information System for New Mangalore Port Trust                           | Shwetha Nayak        | 2004<br>–<br>2005 | Working as a faculty in Udupi                |
| 2.      | Coastal Zone Information System for D. K. Coast                                     | Nisha                | 2005<br>–<br>2006 | Working as a faculty in Mangalore University |
| 3.      | NITK Information System                                                             | Shakila              | 2005<br>–<br>2006 | Working in a Software company                |
| 4.      | Coastal Zone Information System for Udupi Coast                                     | Amrithkala M. Shetty | 2006<br>–<br>2007 | Working as a faculty in Mangalore University |
| 5.      | Integrated Modelling Approach for Shoreline Monitoring and Management               | Aashvija             | 2008<br>–<br>2009 | Working for KSRSAC, Mangalore                |
| 6.      | Integrated Modelling Approach for Sediment Yield Estimation for Periyar River Basin | Supriya J. Anchan    | 2008<br>–<br>2009 | Working for SOI, Bangalore                   |
| 7.      | A Study on Beach Morphology and Shoreline Changes Along Dakshina Kannada Coast      | Vijay Laxmi          | 2013<br>–<br>2014 | Mangalore University, Mangalore              |
| 8.      | Sediment Dynamics Along Mangalore Coast                                             | Bharat N.            | 2022<br>–<br>2023 | Completed<br>(Mangalore University)          |
| 9.      | Shoreline Change Detection Through Geo-informatics                                  | Gopika C.            | 2022<br>–<br>2023 | Completed<br>(Mangalore University)          |

|     |                                                                      |              |                   |                                     |
|-----|----------------------------------------------------------------------|--------------|-------------------|-------------------------------------|
| 10. | Rainfall Runoff Modelling Using Remote Sensing and Conventional Data | Swathi K. K. | 2022<br>–<br>2023 | Completed<br>(Mangalore University) |
|-----|----------------------------------------------------------------------|--------------|-------------------|-------------------------------------|

### Ph.D. Research Supervision [19+4]

| Sl. No. | Name of Student    | Reg. Year and Status (FT/PT)                        | Title of Dissertation                                                                                                                                  | Other Supervisor                            | Completed [placement]/ Ongoing                                      |
|---------|--------------------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|---------------------------------------------------------------------|
| 1.      | Jagadeesha Pai B.  | Full Time<br>Institute Scholar<br>2004 – 2009       | Retrieval of Wind and Wave Parameters Over Indian Ocean Region Using Synthetic Aperture Radar Data                                                     | Prof. A. Vittal Hegde.                      | Completed and working as a faculty at MIT Manipal.                  |
| 2.      | Ashok Kumar T.     | Part Time<br>2004 – 2010                            | Advanced Image Processing Techniques and Algorithms for Classification of Semi-Urban Land Use/Land Cover Features Using High-Resolution Satellite Data | Prof. Shivaprakash Koliwad<br>MCE – Hassan. | Completed and working as a Principal of VCET, Puttur.               |
| 3.      | Rajagopal B.       | Q.I.P.<br>Full Time<br>[Polytechnic]<br>2005 – 2013 | Studies on Land Use/Land Cover Changes and Water Quality Due to Urbanization Along the Coastal Areas Of Dakshina Kannada District, Karnataka, India    | Dr. Srihari. S                              | Completed and working as a Principal in Polytechnic College in A.P. |
| 4.      | Abdu Rahiman K. U. | Q.I.P.<br>Full Time<br>[KUSAT]<br>2006 – 2009       | River Runoff and Sediment Flow Changes Induced by Dams in Periyar River Basin, Kerala, India                                                           | -                                           | Completed and working as a faculty at CUSAT, Cochin                 |
| 5.      | Shushma S. B.      | Part Time<br>(Under Project)<br>2008 – 2015         | RS and GIS tools to Support Conservation and Sustainable Management of Sacred Groves in Kodagu District                                                | Dr. K. B. Kiran                             | Completed and working as a Scientist in Mines and Geology           |
| 6.      | Gumageri Nagaraj   | Institute Fellowship – Full Time<br>2009 – 2013     | Study of Geomorphology and Dynamics of Shoreline Associated with Mulki-Pavanje River Mouth, Dakshina Kannada Coast, Karnataka, India                   | -                                           | Completed and working as a faculty in BIT, Mangalore                |
| 7.      | Gowthaman R.       | Part Time<br>2010 – 2016                            | Modelling of Shoreline Configuration Along Rameshwaram Island, East Coast of India                                                                     | -                                           | Completed and working as a Scientist, NIO, Goa                      |

- |     |                            |                                                                    |                                                                                                                                            |                      |                                                                                                                                      |
|-----|----------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| 8.  | Raju A.                    | Institute<br>Fellowship –<br>Full Time<br>2011 – 2014              | Development of Contrast<br>Enhancement Algorithms for<br>Coastal Applications Using<br>Satellite Images                                    | Prof. D. V.<br>Reddy | Completed and<br>working as a faculty<br>in Japan                                                                                    |
| 9.  | Ganasri B.<br>P.           | PGRA-<br>Institute<br>Fellowship –<br>TEQIP –<br>Full Time<br>2012 | Impact of Land Use Changes on<br>Hydrological Response of Humid<br>and Sub-humid Catchments in<br>Karnataka State, India                   | -                    | Completed and<br>working in USA                                                                                                      |
| 10. | Arega Mulu<br>Adal         | Ethiopian<br>Government<br>Fellowship<br>2013 – 2016               | Simulation of Hydrological Effects<br>of Land Use /Land Cover, Climate<br>Change and Effect of Dam at<br>Gilgel Abay River Basin, Ethiopia | -                    | Completed and<br>working as faculty in<br>Ethiopia                                                                                   |
| 11. | Preeti Jacob               | Part Time<br>2014                                                  | Experimental Study on Effect of<br>Aggregate Size on the Hydraulic<br>Properties of Pervious Concrete                                      | -                    | Completed and<br>working as faculty in<br>CMR Institute of<br>Technology                                                             |
| 12. | Dayanand<br>Shetty         | Part Time<br>2015 – 2019                                           | Optimisation of Vessel Turnaround<br>Time in a Seaport with a Special<br>Reference to New Mangalore Port<br>Trust                          | -                    | Completed and<br>working as an<br>engineer in NMPT                                                                                   |
| 13. | Arunkumar<br>Yadav         | Institute<br>Fellowship –<br>Full Time<br>2015 – 2020              | Shoreline Dynamics in Response<br>to River Sediment: A Case Study                                                                          | Dr. B M<br>Dodamani  | Completed and<br>working as faculty in<br>MAHE Bengaluru                                                                             |
| 14. | Abiot<br>Ketema<br>Demmsie | Ethiopian<br>Government<br>Fellowship<br>2016 – 2021               | Simulation of the Hydrological<br>Impacts of Climate and Land Use /<br>Cover Change on Tikur Wuha<br>Watershed in Ethiopia                 | -                    | Completed and<br>working as faculty in<br>Ethiopia                                                                                   |
| 15. | Dinu Maria<br>Jose         | Institute<br>Fellowship –<br>Full Time<br>2017                     | Temporal Analysis of Land Use<br>Land Cover and Climate Change<br>on Streamflow and Sediment Yield<br>of Netravathi River Basin, India     | -                    | Completed and<br>working as GIS<br>Engineer in Verisk,<br>Hyderabad                                                                  |
| 16. | Waleed<br>Makhdumi         | Institute<br>Fellowship –<br>Full Time<br>2019                     | Soil Erosion Modelling,<br>Assessment and Watershed<br>Prioritisation in Netravati<br>Catchment, Karnataka, India                          | Dr. Shwetha<br>H. R. | Completed                                                                                                                            |
| 17. | G. Praveen<br>Kumar        | Institute<br>Fellowship –<br>Full Time<br>2020                     | Impact Assessment of Climate<br>Change and Land Use Land Cover<br>Change on Streamflow in Kali<br>River Basin, Karnataka, India            | -                    | Completed and<br>working as Project<br>Scientist-I, ESSO-<br>National Center for<br>Earth Science<br>Studies,<br>Thiruvananthapuram. |

|     |                  |                                       |                                                                                                                 |                    |                                                                                      |
|-----|------------------|---------------------------------------|-----------------------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------|
| 18. | Mukul Kumar Sahu | Institute Fellowship – Full Time 2020 | Hydro-geospatial Analysis and AI-based Flood Modelling and Mapping in Cauvery River Basin, India                | Dr. Shwetha H. R.  | Completed and working as Assistant Technical Specialist, Sustainability RMSI, Noida. |
| 19. | Parvathy M. M.   | Part Time 2020                        | Coastal Vulnerability Assessment to Climate Change Impacts for the State of Kerala, South – West Coast of India | -                  | Completed and working in Irrigation Department of Kerala, Thiruvananthapuram         |
| 20. | Anurag Labh Aman | Institute Fellowship – Full Time 2021 | Kosi River Dynamics Through Hydrodynamic Modelling                                                              | -                  | Ongoing                                                                              |
| 21. | Avinash R.       | Institute Fellowship – Full Time 2022 | Assessing the Impacts of Climate Change and Groundwater Withdrawal on Streamflow                                | -                  | Ongoing                                                                              |
| 22. | Vinod P. N.      | Part Time 2023                        | Surface water Hydrology                                                                                         | Dr. Subrahmanya K. | Ongoing                                                                              |
| 23. | Vinayak N.       | Part Time 2024                        | Drought and Flood Analysis                                                                                      | Dr. Subrahmanya K. | Ongoing                                                                              |

### List of Publications (327)

|                               |               |          |
|-------------------------------|---------------|----------|
| Book Chapters                 | 16            |          |
|                               | International | National |
| Journal papers                | 88            | 13       |
| Conference/workshop/Symposium | 129           | 81       |

### Book Chapters/Proceedings [16]

- 2025** Aman, A. L., and **Dwarakish, G. S.** (2025) “Comparative Analysis of Braiding Intensity of Kosi River Using Remote Sensing and GIS. In: Pandey, M., Jayakumar, K.V., Pal, M., Singh, V.P. (eds) *Soft Computing and Geospatial Techniques in Water Resources Engineering*. HYDRO 2023. Lecture Notes in Civil Engineering, vol 397. Springer, Singapore. [https://doi.org/10.1007/978-981-97-7467-8\\_35](https://doi.org/10.1007/978-981-97-7467-8_35)
- Avinash, R., and **Dwarakish, G. S.** (2025) “Essential Climate Variables for Accurate Climate Change Impact Studies on Hydrological Regime: A Comprehensive Review.” In: Das, J., Umamahesh, N.V., Pu, J.H., Pandey, M. (eds) *Climate Change Impact on Water Resources*. HYDRO 2023. Lecture Notes in Civil Engineering, vol 561. Springer, Singapore. [https://doi.org/10.1007/978-981-97-9180-4\\_22](https://doi.org/10.1007/978-981-97-9180-4_22)
- Makhdumi, W., Suragamallika, R., Shwetha, H. R., and **Dwarakish, G. S.** (2025) “Geospatial Techniques for Soil Erosion-Based Watershed Prioritisation: A Review.” In: Pandey, M., Jayakumar, K.V., Pal, M., Singh, V.P. (eds) *Soft Computing and Geospatial Techniques in Water Resources Engineering*. HYDRO 2023. Lecture Notes in Civil Engineering, vol 397. Springer, Singapore. [https://doi.org/10.1007/978-981-97-7467-8\\_31](https://doi.org/10.1007/978-981-97-7467-8_31)
- Sahu, M. K., Shwetha, H. R., and **Dwarakish, G. S.** (2025) “Streamflow Estimation for Harangi River Basin, Karnataka, India.” In: Pandey, M., Umamahesh, N., Das, J., Pu, J.H. (eds) *Hydrology and Hydrologic Modelling*. HYDRO 2023. Lecture Notes in Civil Engineering, vol 410. Springer, Singapore. [https://doi.org/10.1007/978-981-97-7474-6\\_22](https://doi.org/10.1007/978-981-97-7474-6_22)
- 2024** Makhdumi, W., Shwetha, H. R., and **Dwarakish, G. S.** (2024) “Erosion and Accretion in the Netravati River Stretch: Spatiotemporal Analysis Using Geospatial Approach.” In: Chembolu, V., Dutta, S. (eds) *Advances in River Corridor Research and Applications*. RCRM 2023. Lecture Notes in Civil Engineering, vol 470. Springer, Singapore. [https://doi.org/10.1007/978-981-97-1227-4\\_11](https://doi.org/10.1007/978-981-97-1227-4_11)
- Sahu, M.K., Shwetha, H. R., and **Dwarakish, G. S.** (2024) “Flood Inundation Mapping of Krishnaraja Nagar, Mysore Using Sentinel-1 SAR Images.” In: Chembolu, V., Dutta, S. (eds) *Advances in River Corridor Research and Applications*. RCRM 2023. Lecture Notes in Civil Engineering, vol 470. Springer, Singapore. [https://doi.org/10.1007/978-981-97-1227-4\\_17](https://doi.org/10.1007/978-981-97-1227-4_17)

## 2023

Nayana, N., Jose, D. M., and **Dwarakish, G. S.** (2023) “Analysis of Land Use Land Cover Changes in the Netravati Basin, Karnataka, India.” In: Timbadiya, P. V., Patel, P. L., Singh, V. P., Mirajkar, A. B. (eds) *Geospatial and Soft Computing Techniques*. HYDRO 2021. Lecture Notes in Civil Engineering, vol 339. Springer, Singapore.

[https://doi.org/10.1007/978-981-99-1901-7\\_9](https://doi.org/10.1007/978-981-99-1901-7_9)

Jacob, P., **Dwarakish, G. S.**, Wani, A. S., & Jaliyal, V. (2023) “Use of image analysis to study top surface clogging of pervious concrete.” In: *AIP Conference Proceedings* 2901, 1. AIP Publishing. <https://doi.org/10.1063/5.0178951>

Sahu, M. K., Shwetha, H. R., and **Dwarakish, G. S.** (2023) “A Review: Contribution of HEC-HMS Model.” In: Timbadiya, P.V., Patel, P.L., Singh, V.P., Sharma, P.J. (eds) *Hydrology and Hydrologic Modelling*. HYDRO 2021. Lecture Notes in Civil Engineering, vol 312. Springer, Singapore. [https://doi.org/10.1007/978-981-19-9147-9\\_16](https://doi.org/10.1007/978-981-19-9147-9_16)

## 2022

Jacob, P., **Dwarakish, G. S.**, Sharath, G. O., and Ramesh, G. N. (2022) “Pervious Concrete as an Effective Urban Flood Management Tool.” In: Jha, R., Singh, V. P., Singh, V., Roy, L., Thendiyath, R. (eds) *River and Coastal Engineering*. Water Science and Technology Library, vol 117. Springer, Cham. [https://doi.org/10.1007/978-3-031-05057-2\\_13](https://doi.org/10.1007/978-3-031-05057-2_13)

## 2021

Jose, D. M., Makhdumi, W., and **Dwarakish, G. S.** (2021) “Hydrological Modelling to Study the Impacts of Climate and LULC Change at Basin Scale: A Review.” In: Jha, R., Singh, V. P., Singh, V., Roy, L., Thendiyath, R. (eds) *Water Resources Management and Reservoir Operation*. Water Science and Technology Library, vol 107. Springer, Cham. [https://doi.org/10.1007/978-3-030-79400-2\\_2](https://doi.org/10.1007/978-3-030-79400-2_2)

Ketema, A., and **Dwarakish, G. S.** (2021) “Climate Change Impacts on Water Resources in Ethiopia.” In: Jha, R., Singh, V. P., Singh, V., Roy, L. B., Thendiyath, R. (eds) *Climate Change Impacts on Water Resources*. Water Science and Technology Library, vol 98. Springer, Cham. [https://doi.org/10.1007/978-3-030-64202-0\\_5](https://doi.org/10.1007/978-3-030-64202-0_5)

Kumar, M. S., Venkatesh, K., Gowthami, S. B., Anjita, N. A., Nayanna, N., Regi, L., and **Dwarakish, G. S.** (2021) “Monitoring Land Use and Land Cover Changes in Coastal Karnataka.” In: Narasimhan, M. C., George, V., Udayakumar, G., Kumar, A. (eds) *Trends in Civil Engineering and Challenges for Sustainability*. Lecture Notes in Civil Engineering, vol 99. Springer, Singapore. [https://doi.org/10.1007/978-981-15-6828-2\\_57](https://doi.org/10.1007/978-981-15-6828-2_57)

Athira, K., Yadav, A., Dodamani, B. M., **Dwarakish, G. S.** (2021) “Impacts of Dams on Sediment Yield and Coastal Processes Using SWAT and DSAS Tools.” In: Narasimhan, M. C., George, V., Udayakumar, G., Kumar, A. (eds) *Trends in Civil Engineering and Challenges for Sustainability*. Lecture Notes in Civil Engineering, vol 99. Springer, Singapore. [https://doi.org/10.1007/978-981-15-6828-2\\_47](https://doi.org/10.1007/978-981-15-6828-2_47)

- 2019** Makhdumi, W., and **Dwarakish, G. S.** (2019) “Prioritisation of Watersheds Using the TOPSIS and VIKOR Methods.” *Seventh International Conference on Remote Sensing and Geoinformation of the Environment (RSCy2019)*, 11174, 247-256. SPIE.  
<https://doi.org/10.1117/12.2532024>

Yadav, A., Dodamani, B. M., and **Dwarakish, G. S.** (2019) “Study of Dynamic Changes Through Geoinformatics Technique: A Case Study of Karwar Coast, West Coast of India.” In: Murali, K., Sriram, V., Samad, A., Saha, N. (eds) *Proceedings of the Fourth International Conference in Ocean Engineering (ICOE2018)*. Lecture Notes in Civil Engineering, vol 23. Springer, Singapore. [https://doi.org/10.1007/978-981-13-3134-3\\_14](https://doi.org/10.1007/978-981-13-3134-3_14)

### International Journals [88]

- 2026** Kumar, G.P., **Dwarakish, G.S.**, A Framework for Selection of a Hydrological Model-SAWT: A Review. *Water Resour Manage* **40**, 226 (2026). <https://doi.org/10.1007/s11269-026-04600-8>
- Aman A.L., **Dwarakish, G.S.**, (2026). “Geomorphic adjustment and reach-scale sensitivity of the highly braided Kosi River: A dynamic systems approach to resilience-based management” *Geomorphology* <https://doi.org/10.1016/j.geomorph.2026.110283>
- Krishnan, S., **Dwarakish, G.S.**, Pai B, J., Makhdumi, W., Parvathy, M. M., & Sahu, M. K. . (2026). “Tide prediction using soft computing techniques: Comparative analysis of ANN and ANFIS models for Cochin, India.” *Journal of Integrated Science and Technology*, 14(2), 1526. <https://doi.org/10.62110/sciencein.jist.2026.v14.1526>
- 2025** Parvathy, M. M., Balu, R., and **Dwarakish, G. S.** (2025). “Development of a regional-scale erosion vulnerability assessment approach along a human-intervened coast—a case study from the southern part of Kerala, India.” *ISH J. Hydraul. Eng.* <http://dx.doi.org/10.1080/09715010.2025.2546873>
- Kumar, G. P., & **Dwarakish, G. S.** (2025). “Comparison of the Multiple Imputation Approaches for Imputing Rainfall Data: A Humid Tropical River Basin Case Study. *Water Conservation Science and Engineering*, 10(2), 87. <https://doi.org/10.1007/s41101-025-00403-x>
- Makhdumi, W., R, S. H., **Dwarakish, G. S.**, & Pai, J. B. (2025). “Addressing spatial variability in estimating cover management factor of soil erosion models using geoinformatics: A case study of Netravati catchment, Karnataka, India.” *Air, Soil and Water Research*, 18, <https://doi.org/10.1177/11786221251360407>
- Kumar, G. P., & **Dwarakish, G. S.** (2025). “Machine learning-based ensemble of Global climate models and trend analysis for projecting extreme precipitation indices under future climate scenarios.” *Environmental Monitoring and Assessment*, 197(9), 1009. <https://doi.org/10.1007/s10661-025-14469-6>

Kumar, G. P., Vinod, D., **Dwarakish, G. S.** and Mahesha, A. (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 Geophys.* <https://doi.org/10.1007/s11600-025-01623-4>

Snikitha, S., Kumar, G. P. and **Dwarakish, G. S.** (2025) “A Comprehensive Review of Cutting-Edge Flood Modelling Approaches for Urban Flood Resilience Enhancement.” *Water Conserv Sci Eng* 10, 2. <https://doi.org/10.1007/s41101-024-00327-y>

**2024** Jyoti Prasad Gupta, Sahu, M. K., **Dwarakish G. S.** and Shwetha, H. R. (2024). “State-of-the-Art Hydraulic Modelling: A Comprehensive Review of HEC-RAS for 1D and 2D Applications”, *Hydrological Science Journal*. <https://doi.org/10.1007/s40808-023-01704-7>

Sreejith, K. S., Kumar, G. P. and **Dwarakish, G. S.** (2024) “A Critical Review of the Soil Conservation Services - Curve Number Method in Hydrological Modelling.” *Wetlands*, 44, 117. <https://doi.org/10.1007/s13157-024-01873-w>

Kumar, G. P., Sreejith, K. S. and **Dwarakish, G. S.** (2024) “The Influence of Land Use and Land Cover Transitions on Hydrology in a Tropical River Basin of Southwest India.” *Water Conserv Sci Eng* 9, 64. <https://doi.org/10.1007/s41101-024-00301-8>

**Dwarakish, G. S.**, Pai, B. J., and Rajeesh, R. (2024). “Urban Flood Hazard Zonation in Bengaluru Urban District, India.” *Journal of Landscape Ecology*, 17(1), 89-106.

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**Dwarakish, G. S.**, Pai, J. B., & Jubina, C. K. (2024). “Influence of land use land cover change on runoff characteristics of Netravathi River catchment, Karnataka, India.” *Water Conservation and Management*, 8(1), 66. <https://doi.org/10.26480/wcm.01.2024.66.78>

**2023** Makhdumi, W., Shwetha, H. R. and **Dwarakish, G. S.** (2023). “Soil erosion in diverse agroecological regions of India: a comprehensive review of USLE-based modelling.” *Environ. Monit. Assess.* 195, 1112. <https://doi.org/10.1007/s10661-023-11687-8>

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- 2022** Ketema, A., **Dwarakish, G. S.**, and Makhdumi, W. (2022). “Hydrological responses to land use/land cover change in Tikur Wuha Watershed in Southern Ethiopia.” *Sustain. Water Resour. Manag.*, 8, 134 <https://doi.org/10.1007/s40899-022-00716-y>
- Mulu, A., Jacob, P. and **Dwarakish, G. S.** (2022). “Hydraulic Performance of Pervious Concrete Based on Small Size Aggregates.” *Advances in Material Science and Engineering*, 1-12, <https://doi.org/10.1155/2022/2973255>
- Jose, D. M., and **Dwarakish, G. S.** (2022). “Frequency-intensity-distribution Bias Correction and Trend Analysis of High-Resolution CMIP6 Precipitation Data Over a Tropical River Basin.” *Theor Appl Climatol*, 149, 683–694.  
<https://doi.org/10.1007/s00704-022-04078-5>
- Jose, D. M., Vincent, A. M., and **Dwarakish, G. S.** (2022). “Improving multiple model ensemble predictions of daily precipitation and temperature through machine learning techniques.” *Scientific Reports*, 12, 4678. <https://doi.org/10.1038/s41598-022-08786-w>
- Chowdhury, A., and **Dwarakish, G. S.** (2022). “Selection of Algorithm for Land Use Land Cover Classification and Change Detection.” *International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)*, 2, 1, doi: 10.48175/ijarsct-2610
- Jose, D. M., and **Dwarakish, G. S.** (2022). “Ranking of NEX-GDDP dataset at a basin scale: Case study of a tropical river basin on the South West coast of India.” *Arabian Journal of Geosciences*, 15, 120. <https://doi.org/10.1007/s12517-021-09289-0>
- Jose, D.M., and **Dwarakish, G. S.** (2022). “Bias Correction and Trend Analysis of Temperature Data by a High-Resolution CMIP6 Model over a Tropical River Basin.” *Asia-Pacific Journal of Atmospheric Sciences*, 58, 97-115. <https://doi.org/10.1007/s13143-021-00240-7>
- 2021** Ketema, A., and **Dwarakish, G. S.** (2021). “Hydro-meteorological impact assessment of climate change on Tikur Wuha watershed in Ethiopia.” *Sustainable Water Resources Management*, <https://doi.org/10.1007/s40899-021-00547-3>.
- Yadav, A., Dodamani, B. M., and **Dwarakish, G. S.** (2021). “Effect of disturbed river sediment supply on shoreline configuration: A case study.” *ISH Journal of Hydraulic Engineering*. <https://dx.doi.org/10.1080/09715010.2021.1878068>
- 2020** Jose, D. M., and **Dwarakish, G. S.** (2020). “Uncertainties in predicting impacts of climate change on hydrology in basin scale: a review.” *Arabian Journal of Geosciences*. 13 (1037). <https://doi.org/10.1007/s12517-020-06071-6>

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- 2019** Ketema, A., and **Dwarakish, G. S.** (2019). "Water erosion assessment methods: a review." *ISH Journal of Hydraulic Engineering*.

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- 2018** Yadav, A., Dodamani, B. M., and **Dwarakish, G. S.** (2018). "Shoreline analysis using Landsat-8 satellite image." *ISH Journal of Hydraulic Engineering*. doi: 10.1080/09715010.2018.1556569

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- 2016** Mulu, A., and **Dwarakish, G. S.** (2016). "Hydrological effects of land use /land cover changes on stream flow at Gilgel Abay River Basin, Upper Blue Nile, Ethiopia." *International Journal of Earth Sciences and Engineering*. 9(5), 1881-1886.

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### Conferences / Seminars / Workshops attended

|             |                                                                                                                                                        |                                                                                                 |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <b>2025</b> | HYDRO International 2025 - 30 <sup>th</sup> International Conference on Hydraulics, Water Resources, River and Coastal Engineering                     | Chairperson                                                                                     |
| <b>2024</b> | Sustainable Groundwater Management for Water Security, June 21, 2024, held at the Karnataka Science and Technology Academy (KSTA) Office.              | Coastal Aquifers in the Context of Integrated Coastal Zone Management (Invited Talk)            |
| <b>2023</b> | New Horizons in Civil Engineering (NHCE-2023) October 13-14, 2023 MIT Manipal.                                                                         | Role of Geoinformatics in Coastal Engineering (Invited Talk)                                    |
|             | Innovative Concepts in Ocean Engineering, July 28, 2023, NITK, Surathkal.                                                                              | ---                                                                                             |
|             | International Conference on Sustainable Infrastructure: Innovation, Opportunities and Challenges (SIIOC-2023), April 20-21, 2023, NITK, Surathkal.     | Paper Presentation                                                                              |
| <b>2021</b> | HYDRO 2020 International, March 26-28, 2021, NIT Rourkela.                                                                                             | Geoinformatics Applications in Coastal and Ocean Engineering (Key Note)                         |
| <b>2016</b> | National Conference of Advanced Trends in Civil Engineering & Sustainable Development (ATCESD-16) on 26 <sup>th</sup> & 27 <sup>th</sup> February 2016 | Flood Risk Assessment: A Review                                                                 |
|             | National Conference of Advanced Trends in Civil Engineering & Sustainable Development (ATCESD-16) on 26 <sup>th</sup> & 27 <sup>th</sup> February 2016 | A Review on Hard option to Prevent Beach Erosion: Do they Really Work?                          |
|             | National Conference of Advanced Trends in Civil Engineering & Sustainable Development (ATCESD-16) on 26 <sup>th</sup> & 27 <sup>th</sup> February 2016 | Applications of Remote Sensing & GIS for Flood Alert System using a case study of Adhwara Basin |
|             | 10 <sup>th</sup> International Symposium on Lowland Technology (ISLT 2016), during September 15-16, 2016                                               | Chairperson                                                                                     |
|             | 10 <sup>th</sup> International Symposium on Lowland Technology (ISLT 2016), during September 15-16, 2016                                               | Paper Presentation                                                                              |
| <b>2015</b> | 8 <sup>th</sup> KSTA Annual Conference on Science and Technology for GenNext Urban Space held between 5 <sup>th</sup> and 6 <sup>th</sup> November     | Coastal Erosion Mitigation Measures – State-of-the-Art                                          |

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|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| 8 <sup>th</sup> KSTA Annual Conference on Science and Technology for GenNext Urban Space held between 5 <sup>th</sup> and 6 <sup>th</sup> November     | Assessing the Dynamic Changes in Land Use and Land Cover and Hydrological Processes in Netravati River Basin, Karnataka, |
| 8 <sup>th</sup> KSTA Annual Conference on Science and Technology for GenNext Urban Space held between 5 <sup>th</sup> and 6 <sup>th</sup> November     | Study of Mulky-Pavanje River Mouth Dynamic, Mangalore Coast, West Coast of India: An Integrated Approach                 |
| 8 <sup>th</sup> International Conference on Asian and Pacific Coasts (APAC 2015) held on 7 <sup>th</sup> and 10 <sup>th</sup> September                | Weekly Prediction of Tides using Neural Networks                                                                         |
| Dfi-NITK Workshop on Recent Trends in Piling and Ground Improvement on 31 <sup>st</sup> July and 1 <sup>st</sup> August 2015.                          | ---                                                                                                                      |
| National Conference on Geospatial Information & Technology Advancement (GITA-2K15)                                                                     | Application of Neural Network model for LU/LC classification of satellite images of Netravathi river basin.              |
| 4 <sup>th</sup> International Conference on Emerging Trends in Engineering, Science & Technology (ICETEST). 9-11 December, 2015                        | Chairing a session                                                                                                       |
| i-managers International Conference on Engineering and Technology on 10 <sup>th</sup> and 11 <sup>th</sup> April                                       | GIS and Open Geosuite for Sacre Groves of Kodagu District                                                                |
| <b>2014</b> Introduction to CAD/CAM and STAAD, Centre for Continuing Technical Education in Karnataka, Batwal on 3 July 2014                           | RS and GIS for Civil Engineering,                                                                                        |
| Introduction to CAD/CAM and STAAD, Centre for Continuing Technical Education in Karnataka, Batwal on 23 June 2014                                      | Effective Teaching Methodologies/Engineering Mechanics                                                                   |
| Certificate Course on Mining Survey (CCMS), Dept. Of Mining Engineering, NITK, Surathkal, during 09, July 2014                                         | CCMS on Remote Sensing and GIS                                                                                           |
| Annual Conference on Innovations and Developments in Civil Engineering (ACIDIC-2014), Department of Civil Engineering, NITK, Surathkal, 19-20 May 2014 | Geoinformatics for Civil Engineering                                                                                     |
| Faculty of Science, Technology, Engineering and Mathematics (FOSTEM), INTI International University, Kaula Lumpur, Malaysia on 16 April 2014           | Geoinformatics for Coastal Engineering                                                                                   |

|             |                                                                                                                                                                                                                                          |                                                                                                                                      |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
|             | 3 days technical fest SRISHTI 2K14, Department of Civil Engg., LBS College of Engineering, Kasaragod on 13,14 and 15 March 2014                                                                                                          | Remote Sensing and GIS in Civil Engineering                                                                                          |
|             | 2014 IEEE Region 10 Technical Symposium, during 14-16, 2014, Kaula Lumpur, Malaysia                                                                                                                                                      | Satellite Image Contrast Enhancement Algorithm based on Plateau Histogram Equalization                                               |
|             | Short-term Course on Advances and Latest Developments in Mining Geology and Rock Mechanics (STCMGRM-2014), during 02-04, April 2014                                                                                                      | Geoinformatics for Civil and Mining Engineering                                                                                      |
|             | National Workshop on Civil Engineering Challenges in 21 <sup>st</sup> Century (CEC21-2014), Department of Civil Engineering, Mangalore Institute of Technology and Engineering (MITE), Moodabidri. Mangalore during 21-22 February, 2014 | Geoinformatics for Civil Engineering                                                                                                 |
|             | Fifth Indian National Conference on Harbour and Ocean Engineering (INCHOE 2014), NIO, Goa, 5-7 February 2014                                                                                                                             | Study of Coastal Sediment Dynamics and Sand Spit Morphology Around Netravati – Gurpur Rivermouth Through Integrated Approach         |
|             | 3 <sup>rd</sup> World Conference on Applied Sciences, Engineering and Technology, 27-29 September                                                                                                                                        | Histogram Equalization Based Mean Self-Adaptive Plateau Histogram Equalization for Brightness Preserving and Contrast Enhancement.   |
|             | 3 <sup>rd</sup> World Conference on Applied Sciences, Engineering and Technology, 27-29 September                                                                                                                                        | Relocation of Waste bins: A GIS Approach.                                                                                            |
| <b>2013</b> | National Conference on New Horizons in Civil Engineering (NHCE-2013), Department of Civil Engineering, Manipal Institute of Technology, Manipal, Karnataka, 12-13 April, 2013                                                            | Sediment Trend Analysis and Determination of Sediment Movement Patterns Along Coastline in the vicinity of Mulki-Pavanje River Mouth |
|             | National Seminar on Coastal Environments and their Management, Department of Marine Geology, Mangalore University, 22-23 January, 2013                                                                                                   | Coastal erosion and mitigation measures along Mangalore Coast, South West Coast of India                                             |
|             | International Conference on Conserving Biodiversity for Sustainable Development (INCCBSD 2013), DBME, NIT Rourkela, during 16-18, August 2013                                                                                            | RS and GIS Tools to Support Conservation and Sustainable Management of Sacred Groves in Kodagu District, Karnataka, India            |
| <b>2012</b> | National Workshop on Conservation of West Flowing Rivers in Coastal Karnataka, Department of Applied                                                                                                                                     | Geoinformatics for Water                                                                                                             |

|             |                                                                                                                                                                              |                                                                                                                                    |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
|             | Mechanics and Hydraulics, NITK, Surathkal and Dept of Civil Engg., VCET, Puttur, during 14-15 December 2012                                                                  | Resources Engineering                                                                                                              |
| <b>2011</b> | National Conference on Coastal Hazards, Resources & Management, Department of Marine Geology, Mangalore University, Mangalagangothri, Karnataka, India, 25 & 26 March, 2011. | Integrated Coastal Zone Management [ICZM] – An Indian Scenario.                                                                    |
|             | National Conference on Coastal Hazards, Resources & Management, Department of Marine Geology, Mangalore University, Mangalagangothri, Karnataka, India, 25 & 26 March, 2011. | Development of DEM Using ERDAS Imagine 9.0 and ArcGIS 8.3 for Mangalore Coastal Zone, Dakshina Kannada District, Karnataka, India. |
|             | National Conference on Coastal Hazards, Resources & Management, Department of Marine Geology, Mangalore University, Mangalagangothri, Karnataka, India, 25 & 26 March, 2011. | Spit Evolution in the vicinity of Mulky-Pavanje Rivermouth, West Coast of India.                                                   |
| <b>2010</b> | National Conference on Sustainable Water Resources Management [SwaRM 2010], NITK-Surathkal, India, 7th -9th January 2010.                                                    | Determination of Global Water Quality Indices for River Nethravati, South India.                                                   |
|             | National Conference on Sustainable Water Resources Management [SwaRM 2010], NITK-Surathkal, India, 7th -9th January 2010.                                                    | Variable Source Area Watershed Model for Konganahole Catchment Area in Western Ghats                                               |
|             | National Conference on Coastal Processes, Resources and Management, CESS, Thiruvananthapuram, Kerala, India, 5-7th February 2010.                                            | A study on Variations in the Sediment Dynamics along the Dakshina Kannada Coast, West Coast of India.                              |
| <b>2009</b> | Theme meeting on retrofitting & Rehabilitation of Structures (TMRRS) and International Seminar on Structural Rehabilitation, NITK Surathkal, 30-31 March 2009.               | ---                                                                                                                                |
|             | International Conference in Ocean Engineering [ICOE-2009], IIT Madras, India, 1-5th February 2009.                                                                           | Interference of Dams in Periyar River Basin, Kerala, on Coastal Sedimentation.                                                     |
|             | National Workshop on Present and Future Trends in Marine Geology and Geophysics, Mangalore University, India, 21-22nd April 2009.                                            | ---                                                                                                                                |
|             | KSCST- 32nd Series of Student Project Programme [SPP], Seminar cum Exhibition, NITK-Surathkal, India, 4-5th September 2009.                                                  | ---                                                                                                                                |

|             |                                                                                                                                                                             |                                                                                                                                |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
|             | 24th Indian Engineering Congress, NITK-Surathkal, India, 10-13th December 2009.                                                                                             | Land Use Land Cover Change Detection Using Digital Image Processing                                                            |
|             | 39th ISTE Annual Convention, NITK-Surathkal, India, 18-20th December 2009                                                                                                   | ---                                                                                                                            |
| <b>2008</b> | KU-NITK Joint seminar 2008- Recent Advances in Engineering & Technology, June 26, 2008, Inamori Auditorium, Kagoshima University, Japan.                                    | ---                                                                                                                            |
|             | International Conference on Content-Based Image Retrieval, PES Institute of Technology, Bangalore, India, 16-18th July 2008.                                                | Decision tree: A non-parametric approach for classification of High-resolution remote sensing data.                            |
|             | 3rd International Conference on Advanced Computing & Communication Technologies, Asia Pacific Institute of Information Technology SD India, Panipat, 08-09th November 2008. | Effectiveness of decision tree algorithm in classification of semi-urban land cover classes 2-5m resolution satellite imagery. |
|             | National Conference on Hydraulics, Water Resources & Environment HYDRO 2008, Anuvrat Vishwarbharti, Jaipur, India, 15-16th December 2008.                                   | Changes in Hydrology and coastal sedimentation by Dams – A case study.                                                         |
| <b>2007</b> | Indo-Japan workshop on Coastal Problems and Mitigation Measures – Including the effects of Tsunami, IIT Madras, 16-17 <sup>th</sup> July 2007.                              | ---                                                                                                                            |
|             | SPIE Remote Sensing International Conference, Florence, Italy, September, 17-21, 2007.                                                                                      | Integrated Coastal Zone Management Plan and Coastal Zone Information System for Udupi Coast, West Coast of India               |
| <b>2006</b> | Initiative for Research and Innovation in Science [IRIS-2006]                                                                                                               | Assessment of potential locations for offshore wind energy                                                                     |
|             | SPIE- 5 <sup>th</sup> Asia Pacific Remote Sensing International Symposium, Marriot Hotel, Panjim, Goa, India, 13-17 <sup>th</sup> November 2006.                            | Integrated Coastal Zone Management system for Mangalore Coast west coast of India                                              |
|             | SPIE- 5 <sup>th</sup> Asia Pacific Remote Sensing International Symposium, Marriot Hotel, Panjim, Goa, India, 13-17 <sup>th</sup> November 2006.                            | Comparative study of ocean wave spectrum using ENVISAT SAR data and wave rider buoy data                                       |

National conference on Rehabilitation Measures for the ---  
Tsunami affected Coasts of Tamilnadu, Andhra  
Pradesh, Kerala, Pondicherry and Andaman & Nicobar  
Islands, IIT Madras. 11-12 December 2006.

### Books, Monographs, Lab or Design Manuals - Authored/Edited

1. Coastal Land Use/Land Cover and Shoreline Studies for Dakshina Kannada Coast, Karnataka, India Shabnum Suhura, B. Nithyapriya, L. Revanth Reddy, Noelle Philipose, Mary Manisha and **G. S. Dwarakish**. Water Resources Management by the Springer – Nature under the Water Science and Technology Library 78, ISBN 978-981-10-5710-6.
2. Guest Editor – Elsevier Aquatic Procedia-Special Issue on ICWRCOE‘15
3. Guest Editor-In-Chief for Special Issue on RS & GIS Applications, International Journal of Earth Sciences and Engineering
4. Lecture Volume prepared for the Two Days Curriculum Workshop on Geoinformatics in Coastal and Water Resources Engineering. Department of Applied Mechanics and Hydraulics, NITK, from 23-24 September 2013 (Coordinator: **Dr. G. S. Dwarakish**)
5. Lecture volume prepared for the training programme sponsored by TEQIP on ETMS’10 (2010), held at GEC, Goa. (Coordinators: **Dr. G. S. Dwarakish**, Dr. K B Kiran, Dr. B M Dodamani, Dr. V N Shet, Dr. Ulhas Sawaikar and Dr. Vanessa.C)
6. Prepared the complete PPTs for the two subjects namely Remote Sensing & GIS and Digital Image Processing.
7. Contributed to two research papers for the book titled “Coastal Environments: Problems and Perspectives” Edited by K.S.Jayappa and A. C. Narayana, 2009.
8. Lecture volume prepared for the summer School sponsored by AICTE-MHRD on ETMS ’ 10 (2010). (Coordinators: **Dr. G. S. Dwarakish** & Dr. K B Kiran)
9. Lecture volume prepared for the winter School sponsored by AICTE-MHRD on GIRBD ’ 09 (2009).
10. Lecture volume prepared for the winter School sponsored by AICTE-MHRD on GICZMP ’ 09 (2009).
11. Written a complete chapter on Geographical Information System (GIS) in the textbooks, one on “Applied Geology” and another on ‘Engineering Geology’ by Prof. D. Venkat Reddy.
12. Lecture Volume prepared for the “Workshop on Wetland Monitoring and Management” sponsored by TEQIP, conducted in our department.  
Coordinators: Prof. Arkal Vittal Hegde and **Dr. G. S. Dwarakish**).
13. Lecture volume prepared for the workshop on ‘ICZMP-D.K and Udupi Coast’ Sponsored by MOEF, ‘RS & GIS’ Course and GPS Course sponsored by TEQIP, MHRD, Govt. Of India.

### Technical Reports (External & Internal)

| Authors                                                                                              | Title of Report                                                                                                                | Particulars (Sponsored R&D/ Consultancy/ Status Reports, etc.) |
|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| <b>Dr. G. S. Dwarakish</b><br>(P.I.)                                                                 | Simulating the Impact of Land Use Changes on Hydrological Response of Humid and Sub-Humid Catchments in Karnataka State, India | The final report was prepared & Submitted to the ISRO RESPOND  |
| <b>Dr. G. S. Dwarakish</b><br>(Research Co-ordinator)                                                | Proposal for Creation of Ocean and Atmospheric Science and Technology Cell (OASTC), Centre for Ocean Technology (COT)          | The final report was prepared & Submitted.                     |
| <b>Dr. G. S. Dwarakish</b><br>(P.I.)<br>Dr. S.G. Mayya<br>(Co-P.I.)                                  | Nearshore processes information system for Mangalore coast - A RS & GIS Approach                                               | The final report was prepared & Submitted.                     |
| <b>Dr. G. S. Dwarakish</b><br>(P.I.)<br>Prof. G. Srinikethan<br>(Co-P.I.)                            | Integrated Coastal Zone Management Plan for Karnataka Coast                                                                    | The first Draft of the Final report was Prepared and Submitted |
| Dr. Subba Rao<br>Dr. Kiran G Shirlal<br><b>Dr. G. S. Dwarakish</b><br>(Co-P.I.)<br>Mr. Subramanya K. | Management of Tidal Inlets along West Coast of India                                                                           | The final report was Prepared and Submitted                    |
| <b>Dr. G. S. Dwarakish</b><br>(P.I.)<br>Mr. K. B. Kiran<br>(Co-P.I.)                                 | RS and GIS tools for sustainable management of Sacred Groves in Kodagu district                                                | The annual progress report was prepared                        |
| <b>Dr. G. S. Dwarakish</b><br>(P.I.)                                                                 | Analysis of satellite derived wind and wave parameters for coastal waters off Karnataka                                        | The annual progress report was prepared                        |

## Continuing Education Programmes / Short Term Courses/ Workshops / Seminars Etc. Organized

| Date                       | Title of Programme                                                                                     | Funding Agency                                                                              |
|----------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| 11/04/2014                 | Special Lecture by Dr. M. Baba                                                                         | Institute Fund, NITK, Surathkal                                                             |
| 21/09/2013                 | Special Lecture by Prof. Venkatlakshmi,<br>University of South Carolina (USC)                          | Institute Fund, NITK, Surathkal                                                             |
| 05/09/2013                 | Special Lecture by T. N. Singh                                                                         | Institute Fund, NITK, Surathkal                                                             |
| 17/12/2012                 | Special Lecture by Prof. J. Dattatri                                                                   | Institute Fund, NITK, Surathkal                                                             |
| 13/06/2011 -<br>17/06/2011 | Effective Teaching Methodologies [ETM 10]                                                              | TEQIP, NITK, Surathkal, Govt.<br>Of India, New Delhi. [Conducted<br>at NIT Goa, GEC Campus] |
| 11/05/2010 -<br>14/05/2010 | Effective Teaching Methodologies - Statics<br>[ETMS' 10] - Summer School                               | MHRD, Govt. Of India, New<br>Delhi.                                                         |
| 15/02/2010 -<br>19/02/2010 | NURTURANCE Programme for NTS<br>Awardees                                                               | NCERT, Govt. Of India, New<br>Delhi.                                                        |
| 29/12/2009 -<br>02/20/2010 | INSPIRE - Winter Science Camp                                                                          | DST, Govt. Of India, New Delhi                                                              |
| 20/07/2009 -<br>31/07/2009 | Geoinformatics for Integrated River Basin<br>Development [GIRBD] - Summer School                       | MHRD, Govt. Of India, New<br>Delhi.                                                         |
| 19/01/2009 -<br>30/01/2009 | Geoinformatics for Integrated Coastal Zone<br>Management Plan [GICZMP] - Winter<br>School              | MHRD, Govt. Of India, New<br>Delhi.                                                         |
| 26/04/2007                 | One day workshop on Integrated Coastal<br>Zone Management Plan [ICZMP-2007]                            | MoEF, Govt. Of India, New<br>Delhi.                                                         |
| 24/03/2007                 | One day awareness programme on Global<br>Positioning System [GPS]                                      | MHRD, TEQIP, NITK,<br>Surathkal.                                                            |
| 10/03/2007                 | One Day Awareness Program on Remote<br>Sensing & Geographic Information System<br>for College Students | MHRD, TEQIP, NITK, Surathkal                                                                |

02/02/2005 Workshop on Wetland Monitoring and Management” sponsored by TEQIP, conducted in our department. (Coordinators: MHRD, TEQIP, NITK, Surathkal Dr. Arkal Vittal Hegde and **Dr. G. S. Dwarakish**).

### Professional Training Received / Summer / Winter Schools attended [06]

| Year | Nature of Training                                                                                                                                             | Duration  | Organization where training was provided                                               |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------------------------------------------------------------|
| 2010 | Summer School on “Field methods and eco-hydrological models for integrated water management in rural areas” sponsored by DAAD, 16 - 29 September 2010, Germany | Two weeks | Department of Hydrology and Water Resources Management, Ecology Center, Kiel, Germany. |
| 2009 | Short-term training program on “Isotope Tracer Techniques for Water Resources Development and Management” 15 - 20 June 2009.                                   | One week  | CWRDM, Calicut, Kerala, India.                                                         |
| 2009 | Indo-US Engineering Faculty Leadership Institute. June 29 - July 3, 2009.                                                                                      | One week  | Infosys Mysore Center                                                                  |
| 2008 | RISAT-UP Radar Remote Sensing and Applications. 1 - 2 December 2008.                                                                                           | Two weeks | SAC, ISRO, DOS, Ahmedabad, India                                                       |
| 2005 | Introduction to Statistics using SPSS. 19 January 2005                                                                                                         | One day   | NITK Surathkal, by SPSS South Asia                                                     |
| 2005 | GIS training programme. 22 June 2005                                                                                                                           | One week  | ESRI India, Bangalore                                                                  |
| 2004 | Integrated Water Resources Management using Numerical Methods, Remote Sensing and GIS                                                                          | One week  | IIT, Bombay                                                                            |
| 2004 | Planning, Development and Management of Modern Urban Core Infrastructure Solutions for India                                                                   | Two weeks | NITK, Surathkal                                                                        |
| 2004 | Satellite Oceanography                                                                                                                                         | Two weeks | DOD, ICMAM-PD, Chennai                                                                 |
| 2004 | Computer-Aided 3-D Modelling and Animation                                                                                                                     | One week  | MIT, Manipal                                                                           |
| 2003 | Remote Sensing and Geographic Information System for Resources Management                                                                                      | Two weeks | KREC, Surathkal                                                                        |

|             |                                                                                                                                     |           |                                    |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------------------|
| <b>2003</b> | Coastal Erosion Areas (CEA)- Protection and Management                                                                              | Two weeks | NITK, Surathkal                    |
| <b>2003</b> | Advances and Latest Trends in Engineering Geology and Geotechnology                                                                 | Two weeks | NITK, Surathkal                    |
| <b>2002</b> | Remote Sensing and Geographic Information System for Resources Management                                                           | Two weeks | KREC, Surathkal                    |
| <b>2000</b> | Engineering Geology and Geotechnology Role in Country Planning and Development                                                      | Two weeks | KREC, Surathkal                    |
| <b>2000</b> | Introduction to ArcView and Spatial Analyst                                                                                         | One week  | ESRI India, New Delhi              |
| <b>1999</b> | Recent advances in Chemical, Electro-chemical and Nuclear Energy Systems                                                            | Two weeks | PES College of Engineering, Mandya |
| <b>1998</b> | Remote Sensing Applications in Marine Sciences                                                                                      | Two days  | Anna University Chennai            |
| <b>1998</b> | Site Investigation Techniques for Civil Engineering Constructions and Development of Engineering Geology and Geotechnology in India | Two weeks | KREC, Surathkal                    |
| <b>1997</b> | Quality Assurance in Engineering Education                                                                                          | One week  | KREC, Surathkal                    |
| <b>1996</b> | Remote Sensing for Land and Water Resources Management                                                                              | Two weeks | IIT, Kharagpur                     |
| <b>1995</b> | P. C. Professional Course                                                                                                           | One week  | KREC, Surathkal                    |
| <b>1995</b> | Digital Image Analysis in the Field of Remote Sensing Technology                                                                    | Two weeks | RRSSC Bangalore                    |

## Summary of R & D Projects

### RESPOND project

The coastal zone of Mangalore is acquiring an ever-increasing importance due to its rich ocean resources and favourable condition for the development of port-based major industries. All weather New Mangalore Port Trust (NMPT) is the administrative unit of the port which caters to the needs of large, medium and small-scale industries.

The present study is carried out with a view

- (i) to understand sediment dynamics and interaction of coastal structures with beach morphology,
- (ii) to study the coastal processes in the vicinity of the New Mangalore Port (NMP) breakwaters,
- (iii) to develop an algorithm for the estimation of Suspended Sediment Concentration (SSC) from in-situ and Indian Remote Sensing Satellite (IRS)-P4 Ocean Colour Monitor (OCM) data and
- (iv) to study the change detection of shoreline.

These objectives are addressed using various conventional and satellite data. A 40km stretch of the Mangalore Coast, starting from Talapady in the South and Mulky in the North, along the West Coast of India is the study area.

Survey of India toposheet was used to prepare the base map. The predominant direction of sediment transport was determined by drawing sediment trend matrices based on the statistical parameters of beach face sediments. Sea sledge survey data were used to study the effects of seawalls on beach profile morphology. The performance of breakwaters at NMP was assessed by leadline soundings data. Sea bed sediment data were analysed to detect the source of siltation along the outer approach channels and lagoon of NMP. In-situ measurements in synchronized with the IRS-P4 satellite overpass were used to validate the SSC algorithm developed from OCM data. Shoreline changes were detected using IRS-1A/1B satellite data.

Based on the analysis of conventional and satellite data, it is concluded that the littoral drift in the study area is negligibly small which is supported by the results of other analyses. Net sediment transport along the Mangalore coast is very small. Siltation in the approach channel and lagoon of NMP is due to the offshore-onshore movement of sediments.

The analysis to study the effect of coastal structures with coastal processes shows that seawalls constructed along the Mangalore coast are properly designed and located away from the active zone of the beach and hence they are not affecting the beach profiles and beach recovery processes either in front of it or on the neighbouring beaches. There are no significant changes observed in the bathymetry and shoreline in the vicinity of NMP due to breakwater construction. Analysis of satellite data indicates that there is no large-scale variation in the shoreline configuration, except at the unprotected river mouth. The accuracy of the algorithm developed using IRS-P4 OCM data for the estimation of SSC is satisfactory. Hence, it is concluded that satellite data can be used for studying the coastal processes.

### MHRD project

The proposed work mainly concentrates on the nearshore coastal processes of the Mangalore coast. It involves the identification of eroding/accreting critical areas along the Mangalore coast. The performance of coastal structures in the study area will be assessed in the proposed study. The Suspended Sediment Concentration (SSC) model relating remotely sensed data and in-situ data will be developed by considering state-of-the-art technology. It is also proposed to develop a model, which gives the vertical distribution of SSC along the Mangalore coast. The sediment

dynamics in the vicinity of all-weather New Mangalore Port (NMP) are proposed to find out the main reason for the siltation problem in the approach channel and lagoon of NMP. The movements and distribution of dredged material from the dumping site will be tackled through Sediment Trend Analysis (STA). The study will be carried out using both conventional and remotely sensed data and other attribute information of the study area. The nearshore processes information system for the study area will be developed under a Geographical Information System (GIS) environment. This gives online information about the long-term and short-term shoreline configuration, the effect of coastal structure on the coastal processes, surface as well as vertical distribution of SSC and sediment dynamics in the vicinity of the NMP approach channel and lagoon.

### **MOEF project**

The main objectives of this project are:

1. To identify the critical erosion areas of the Karnataka coast using RS & GIS.
2. To prepare area area-specific management plan for mitigation of erosion along the Karnataka Coast.
3. To develop a Critical Erosion Areas Information System (CEAIS) in a GIS environment.

The following are the sub-components of the project work:

- i. Shoreline Change detection using Topo sheets and multi-date Remotely Sensed data.
- ii. Analysis of the data to identify and classify the erosion-prone areas as critical, moderate, and zero-erosion areas.
- iii. Land use/Land cover change detection and analysis.
- iv. Arriving at Area-specific management of erosion areas based on the land use/ land cover analysis.
- v. Integrating all the data generated into the GIS environment.
- vi. Development of a Critical Erosion Areas Information System (CEAIS).
- vii. Final Document / Report generation.

### **ICMAM-PD, DOD project**

This project mainly concentrates on the dynamics of the river mouth along the Karnataka Coast. As an experimental basis, only the Netravati-Gurpur river mouth is selected in the beginning. All the available data such as wind velocity & direction, wave direction, currents, tides, sediment concentration and its distribution, bathymetric details, beach profile, the quantity of sediment brought in by the rivers, high resolution remotely sensed data at frequent intervals will be used to understand the river mouth dynamics and shoreline configuration at Netravati-Gurpur river mouth. Based on the experience gained while conducting the present study for the Netravati-Gurpur river mouth, the same study will be extended to the remaining river mouths of the Karnataka Coast. For this project, major equipments will be given by ICMAM-PD, DOD, Pallikarani, Chennai. This project is challenging since it involves a lot of field data collection both in the estuary as well as in the vicinity of the Netravati-Gurpur River on the ocean side.

### **DST Project**

The DST project titled “RS & GIS Application for Sustainable Management of Sacred Groves” in Kodagu District” is basically for the development of a database for the Sacred Groves in

Kodagu district. The database includes location details, the areal extent of the sacred groves, monitoring agency, temple name and other details, threats to the sacred groves and some development plans for the existing sacred groves. The actual extent of the sacred groves is extracted through the analysis of high-resolution IRS satellite data, using ERDAS Imagine 9.3 software and analysed in Arc View- Master lab kit GIS environment.

### **RESPOND Project**

The second RESPOND project, sponsored by the Indian Space Research Organisation (ISRO) under the RESPOND programme titled “Analysis of Satellite Derived Wind and Wave Parameters of Karnataka Coast”. For the execution of this project, ENVISAT data was purchased from ESA. The programme was written in FORTRAN to extract the wave and wind information. The different activities completed under this project include

- a) Understanding the SAR concepts
- b) retrieval and validation of Wave spectra and Wind speed from SAR
- c) Algorithm to derive level 2 from Level 1 data of wave mode data
- d) preparation of wave spectra and wind speed map for the new datasets purchased from ESA
- e) Completion of the algorithm for wave mode data.

### Consultancy works undertaken/ Industry interaction

Only the departmental testing and consultancy works related to strength of materials lab (tension test, bending & re-bending test) and fluid mechanics lab (Calibration of pressure gauges and watermeter) have been undertaken.

I am regularly interacting with New Mangalore Port Trust (NMPT), Panambur, India Meteorological Department (IMD) observatory, Panambur; Minor Irrigation Department, Public Works Department, Port & Harbour Sub-division, Mangalore; KERS, Mangalore Sub-division; RRSSC, KSRSAC, Bangalore; MPT, Goa; IIT Madras, IIT Mumbai, IIT Kharagpur, IIT Delhi, NIT- Calicut, Trichi, Warangal, Nagpur, Surath, Raipur, Rourkela, Pandichery, Goa, NIO Goa; NIOT Chennai; IRS, Anna University, Chennai; GEC, Farmagudi, Ponda, Goa, Anna University, Chennai, Bangalore University, Bangalore, Mangalore University, Mangalore, VTU, Belgaum, College of Engineering, Trivendrum, etc.

## Experience in Administrative Positions, Curriculum and Lab Development, Student Welfare, Professional and Outreach Activities

### Administrative Positions

|                                    |                                                                                                                                |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Dean Academic                      | National Institute of Technology Karnataka, Surathkal                                                                          |
| Dean Planning and Development      | National Institute of Technology Karnataka, Surathkal                                                                          |
| Head of the Department             | Water Resources and Ocean Engineering,<br>(Formerly Dept. Of Applied Mechanics and Hydraulics)<br>NITK, Surathkal              |
| Faculty In-Charge                  | IIP Cell, NITK Surathkal                                                                                                       |
| Deputy Co-ordinator                | NIT Goa                                                                                                                        |
| Chief Warden [In-charge]           | NIT Goa, GEC Campus, Ponda, Goa                                                                                                |
| Hostel block Warden                | NITK Hostels for two terms                                                                                                     |
| Associate Dean (Students' Welfare) | NITK Surathkal                                                                                                                 |
| Member                             | SC/ST Cell, NITK Surathkal                                                                                                     |
| Member                             | Health Care Centre, NITK Surathkal                                                                                             |
| Board of Directors                 | Consumer's Society, NITK Surathkal                                                                                             |
| Secretary                          | Consumer's Society, NITK Surathkal                                                                                             |
| Board of Directors                 | Credit Society, NITK Surathkal                                                                                                 |
| Member                             | Provident Fund Committee, NITK Surathkal                                                                                       |
| Member                             | Fire Committee, NITK Surathkal                                                                                                 |
| Member                             | AIEEE Counseling & Admission, NITK Surathkal<br>[2004-05]                                                                      |
| Dy. In-charge                      | Help Centre & Admission Centre, AIEEE' 10 & AIEEE<br>' 11, NIT Goa                                                             |
| Member                             | AIEEE Counseling & Admission NIT Goa [2010-11]                                                                                 |
| Member                             | Institute Staff Selection Committee, NITK & NIT Goa                                                                            |
| Member                             | Institute Magazine Committee, Vitruvian (Kannada<br>Section)                                                                   |
| Faculty In-charge                  | MUNDAABHIVRUDI SAMANYA SAMITHI [MASS],<br>to develop the Munda Village, under Services to the<br>Community under ENGINEER' 09. |

### Academics

|                   |                                                                   |
|-------------------|-------------------------------------------------------------------|
| Member            | RPAC                                                              |
| Member            | DRPC, DPGC and DUGC                                               |
| Secretary         | DPGC, DRPC                                                        |
| Faculty in-charge | Department timetable for three years                              |
| Faculty Advisor   | CIVIL Engineering Branch<br>M.Tech. [Marine Structures, RS & GIS] |
| Faculty In-charge | RS & GIS and Departmental Computer Labs                           |
| Member            | DAAB committee                                                    |
| Secretary         | Civil Engineering Association                                     |
| Faculty Advisor   | First year and Second year - NIT Goa                              |

#### Others

|                   |                                                                                                         |
|-------------------|---------------------------------------------------------------------------------------------------------|
| Co-coordinator    | INSPIRE- Winter Science Camp                                                                            |
| Co-coordinator    | NURTURANCE Programme for NTS Awardees                                                                   |
| Co-coordinator    | RS & GIS programme                                                                                      |
| Co-coordinator    | GPS programme                                                                                           |
| Co-coordinator    | GICZMP'09, GIRBD'09 & ETMS'10 and ETM'11 at NIT Goa                                                     |
| Member            | Annual Convocation                                                                                      |
| Member            | Golden Jubilee Celebrations                                                                             |
| Co-convener       | Transportation Committee, INCHOE'2007                                                                   |
| Convener          | Transportation Committee, SwaRM'2010                                                                    |
| Member            | Stage Committee ISTE Annual Convention, Indian Engineering Congress                                     |
| Member            | ENGINEER [Technical Fest], INCIDENT [Cultural Fest], CRESCENDO [Inter-year cultural competition]        |
| Member            | World Coastal Clean-up Day                                                                              |
| Coordinator       | World Water Day, World Wetland Day and World GIS Day                                                    |
| Returning Officer | Student's Union Elections                                                                               |
| Faculty Advisor   | Music Club, Kannada Vedike, Artist forum, Ganesha Festival, Holi, Deepavali, New Year's Day celebration |
| Faculty Advisor   | Civil Engineering Model Competitions                                                                    |

Secretary

Staff Recreation Club

Performed in several Kannada Dramas namely Deepadinda Deepa Hacha, Panchabootha, Panchabootha'08, Panchabootha'25 , Devarapalayana

### Awards / Recognitions

**2025** Awarded **Best Paper** under the theme “Climate Change, Hydroclimate & Drought” presented in International Conference on Wetlands and Water Resources for Sustainable Development held at National Institute of Technology Patna during 29th-31st December, 2025.

Awarded **Best Paper Presentation** for “Assessing the Impact of Rainfall and Groundwater Abstraction on Groundwater Levels Using Statistical Analysis” presented in the Symposium on River Health Evaluation and Protection held on 29<sup>th</sup> and 30<sup>th</sup> December 2025.

**2024-25** Board of Examiners (BoE), PG, NIE, Mysuru, Karnataka.

**2023** Awarded **Best Technical Paper** for “Streamflow Estimation using Deep Learning Approach (CNN and LSTM) for Hemavathi River Basin, Karnataka, India” presented at New Horizons in Civil Engineering (NHCE-2023), October 13-14, 2023 MIT Manipal.

Awarded **Best Technical Paper** for “Comparative Analysis of Topographic Factor (LS Factor) Estimation Methods for Soil Erosion Risk Assessment in the Netravati Watershed, India”, presented at International Conference on Sustainable Infrastructure: Innovation, Opportunities and Challenges (SIIOC-2023), April 20-21, 2023, at NITK, Surathkal.

**2021** Awarded **Best Presentation** for “Study of shoreline change along Kasaragod district in Kerala, West Coast of India”, presented at HYDRO 2020 International, March 26-28, 2021, NIT Rourkela.

**2018** Awarded **Best Session’ s Paper** for “Shoreline change threat to coastal zone: A case study on Karwar coast”, presented at 2<sup>nd</sup> International Conference on Climate Change (ICCC 2018), February 18-19, 2018, Srilanka.

**2016** Awarded **Best Paper** for “Coastal Inundation Study Using Remote Sensing”, presented at 10<sup>th</sup> International Symposium on Lowland Technology September 15-17, 2016 at Mangalore, India.

Received **Venus International Faculty Award for the year 2016**, instituted by Venus Education Foundation, Chennai, in recognition of outstanding contribution in the field of Coastal Engineering Sciences.

**2015** Guest Editor – Elsevier Aquatic Procedia-ICWRCOE‘15

Received **Young Scientist Award** and **Best Paper Award** for the paper titled “Study of Land Use/Land Cover Dynamics through Classification Algorithms for

Harangi Catchment Area, Karnataka State, India” presented at the International Conference on Water Resources, Coastal and Ocean Engineering (ICWRCOE '15), 12-14 March 2015 organised by Department of Applied Mechanics and Hydraulics, NITK Surathkal.

**2014** Board of Examiners (BoE), PG, UVCE, Bangalore, Karnataka.

**2013** Received **Prof. Satish Dhawan Young Engineers State Award** for the year **2013**, instituted by the Government of Karnataka in recognition of outstanding contribution in the field of Engineering Sciences.

Guest Editor-In-Chief for Special Issue on RS & GIS Applications, International Journal of Earth Sciences and Engineering

Awarded **Best Young Scientist** for “Land use/ Land cover changes along D. K. Coast, West coast of India using Remote sensing and GIS ” which was presented during the 8<sup>th</sup> International Congress on climate change, Territorial Classification and Socio-economic Crisis, organised by Bharathidasan University, Tamilnadu and National Polytechnic Institute, Mexico, Bharathidasan University, Tamilnadu, 23<sup>rd</sup>-27<sup>th</sup> April 2013.

Serving as a **Secretary** of Indian Society of Geomatics [ISG]

Executive Member, Kodagu- Dakshina Kannada- Udupi Engineers’ Association

**2010** Awarded **Best Paper** for “Sediment Characteristics of Dakshina Kannada Coast, West Coast of India” which was presented during the International Conference on Earth Sciences and Engineering, held at Hyderabad, on 21<sup>st</sup> August 2010.

Selected as Board of Examiners (BoE), PG, UVCE, Bangalore, Karnataka.

Selected as Board of Examiners (BoE), VTU, Belgaum, Karnataka

Selected as Board of Examiners (BoE), Anna University, Chennai, Tami Nadu.

Selected as Board of Examiners (BoE), Coimbatore Institute of Technology, Coimbatore, Tamil Nadu.

Selected as one of the Committee Members of the Board of Studies (BoS), for NIE, Mysore and NMAMIT, NITTE University, Nitte, and College of Engineering, Thiruvananthapuram.

One of the Editors of International Journal of Earth Sciences and Engineering

Reviewer of International Journal of Earth Sciences and Engineering, India

Reviewer of International Journal of Coastal Research, USA

Reviewer of International Journal of Imaging

Reviewer of Climate Change



Received **Prof. Satish Dhawan Young Engineers State Award for the year 2013**, instituted by the Government of Karnataka in recognition of outstanding contribution in the field of Engineering Sciences.



Received **Venus International Faculty Award for the year 2016**, instituted by Venus

Education Foundation, Chennai, in recognition of outstanding contribution in the field of Coastal Engineering Sciences.



Recognized as **IUCEE Faculty Fellows** for contributions to improving the quality and global relevance of engineering education in India in **The Fourth International Conference on Transformations in Engineering Education (ICTIEE 2017)**

### Extra Curricular Activities

Reviewed the textbook titled “An Introduction to Geographic Information Technology” [ISBN: ISBN 81-88237-66-3] written by Sujith Choudhury, Deepankar Chakraborti and Suchandra Choudhury, published by I.K. International Publishing House Pvt. Ltd.

Identified as one of the resource persons in the area of remote sensing, GIS and image processing and delivered invitation talks in several institutes and schools. In addition to this, I have also given lectures in high schools both in Kannada and English, about remote sensing, GIS and GPS

Execution of all the works related to counselling, admission, academic, administration, hostel affairs, and students' affairs at NIT Goa, under the able guidance and support from the Director, NITK and other Administrative officials of NITK Surathkal and Goa College of Engineering, Ponda, Goa, in addition to taking Engineering Mechanics subject.

Serving as a Secretary of Indian Society of Geoinformatics [ISG]

Chairman of one of the technical sessions of ICOE'09, held at IIT Madras, India, 1-5th February 2009.

Co-Chairman of one of the technical sessions of SwaRM'10 held at NITK, Surathkal, India, 7th -9th January 2010.

Extracurricular activities- Drama, Sports, Singing, Folk Songs

Executive Member, Kodagu- Dakshina Kannada- Udupi Engineers' Association

One of the panel of judges for Dakshina Kannada – Udupi Vijgana Mela held at Vidyadayini School

Served as one of the judges for various events such as Kannada light music, folk dance/songs, Kannada drama etc., held in D. K. District

Chairman of one of the technical sessions of INCHOE'14, held at NIO, Goa, India, 5th – 7th February 2014.

### **List of Mini Projects/ Technical Seminars Guided (M.Tech/Ph.D.)**

Wetland Management using using remote sensing

Classification of rain-fed and irrigated crops using remote sensing

Indian Satellite Family

Integrated Coastal Zone Management (Ph.D. Scholar).

Satellite Launch Vehicles past, present & future

Sediment Trend Matrix

Granulometric analysis of Netravati- Gurpur rivers

Landuse/Land cover map preparation by DIP

Nearshore Bathymetric Study by using RS data

Coastal pollution

Satellite Oceanography

Space Shuttle

International Space Station

Global Positioning System [GPS]

Variable Source Area Watershed Model

River Basin Soil Erosion Model [MUSLE]

Interlinking of Rivers

Numerical modelling to estimate groundwater contamination

Crime analysis using GIS

Littoral drift along D.K. Coast

Urban Hydrology

LU/LC change detection using high-resolution RS data

Dredging Equipment for Deep and Shallow Water Marine Applications

### Technical Talks Delivered

|                                                                                                            |                                                                                                                                                                                                                     |
|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Geoinformatics for Coastal & Water Resources Engineering                                                   | Workshop on Geoinformatics 29 <sup>th</sup> June 2026<br>Department of Civil Engineering, UVCE Bengaluru                                                                                                            |
| Research & Reward                                                                                          | Faculty Development Programme for the academic year 2026–2027 11 <sup>th</sup> June 2026, St Aloysius (Deemed to be University), Mangalore                                                                          |
| Geo-informatics in Coastal Engineering                                                                     | HYDRO International 2025 - 30 <sup>th</sup> International Conference on Hydraulics, Water Resources, River and Coastal Engineering, December 18-20, 2025, National Institute of Technology Rourkela, Odisha, India. |
| Coastal Aquifers in the Context of Integrated Coastal Zone Management                                      | Sustainable Groundwater Management for Water Security, June 21, 2024, held at the Karnataka Science and Technology Academy (KSTA) Office.                                                                           |
| Role of Geoinformatics in Coastal Engineering                                                              | New Horizons in Civil Engineering (NHCE-2023) October 13-14, 2023 MIT Manipal.                                                                                                                                      |
| Modes of Sediment Transport                                                                                | Training Programme for KERS Engineers, Mysore.                                                                                                                                                                      |
| Fundamentals of Fluid Mechanics, Selection of Turbines & Pumps                                             | Transfer of Technology to Rural Areas, KREC, Surathkal                                                                                                                                                              |
| Performance of Seawalls along D.K.Coast                                                                    | Departmental Technical Talk, KREC, Surathkal.                                                                                                                                                                       |
| Decision Support System for civil engineering problems                                                     | During Workshop, Institute of Remote Sensing, Anna University, Chennai                                                                                                                                              |
| Applications of RS & GIS for Coastal Engineering                                                           | AICTE / ISTE - STTP, KREC, Surathkal.                                                                                                                                                                               |
| Sediment Dynamics along Mangalore Coast through RS & GIS.                                                  | Engineer' s Day, Institute of Engineers, Mangalore Chapter, Mangalore.                                                                                                                                              |
| Fundamentals of Digital Image Processing                                                                   | AICTE / ISTE - STTP, KREC, Surathkal                                                                                                                                                                                |
| Digital Image Processing Methods & Applications                                                            | AICTE / ISTE - STTP, KREC, Surathkal                                                                                                                                                                                |
| Study of Suspended Sediment Concentration (SSC) and its distribution along Mangalore Coast using RS & GIS. | AICTE / ISTE - STTP, KREC, Surathkal                                                                                                                                                                                |
| Civil Engineering Applications of RS & GIS.                                                                | Engineer' s Day, MIT, Manipal.                                                                                                                                                                                      |

|                                                                                       |                                                                                                                  |
|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Physics of Remote Sensing                                                             | NNRMS - STTP, Kongu Engineering College, Erode, TN.                                                              |
| Platforms and Sensors for Satellite Remote Sensing.                                   | NNRMS - STTP, Kongu Engineering College, Erode, TN.                                                              |
| Visual Interpretation Techniques of RS data.                                          | NNRMS - STTP, Kongu Engineering College, Erode, TN.                                                              |
| Digital Image Processing of RS data.                                                  | NNRMS - STTP, Kongu Engineering College, Erode, TN.                                                              |
| Fundamentals of Microwave Remote Sensing and its Applications.                        | NNRMS - STTP, Kongu Engineering College, Erode, TN.                                                              |
| Applications of Remote Sensing.                                                       | RSIP- 03, Kongu Engineering College, Erode, TN.                                                                  |
| RS and GIS & Visualisation Capabilities for Interlinking of Rivers.                   | National Seminar on Interlinking of Rivers, UVCE, Bangalore.                                                     |
| Integrated Coastal Zone Management Plan (ICZMP) through RS & GIS - An Indian Scenario | National Seminar on National Resources Management for Sustainable Development, UVCE, Bangalore.                  |
| Bird' s Eye view of RS and GIS                                                        | STTP - AICTE - ISTE, IIT, Mumbai.                                                                                |
| Fundamentals of Remote Sensing and GIS                                                | STTP - AICTE - ISTE, College of Technology<br>G. B. Pant University and Technology, Pantnagar, Uttaranchal State |
| Visual and Digital Image Processing                                                   | STTP-AICTE-ISTE, College of Technology; G. B. Pant University and Technology, Pantnagar, Uttaranchal state       |
| Application of RS and GIS for Natural Resources Management                            | STTP - AICTE - ISTE, College of Technology G. B. Pant University and Technology, Pantnagar, Uttaranchal state    |
| Remote Sensing Application in Coastal Engineering                                     | Awareness programme on RS & GIS application in civil engineering, MIT, MAHE, Manipal                             |
| Applications of RS & GIS for Marine Pollution                                         | World Environment Day, NITK, Surathkal                                                                           |
| Application of RS & GIS for Infrastructure Development in India                       | STTP - AICTE - ISTE, Applied Mechanics Department NITK, Surathkal                                                |
| Land use/land cover change Detection Analysis: An Indian Scenario                     | NASA-CWRDM-LU/LC Internation meet, CWRDM, Calicut                                                                |
| Tsunami Prediction and Mitigation measures                                            | National workshop on Natural disasters, mitigation and management, NIE, Mysore                                   |
| RS & GIS Applications in Natural Resources Management                                 | National workshop on Geoinformatics, Mysore University, Mysore                                                   |
| RS & GIS Applications in Water Resources Engineering                                  | National Conference on New Horizons in Civil Engineering - NHCE 2013, MIT Manipal                                |

|                                                                                                                         |                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fundamentals of Microwave Remote Sensing and its Applications in Coastal Engineering                                    | Dept. of Civil Engineering, College of Engineering, Thiruvananthapuram                                                                                                                                      |
| RS, GIS & GPS Applications in Civil Engineering                                                                         | Christ The King College of Engineering, Coimbatore, Tamil Nadu                                                                                                                                              |
| RS & GIS A RS & GIS Applications in Water Resources Engineering                                                         | One-day Workshop on Application of RS & GIS in Civil Engineering, Faculty of Engineering, EBET Group of Institutions, Erode, Tamil Nadu                                                                     |
| Remote Sensing and GIS Applications in Sacred Groves Information System and Management- A Case Study of Kodagu District | International Conference on Conserving Biodiversity for Sustainable Development, 16-18 August 2013, NIT, Rourkela, Odisha                                                                                   |
| RS & GIS Applications in Civil Engineering                                                                              | National Workshop on Civil Engineering Challenges in 21st Century, MITE, Moodabidri, Karnataka                                                                                                              |
| Geoinformatics in Coastal Engineering                                                                                   | Shristi 2K14, LBS College of Engineering, Kasaragod, Karnataka                                                                                                                                              |
| Tsunami Generation and its Mitigation Measures                                                                          | ACCE Mangalore Chapter, Mangalore                                                                                                                                                                           |
| RS & GIS A RS & GIS Applications in Water Resources Engineering                                                         | ACCE Week long Programme, KVG College of Engineering, Sullia, Karnataka, India                                                                                                                              |
| Geoinformatics for Civil Engineering                                                                                    | INTI International University, Kaula Lumpur, Malaysia                                                                                                                                                       |
| Remote Sensing and GIS in Civil Engineering                                                                             | 3 days technical fest SRISHTI 2K14, during 13,14 and 15 March 2014, LBS Collge of Engineering, Kasaragod, India                                                                                             |
| Effective Teaching Methodologies/ Engineering Mechanics                                                                 | Centre for Continuing Technical Education, Karnataka                                                                                                                                                        |
| Coastal Erosion along Dakshina Kannada Coast                                                                            | Recent Challenges in Atmospheric and Earth Sciences, 27-30 December 2014, Dept. of Chemical Engineering, NITK, Surathkal                                                                                    |
| Harnessing Energy From the Ocean                                                                                        | Renewable Energy Sources and Emerging Technologies (RESET), 1-5 September 2014, PESCE, Mandya                                                                                                               |
| Geoinformatics in Integrated Coastal Zone Management Plan for Undived Dakshina Kannada Coast                            | Special lecture series programme on Integrated Coastal Zone Management for PG students,13-14 November 2014, Karnataka Veterinary, Animal and Fisheries Sciences University, College of Fisheries, Mangalore |
| Geoinformatics in Coastal and Water Resources Engineering                                                               | 1st International Conference on Ingenious Technologies and Sustainable Developments in                                                                                                                      |

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|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                             | Civil Engineering, 8th October 2014, Noorul Islam University, Tamilnadu                                                                                                                        |
| Application of RS & GIS in Mining                                                           | Short-term course on Advances and Latest Developments in Mining Geology and Rock Mechanics, 2-4 April 2014, Dept. Of Mining, NITK, Surathkal                                                   |
| Applications of Remote Sensing and GIS in Coastal/Ocean Engineering                         | For M.Tech. Students, Dept. of Civil Engineering, College of Engineering, Thiruvananthapuram, 6th November 2014                                                                                |
| Fundamentals of Remote Sensing and GIS                                                      | Short-term training programme on Introduction to CAD/CAM and STAAD, 3-7 July 2014                                                                                                              |
| Digital Image Processing- A Game of Numbers                                                 | Short-term training programme on Introduction to CAD/CAM and STAAD, 3-7 July 2014                                                                                                              |
| RS, GIS, GPS and Conventional Survey in Coastal Engineering                                 | 3 days training on advanced survey, NAMIT, Nitte, 29-30 July 2014                                                                                                                              |
| Advanced Coastal Survey                                                                     | Three days State level Workshop on Advanced Surveying and Mapping Techniques, organised by AIET, Moodbidri, 26th - 28th February 2015                                                          |
| Selection of suitable Soil and Water conservation Structures through RS & GIS- A Case Study | One day National Workshop on Management Techniques of Rainwater Harvesting- Artificial Recharge Structures D.K. and Udupi Districts of Karnataka conducted by MITE, Moodbidri, 18th April 2015 |
| Ocean Energy                                                                                | Invited talk at Srinivasa Institute of Technology, Mangalore on 11.09.2015.                                                                                                                    |

### Countries Visited

| Country visited                         | Period of Visit |            | Purpose of visit                                                                                                                                  |
|-----------------------------------------|-----------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
|                                         | From            | To         |                                                                                                                                                   |
| Colombo, Sri Lanka                      | 13/02/2018      | 18/02/2018 | To attend and present paper in the 2nd International Conference on Climate Change 2018 ICCC.                                                      |
| McGill University,<br>Montreal, Canada  | 26/10/2015      | 03/11/2015 | Research interaction with Prof. Shiv O. Prasher and academic and research collaboration and intiation of MoU and GIAN program.                    |
| Kaula Lumpur,<br>Malaysia               | 14/04/2014      | 17/04/2014 | To attend and present paper in the International Conference 2014 IEEE Region 10.                                                                  |
| University of<br>South Carolina,<br>USA | 21/02/1012      | 04/03/2012 | For research interaction with the Professors of Dept. Of Geological Sciences & Marine Science Program, USC, USA                                   |
| Kiel, Germany                           | 13/09/2010      | 02/10/2010 | To attend the Summer School on “Field methods and eco-hydrological models for integrated water management in rural areas” held at Kiel University |
| Kagoshima, Japan                        | 20/05/2008      | 03/07/2008 | For research interaction with the Professors of Ocean Civil Engineering, from Kagoshima University, Japan.                                        |
| Florence, Italy                         | 15/09/2007      | 21/09/2007 | To attend and present paper in the International Conference SPIE’ 07.                                                                             |

### Computer Skills

|                                 |                                            |
|---------------------------------|--------------------------------------------|
| Image processing software       | ERDAS Imagine 9.0 - 9.2, ENVI, EASI / PACE |
| GIS Software Professional, GRAM | ARC/INFO, ARCVIEW, ARC GIS, Geomedia       |
| Marine Modeling software        | MIKE 21, OCM DAS                           |
| Statistical Analysis Tool       | SPSS                                       |
| Operating System                | Windows, UNIX                              |
| Others                          | MS Office                                  |

## Name and Address of Professional References

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**Prof. Dwarakish G. S.**