

CURRICULUM VITAE

Dr. BASAVANAND M DODAMANI

Professor

Department of Water Resources and Ocean Engineering

National Institute of Technology Karnataka,

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Professional Education

- **PhD, Water Resources Engineering**

Thesis title: 'Groundwater Assessment & Management of Coastal Aquifer System' National Institute of Technology Karnataka, India, 2008.

- **Master of Engineering, Water Resources Engineering**, Karnataka Regional Engineering College Surathkal, University of Mangalore, India, 1995.

- **Bachelor of Engineering, Civil**, B.V.B. College of Engineering Hubli, India, 1991.

Technical Areas of Specialization

Hydraulics, Fluid Mechanics, Water Resources Engineering, Surface Water Hydrology,

Ground Water Hydrology, Irrigation & Drainage Engineering, Design of Hydraulics Structure

Professional experience

Lecturer KREC Surathkal 1997

Senior Lecturer KREC Surathkal 2002

Selection Grade Lecture NITK Surathkal 2007

Asst. Professor NITK Surathkal 2008

Assoc. Professor NITK Surathkal 2010

Professor NITK Surathkal 2019

Courses Taught

- Engineering mechanics (Graduate)
- Strength of materials (Graduate)
- Surface Water Hydrology (Graduate)
- Fluid Mechanics (Graduate)
- Water Conveyance Systems (Graduate)
- Hydraulic Machines & Water Power (Graduate)
- Groundwater Hydrology (Post-Graduate)
- Design of Hydraulics Structure (Post-Graduate)
- Irrigation & Drainage Engineering (Post-Graduate)

Professional Membership

ISH, ISTE, ACCE

PUBLICATIONS

1. N, K., Salma, S., and **Dodamani, B. M.** (2022). “Identifying Rice Crop Flooding Patterns Using Sentinel-1 SAR Data.” *J. Indian Soc. Remote Sens.*, 50(8), 1569–1584.
2. Pathak, A. A., and **Dodamani, B. M.** (2021). “Connection between Meteorological and Groundwater Drought with Copula-Based Bivariate Frequency Analysis.” *J. Hydrol. Eng.*, 26(7), 05021015.
3. Yadav, A., **Dodamani, B. M.**, and Dwarakish, G. S. (2021b). “Shoreline analysis using Landsat-8 satellite image.” *ISH J. Hydraul. Eng.*, 27(3), 347–355.
4. Yadav, A., **Dodamani, B. M.**, and Dwarakish, G. S. (2021a). “Effect of disturbed river sediment supply on shoreline configuration: A case study”. *ISH J. Hydraul. Eng.*, 00(00), 1–16.
5. Nizar, S., and **Dodamani, B. M.** (2020). “Satellite-based top-down Lagrangian approach to quantify aerosol emissions over California.” *Q. J. R. Meteorol. Soc.*, 146(729), 1626–1635.
6. Salma, S., and **Dodamani, B. M.** (2019). “A GIS topology to detect coastal groundwater Potential zones and variation of sea water temperature along west coast of Karnataka.” *Asian J. Converg. Technol.*, ISSN-2350.
7. Pathak, A. A., and **Dodamani, B. M.** (2019). “Trend Analysis of Groundwater Levels and Assessment of Regional Groundwater Drought: Ghataprabha River Basin, India.” *Nat. Resour. Res.*, 28(3), 631–643.
8. Nizar, S. and **Dodamani, B. M.** (2019). “Spatiotemporal distribution of aerosols over the Indian subcontinent and its dependence on prevailing meteorological conditions.” *Air Qual.*

Atmos. Heal., 12, 503–517.

9. Poojitha, K. and **Dodamani, B. M.** (2017). “Delineation of artificial recharge potential zones in lower part of Ghataprabha basin, Karnataka, India.” *Int. J. Sci. Innov. Technol.*, 5(ISBN 978-81-904760-9-6).
10. Pathak, A. A., Channaveerappa, and **Dodamani, B. M.** (2016). “Comparison of two hydrological drought indices.” *Perspect. Sci.*, 8, 626–628.
11. Mahajan, D. R., and **Dodamani, B. M.** (2016). “Spatial and temporal drought analysis in the Krishna river basin of Maharashtra, India.” *Cogent Eng.*, 3(1).
12. Naseela, EK and **Dodamani, BM** and Chandran, C. (2015). “Estimation of runoff using nrcs-cn method and shetran model.” *Int. Adv. Res. J. Sci. Eng. Technol*, 2, 23–28.
13. **Dodamani, B. M.**, Anoop, R., and Mahajan, D. R. (2015). “Agricultural Drought Modeling Using Remote Sensing.” *Int. J. Environ. Sci. Dev.*, 6(4), 326–331.
14. Kajekar, A. J., **Dodamani, B. M.**, Isloor, A. M., Karim, Z. A., Cheer, N. B., Ismail, A. F., and Shilton, S. J. (2015). “Preparation and characterization of novel PSf/PVP/PANI-nanofiber nanocomposite hollow fiber ultrafiltration membranes and their possible applications for hazardous dye rejection.” *Desalination*, 365, 117–125.
15. Mahajan, D. R., and **Dodamani, B. M.** (2015). “Trend Analysis of Drought Events Over Upper Krishna Basin in Maharashtra.” *Aquat. Procedia*, 4, 1250–1257.
16. Kajekar, A. J., **Dodamani, B. M.**, and Isloor, A. M. (2014). “Reverse Osmosis Desalination as an Alternative Water Resource Project for Drinking Water Production a Case Study.” *Int. J. Eng. Res. Technol.*, 3(12), 173–178.
17. Shweta, **B. M. Dodamani.** and. (2012). “Comparative analysis of ETo using AWS data.” *Int. J. Earth Sci. Eng.*, 5(4 (02)), 1015–1019.
18. M. K. NAGARAJ, SUBHASH C. YARAGAL, **B. M. Dodamani.** and B. C. Y. (2009). “Prioritization of Micro-Water Sheds Based on Soil Thematic Mapping.” *Int. J. Earth Sci. Eng. (ISSN 0974-5904)*, 2(3), 253–263.
19. Yaragal, Subhash C and Nagaraj, MK and Yogananda, BC and **Dodamani, B. M.** (2009). “Application of Universal Soil Loss Equation (USLE) in Micro-Water Sheds-A Case Study of the Kudremukh National Park Area, Karnataka, India.” *Int. J. Earth Sci. Eng.*, 2(6), 576–587.

CONFERENCES/ SEMINARS

1. Pathak, A. and Dodamani. B. M. (2019). “Analysis of Agricultural Drought and Investigation of Bivariate Return Periods using Copula.” *Geophys. Res. Abstr.*, 21.
2. Athira, k, Arunkumar Yadav, B M Dodamani, and Dwarakish. G. S. (2019). “Impacts of dams on sediment yield and coastal processes using SWAT and DSAS tools.” *Int. Conf. Civ. Eng. Trends Challenges Sustain.*, 633–645.
3. Shaik, Salma. and B. M. Dodamani. (2019). “Temporal Crop Monitoring with Sentinel-1 SAR Data.” *Int. Conf. Civ. Eng. Trends Challenges Sustain.*, 621–632.
4. Rajarshi, Datta, Abhishek A. Pathak, and B. M. Dodamani. (2019). “Assessment of Meteorological Drought Return Periods Over A Temporal Rainfall Change.” *Int. Conf. Civ. Eng. Trends Challenges Sustain.*, 573–592.
5. Sinan, N. and B. M. Dodamani. (2018). “Spatio-temporal distribution of rainfall and aerosols over urban areas of Karnataka.” *SPIE 10786, Remote Sens. Clouds Atmos. XXIII, 107860U*.
6. Abhishek A Pathak, S Nizar, B.M. Dodamani. (2018). “Trends in Agro-Meteorological Parameters as Groundwater Exploitation Indicators.” *IOP Conf. Ser. Earth Environ. Sci.* , 8th *Int. Conf. Environ. Sci. Eng.*, 167(1).
7. Arunkumar Yadav, B. M. Dodamani, and G. S. D. (2018). “Shoreline change threat to coastal zone: a case study of Karwar coast.” *Int. Conf. Clim. Chang.*, <https://doi.org/10.17501/2513258X.2018.2202>.
8. Abhishek A Pathak, B. M. Dodamani. (2018). “Assessment of agricultural drought by remote sensing technique.” *SPIE - Int. Soc. Opt. Eng. Sens. Agric. Ecosyst. Hydrol. XX 2018; Remote Sens. Agric. Ecosyst. Hydrol.*, 10783.
9. Sinan Nizar, and B. M. Dodamani. (2017b). “Cooling Effect of Netravati on Urban Heat Island over Mangalore.” *Status Futur. World’s Large Rivers*.
10. Abhishek A Pathak, and B. M. Dodamani (2017a). “Drought assessment for Ghataprabha river basin - a multi probability approach.” *Status Futur. World’s Large Rivers*.
11. Vineeta Surya, and Dodamani. B. M. (2017). “Comparison of baseflow separation techniques.” *Int. Themat. Conf. Urban. Heal. Wellbeing Sustain. Dev. Goals*.
12. Yadav, ARUNKUMAR and Dodamani, BM and Dwarakish, G. (2017). “Shoreline change: a review.” *Glob. Civ. Eng. Challenges Sustain. Dev. Clim. Chang.*

13. Nizar, Sinan and Dodamani, B. (2016). "Urbanization and rainfall trends in Karnataka." *Int. Conf. Hydraul. Water Resour. Coast. Eng.*
14. Ahishek A, Pathak. and B. M. Dodamani (2016). "A review of agricultural drought." *Int. Conf. Hydraul. Water Resour. Coast. Eng.*
15. Arunkumar Yadav, B. M. Dodamani. and G. S. Dwarakish. (2016). "Estimation of longshore sediment transport rate: a review." *Int. Conf. Hydraul. Water Resour. Coast. Eng.*
16. Abhishek A Pathak, M Inaayathulla, B. M. Dodamani. (2015). "Generation of unit hydrograph for flood studies for an ungauged catchment area." *Int. Conf. Hydraul. Water Resour. River Eng.*
17. Chandran Chaithra, Dodamani, B. M., Reddy, Krishna, and Naseela, E. K. (2015). "Drought monitoring for rabi season in upper krishna river basin using remote sensing and GIS." *Asian Conf. Remote Sensing, Philipp.*, 3201–3207.
18. Ashish Saxena, P. G. and B. M. Dodamani. (2013). "Estimation of runoff using SWMM model for a small catchment in NITK." *Int. Conf. Exhib. Water, Wastewater Isot. Hydrol.*, 134–138.
19. Ashish Saxena, and B. M. Dodamani (2013b). "Generation of intensity duration frequency curve for Mangalore and Udupi District of Karnataka by using hourly rainfall data." *Int. Conf. Exhib. Water, Wastewater Isot. Hydrol.*, 148–153.
20. Adarsh Koti, and B. M. Dodamani (2013a). "Spatial & temporal analysis of rainfall pattern over western ghat of Karnataka." *Natl. Conf. New Horizons Civ. Eng. Manipal*, 736–744.
21. Avin J Kajekar, B.M. Dodamani, Arun Isloor, and Rajesh, A. (2013). "Synthesis and characterization novel PVDF/ Nanofibre membrane and its possible applications for heavy metal rejection." *Int. Conf. Membr. Sci. Technol.*
22. B. M. Dodamani, and Arun Kumar, shetty (2012). "Profile of technical Education facilities and employment scenario in Karnataka State." *Employab. Fresh Eng. Grad. era Glob. Probl. Prospect.*
23. Dwarakish. G.S., Usha Nateshan., D. Venkata Reddy., and Dodamani. B. M. (2004). "Sediment Dynamics along Mangalore coast through sediment trend matrix analysis (STMA)." *Natl. Symp. Appl. Mar. Geosci. NIO Goa.*
24. B.M. Dodamani, Mahesh.A, M. K. Nagaraj. (2003). "Ground Water Quality Monitoring in Aquifer Management: A case study." *Int. Conf. Water Qual. Manag.*, 152–154.

25. B.M. Dodamani, M.K. Nagaraj, and Mahesh A. (2003). "Aquifer Zonation based on electrical resistivity test." *Natl. Conf. Hydraul. Water Resour. Ocean Eng.*, 152–154.
26. M.K. Nagaraj, Mahesh.A, and B. M. Dodamani. (2003). "Draft Operation Policy in a Regional Groundwater System." *Int. Semin. Watershed Dev. Drink. WATER SUPPLY SAARC Countries.*
27. M.K. Nagaraj, Mahesh A, and B. M. Dodamani. (2002). "Spatial Variability of Aquifer Parameters in a Regional Ground Water System." *Natl. Conf. Hydraul. Water Resour. Ocean Eng.*, 151–153.
28. Lakshman, N. and Dodamani B.M. (1995). "Development and testing of a catchment rainfall – Runoff model." *Natl. Conf. Signals, Data Syst. Model. Simul. Anal.*, 4–8.

Courses / Events Organised

1. Coordinator for a summer school on "Water resources Development and Management", held during 28 July – 8 August 2008, at Applied Mechanics Department, NITK, Surathkal.
2. Coordinator for a short-term refreshers course on "Design, Operation and Maintenance of Canals", held during 20-24 October 2008, at Applied Mechanics Department, NITK, Surathkal. The course conducted under CCE and sponsored by Engineering Staff College Krishnarajsagar.
3. Coordinator for a STTP at NIT Gao on "Effective Teaching Methodologies (ETM)", held during 13th to 17th June 2011 at NIT Gao.
4. Coordinator for a "Professional Skill Enhancement Program" held for final B.Tech/M.Tech SC/ST students of NITK for the years 2011, 2012 & 2013.
5. Coordinator for a "Self-Enrichment Program" held for first year B. Tech SC/ST students of NITK, 2013.
6. Coordinator for a "Personal Empowerment" held for first year M. Tech SC/St students of NITK, Jan 18-19th 2014.

Other professional Activities

Member Board of Studies: Bangalore University

Visits Abroad: Australia 2008, Japan 21012, Malaysia 2013, United States 2016, France 2018.

Counsellor for courses on Engineering Mechanics, Strength of Materials, Fluid Mechanics and Water Resources Engineering of the Indira Gandhi National Open University

Worked a Warden of VIII th Block.

Worked as Project Officer at NTMIS Nodal center.

Served as Executive member of Students Co-operative Society.