

Dr. PRUTHVIRAJ UMESH

Faculty | Researcher | Technology Integrator

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EXPERIENCE

Assistant Professor

National Institute of Technology Karnataka, Surathkal

📅 December 2007 - Ongoing 📍 Mangaluru, India

- Delivering lectures, conducting course related laboratory experiments and evaluation of courses for classroom learning students.
- Designed and implemented flipped classroom teaching setup- a type of blended learning that reverses the traditional learning environment by delivering course content online or outside classroom- for NITK Surathkal.
- Mentoring students for industry level projects and assist in product development and implementation.
- Effectuate research & development for externally funded projects.

Project Assistant

National Institute of Technology Karnataka, Surathkal

📅 2002 - 2003 📍 Mangaluru, India

- Groundwater quality monitoring in regions of laterite soil profile.
- Digital Elevation Model(DEM) creation by means of conducting total station survey and analysis of survey data.

KEY ACHIEVEMENTS

- 🔧 Total projects : 32 Cr (₹ 3160.59 Lakh)
- 📖 Total journal publications : 16
- 📄 Total conference publications : 67
- ⚙️ Product development projects mentored : 28
- ⚙️ Consultancy projects : ₹ 35.32 Lakh
- 🗣️ Invited technical talks :312

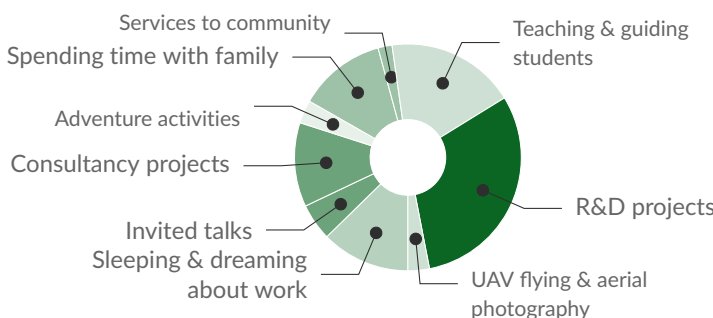
RESEARCH INTERESTS

Wave-structure interactions Open source product development
Wildlife conservation Autonomous navigation systems

COUNTRIES VISITED



IN A MONTH OF MY LIFE



📅 December 14, 2022

LIFE PHILOSOPHY

"Once born, don't stop till death. Aim, achieve and relish everything and anything you desire."

MOST PROUD OF



My competence

in being faculty mentor of 7+ award winning projects and in attracting 17+ funded projects worth over 24 crores.



Persistence & Loyalty

I showed despite the hard moments and financial hurdles in continuing to give quality research output.



Providing experiential learning

by introducing NITK's first open source hardware & software course AM477: Open source virtual instrumentation, which motivates and allows students to develop products through formation of trans disciplinary groups.

STRENGTHS

Perseverance Commitment
Self-motivation Flexibility Creativity
Interpersonal skills

LANGUAGES

English/Kannada ●●●●●●●●
Hindi ●●●●●●●●
Tulu/Sanskrit ●●●●●●●●

EDUCATION

🎓 PhD | Wind Engineering

NITK Surathkal

📅 2015 📍 Mangaluru,India

🎓 M.Tech | Structural Engineering

NITK Surathkal

📅 2005 📍 Mangaluru,India

🎓 B.E | Civil Engineering

NITK Surathkal

📅 2002 📍 Mangaluru,India

FUNDED PROJECTS



Environmental innocuous pile head breakwater for the Mitigation of coastal erosion

🏢 MHRD, Government of India ₹ 48.28 Lakh 📅 2019 - Ongoing 🏠 NITK Surathkal 👤 Investigator 👥 Prof. Kiran G Shiralal



Design and Development of Switched Reluctance Motor(SRM)

🏢 Department of Heavy Industry(DHI), Government of India ₹ 1698.94 Lakh 📅 2018 - Ongoing 🏠 NITK Surathkal
👤 Co-Investigator 👥 Dr. Gangadharan K V, Dr. Navin Karanth, Dr. B Venkatesa Perumal, M/s Aditya Auto, Bengaluru



Tech Implementation in Trucking Industry

🏢 Hicetane Logistics Innovations Private Limited, Bengaluru ₹ 5.00 Lakh 📅 2018 - Ongoing 🏠 NITK Surathkal 👤 Principal Investigator 👥 Dr. Gangadharan K V



Virtual Laboratory - Phase III

🏢 The National Mission on Education through Information and Communication Technology (NMECIT), MHRD,Gol ₹ 15.00 Lakh
📅 2018 - Ongoing 🏠 NITK Surathkal 👤 Lab Coordinator 👥 Dr. Gangadharan K V



Virtual Laboratory - Phase II

🏢 The National Mission on Education through Information and Communication Technology (NMECIT), MHRD,Gol ₹ 122.24305 Lakh
📅 2017 - Ongoing 🏠 NITK Surathkal 👤 Lab Coordinator 👥 Dr. Gangadharan K V, Dr.Panduranga Vittal K, Dr. Vidya Shetty



Remote Trigger Laboratory

🏢 The National Mission on Education through Information and Communication Technology (NMECIT), MHRD,Gol ₹ 119.1131 Lakh
📅 2011 - 2018 🏠 NITK Surathkal 👤 Lab Coordinator 👥 Dr. Gangadharan K V



Simulation and development of flapping mechanics

🏢 Aeronautical Research & Development Board (AR&DB), DRDO ₹ 17.803 Lakh 📅 2010-2012 🏠 NITK Surathkal 👤 Principal Investigator 👥 Dr. Shrikantha S Rao, Dr. Shrihari S



Flow characteristics and pollutant dispersion around building

🏢 Board of Research in Nuclear Sciences (BRNS) ₹ 19.60 Lakh 📅 2007-2009 🏠 NITK Surathkal 👤 Co- Investigator 👥 Dr. Shrihari S, Dr. Subhash C Yaragal, Dr. M K Nagaraj



Virtual Laboratory - Phase I : Strength of Material, Fluid Mechanics

🏢 The National Mission on Education through Information and Communication Technology (NMECIT),MHRD, Gol ₹ 374.54491 Lakh
📅 2010 - Ongoing 🏠 NITK Surathkal 👤 Lab Coordinator 👥 Dr. Gangadharan K V, Dr. Panduranga Vittal K, Dr. Vidya Shetty



Analysis & Mapping of Historical data on bonafide tree felling in Virajpet Division : Phase -I

🏢 Office of the Deputy Conservator of forests Virajpet Division,KFD ₹ 8.60 Lakh Lakh 📅 2017-Ongoing 🏠 NITK Surathkal 👤 Lab Coordinator 👥 Dr. Amba Shetty, Dr. Gangadharan K V



Glimpse of Kudremukh wildlife - An Educational Documentation

🏢 Office of the Deputy Conservator of forests, Kudremukh Wildlife Division Karkala, Karnataka Forest Department ₹ 5.60 Lakh Lakh
📅 2017-Ongoing 🏠 NITK Surathkal 👤 Principal investigator 👥 Dr. Gangadharan K V



Filtering the camera trap data

🏢 Office of the Deputy Conservator of forests, Kudremukh Wildlife Division Karkala, Karnataka Forest Department ₹ 1.57 Lakh Lakh
📅 2007-2009 🏠 NITK Surathkal 👤 Principal investigator 👥 Dr. Amba Shetty, Dr. Gamgadharan K V



Low-cost Automated Guided Vehicles (AGV)

🏢 Daimler India Commercial Vehicles Pvt. Ltd., Chennai ₹ 1.57 Lakh 📅 2015-2016 🏠 NITK Surathkal 👤 Faculty mentor 👥 Dr. Gangadharan K V



Solar powered unmanned aerial vehicles for disaster management

🏢 Institution of Engineers (India) ₹ 2.00 Lakh 📅 2010-2011 🏠 NITK Surathkal 👤 Faculty mentor



Micro aerial vehicles for deployable of wireless sensors

🏢 Institution of Engineers (India) ₹ 2.00 Lakh 📅 2010-2011 🏠 NITK Surathkal 👤 Faculty mentor



Plastic Waste Management System

🏢 Technical Education Quality Improvement Programme (TEQIP-II) ₹ 6.206 Lakh Lakh 📅 2016-2017 🏠 NITK Surathkal
👤 Co-Investigator 👥 Dr. Lakshman Nadagiri, Dr. Gangadharan K V



Waste Paper Recycling Management System

🏢 Technical Education Quality Improvement Programme (TEQIP-II) ₹ 4.768 Lakh Lakh 📅 2016-2017 🏠 NITK Surathkal
👤 Co-Investigator 👥 Dr. Navin Karanth, Dr. Gangadharan K V



A cost effective open source camera trap for wildlife conservation and research application

🏢 Technical Education Quality Improvement Programme (TEQIP)-II ₹ 5.567 Lakh Lakh 📅 2016-2017 🏠 NITK Surathkal
👤 Principal investigator 👥 Dr. Amba Shetty, Dr. Gangadharan K V



Smart Irrigation Management System

🏢 Technical Education Quality Improvement Programme (TEQIP)-II ₹ 6.539 Lakh Lakh 📅 2016-2017 🏠 NITK Surathkal 👤 Co-Investigator 👥 Dr. Amba Shetty, Dr. Gangadharan K V



Building an unmanned aerial vehicles for surveillance and rescue operations

🏢 TEQIP-II ₹ 3.57 Lakh 📅 2007-2008 🏠 NITK Surathkal 👤 Faculty Mentor

JOURNAL PUBLICATIONS



Impact of Atmospheric Correction Methods Parametrization on Soil Organic Carbon Estimation Based on Hyperion Hyperspectral Data

Mruthyunjaya, P., Shetty, A., Umesh, P., Gomez, C. Remote Sensing 2022 14 (20) 5117

DOI <https://doi.org/10.3390/rs14205117>



Multi-role Remotely Operated Marine Surface Vehicle

Shetty, N.B., Umesh, P., Gangadharan, K.V. Journal of Marine Science and Application 2022 21 (3) 219-227

DOI <https://doi.org/10.1007/s11600-021-00557-x>



Evaluation of surface soil moisture models over heterogeneous agricultural plots using L-band SAR observations

Gururaj P., Pruthviraj Umesh and Shetty A. Geocarto International 2022 1-19

DOI <https://doi.org/10.1080/10106049.2022.2032398>



Assessment of surface soil moisture from ALOS PALSAR-2 in small-scale maize fields using polarimetric decomposition technique

Gururaj P., Pruthviraj Umesh and Shetty A. Acta Geophysica 2021 69 (2) 579-588

DOI <https://doi.org/10.1007/s11600-021-00557-x>



Performance characteristics of a conical pile head breakwater: An experimental study

Sathyanarayana A.H., Suvarna P.S., Pruthviraj Umesh and Shirlal K.G. Ocean Engineering 2021 235 109395

DOI <https://doi.org/10.1016/j.oceaneng.2021.109395>



Hydraulic performance of perforated enlarged pile head breakwaters through laboratory investigation

Suvarna, P.S., Sathyanarayana A.H., Pruthviraj Umesh and Shirlal K.G. Ocean Engineering 2021 241 110089

DOI <https://doi.org/10.1016/j.oceaneng.2021.110089>



Dependability of rainfall to topography and micro-climate: an observation using geographically weighted regression

Shetty S., Pruthviraj Umesh, Shetty A. Theoretical and Applied Climatology 2021 2021 01-21

DOI <https://doi.org/10.1007/s00704-021-03811-w>



An exploratory analysis of urbanization effects on climatic variables: a study using Google Earth Engine

Shetty A., Pruthviraj Umesh, Shetty A. Modeling Earth Systems and Environment 2021 2021 01-16

DOI <https://doi.org/10.1007/s40808-021-01157-w>



Vertical accuracy assessment of open source digital elevation models under varying elevation and land cover in Western Ghats of India

Shetty S, Vaishnavi P C, Pruthviraj Umesh and Shetty A. Modeling Earth Systems and Environment 2021 2021

01-13 DOI <https://doi.org/10.1007/s40808-021-01119-2>



Modeling of surface soil moisture using C-band SAR data over bare fields in the tropical semi-arid region of India

Gururaj P, Pruthviraj Umesh, Shetty A. Applied Geomatics 2020 13(4) 555-564

DOI <https://doi.org/10.1007/s12518-021-00370-7>



Laboratory investigation on hydraulic performance of enlarged pile head breakwater

Suvarna, P.S., Sathyanarayana A.H., Pruthviraj Umesh and Shirlal K.G. Ocean Engineering 2020 217 107989

DOI <https://doi.org/10.1016/j.oceaneng.2020.107989>



A Comparative Analysis of Forest Fire Risk Zone Mapping Methods with Expert Knowledge

Yathish H., Athira K V, Preethi K, Pruthviraj U. and Shetty A. Journal of the Indian Society of Remote Sensing 2019

47(12), 2047-2060 DOI <https://doi.org/10.1007/s12524-019-01047-w>



Effect of Submerged Coastal Rigid Vegetation on Wave Attenuation Using Open Source CFD Tool: REEF3D

Arunakumar H S , Pruthviraj U , Praveen Suvarna and Arun Kamath International Journal Of Earth Sciences And Engineering (IJEE) 2017 10(4) 892-897



Numerical Modelling and Corroboration of Wave Interaction with Coastal Vegetation using Open Source CFD Tool: REEF3D

Ashwin S Prabhu, Abhijith P. A., Arunakumar H. S., Pruthviraj U and Arun Kamath International Journal of Earth Sciences And Engineering (IJEE) 2017 4(8) 237-243



Temporal Forest Cover Analysis of Udupi District In Karnataka Using Remote Sensing and GIS

👤 Rinnet Francis, Pruthviraj U and Amba Shetty 📖 International Journal of Engineering Research in Electronics and Communication Engineering (IJERECE) 📅 2017 📄 7(5) ↗ 59-64



Study on shelter effects of solids and porous fences

👤 Pruthviraj U, Prashanth J, Subhash C Yaragal and M K Nagaraj 📖 International journal of earth science and Engineering (IJEE) 📅 2011 📄 08(02) ↗ 158-159



Unmanned Aerial Vehicle for Coastal Zone Management

👤 Pruthviraj U, Sohan S, Ashwin L N and Shritheja U 📖 International journal of earth science and Engineering (IJEE) 📅 2011 📄 08(02) ↗ 84-87



Pollutant dispersion in the wake of a hill: A numerical Simulation

👤 Harishankar M , Pruthviraj U 📖 Journal of environmental research and development 📅 2010 📄 03(04) ↗ 330-339