

CURRICULUM VITAE

Sankar V, M.Tech.

Research Scholar (PhD) August 2024- Present
Building Technology, Construction Materials & Management
Group
Department of Civil Engineering Indian Institute of Technology
Madras (IITM), Chennai – 600 036, India Phone: +91 44 2257
4303 (office), +91 9497264741 (mobile)
Email: ce24d001@smail.iitm.ac.in



EARNED DEGREES

Master of Technology (M.Tech.) in Engineering Mechanics August 2016
Department of Applied Mechanics,
Indian Institute of Technology (IIT) Madras, India
Thesis: “Fracture Behavior of Bulk Metallic Glasses-Molecular Dynamics Simulations”
CGPA: 9.48/10 (Securing the first position)

Bachelor of Technology (B.Tech.) in Civil Engineering July 2013
College of Engineering Trivandrum, University of Kerala, India
CGPA: 9.19/10

AWARDS AND RECOGNITION

- Prof. B.V.A. Rao Endowment Prize for the best academic record in M.Tech. Applied Mechanics, Indian Institute of Technology (IIT) Madras.
- Received Certificate of Appreciation from the Secretary, Public Works Department for significant contributions towards achieving the NABL accreditation for the Kerala Highway Research Institute, Public Works Department, Kerala, 2021
- Best Paper Award at CORCON 2021: Co-authored the technical study on “Condition Assessment, Repair, and Rehabilitation of Kadalundikadav Bridge. Led the technical team in collaboration with IIT Madras.

WORK EXPERIENCE

- **Project Associate**, Indian Institute of Technology (IIT) Madras **2016 – 17**
- **Assistant Director**, Kerala Highway Research Institute, Public Works Department, Government of Kerala **June 2017 – June 2024**

- **Technical Manager**, Concrete & Structures Division, Kerala Highway Research Institute- NABL authorised signatory for building material and non-destructive testing.
January 2021 – June 2024
- **Project Coordinator**, Centre of Excellence for Roads Sector in Kerala established by the Government of Kerala, Kerala State Transport Project, and the World Bank. **2020 – 2024**

RESEARCH INTERESTS

- Corrosion mechanisms in steel-cementitious systems
- Service life estimation and design of concrete structures
- Electrochemical repair strategies
- Cathodic protection of concrete structures
- Concrete technology & high performance concrete
- Structural health monitoring & Non-destructive testing

SOFTWARE SKILLS

- LAMMPS Molecular Dynamics Simulator
- MATLAB
- ABAQUS Finite Element Analysis Software
- C++, Python

COURSES & GRADES

PhD, Civil Engineering (Ongoing)

- Modern Construction Materials – 10/10
- Repair and Rehabilitation of Constructed Facilities – 10/10

M Tech, Applied Mechanics

- Analytical Methods in Applied Mechanics – 10/10
- Computational Techniques in Applied Mechanics – 10/10
- Composite Structures – 10/10
- Experimental Stress Analysis – 10/10
- Advanced Structural Mechanics – 9/10
- Fundamentals of Finite Element Analysis – 9/10
- Impact Mechanics – 10/10
- Dynamics of Structures – 9/10

SPONSORED AND CONSULTANCY PROJECTS

Internal Projects (Public Works Department, Government of Kerala)

- 1) Establishment of Centre of Excellence in Roads Sector; Sponsored by the Government of Kerala and World Bank. Worked as Project Coordinator, collaborating closely with the Secretary, PWD, and Joint Director, KHRI, to translate policy directives into actionable steps; Project Cost: Rs. 31 Crores. 2020–2024
- 2) Upgradation of Kerala Highway Research Institute material testing laboratory to ISO-17025 standards. Worked in the upgradation team covering the technical and managerial aspects of NABL accreditation; Project Cost : 2 Crores; Sponsored by Kerala Highway Research Institute, Govt. of Kerala; Duration : 2020–2021
- 3) Electrochemical and structural repairs for extending the service life of CH Bridge, Kozhikode, and AKG Bridge, Kozhikode; Project Team: Thomas John (Joint Director), Sony JSD (Deputy Director), Sankar V (Assistant Director), Prof. Radhakrishna G Pillai, IIT Madras; Project Cost: Rs. 2 Lakhs; Sponsored by Kerala Highway Research Institute (KHRI), Govt. of Kerala. 2020–2021
- 4) Preliminary Investigation of Cracks in Records Room of High Court of Kerala; Project Team: Sri. Thomas John, Joint Director, Sony JSD, Deputy Director, Sankar V (Assistant Director). 2021- 2022
- 5) Investigation of RCC Anchuthengu fish landing center for Vigilance & Anti-corruption Dept., Govt. of Kerala. Team: Rakesh T Menon(Deputy Director), Sankar V, 2021-2022
- 6) Condition assessment of Alappuzha District Hospital and Kottayam Medical College. Project Team : Rakesh T Menon(Deputy Director), Sankar V. 2022-23

External Projects

- 7) Condition Assessment of Ammonia Importation Terminal (ATI), Southern Petrochemical Industries Corporation Ltd (SPIC), Tuticorin, Tamil Nadu; Project Team: Thomas John (Joint Director), Sankar V (Assistant Director), Sarath S (Assistant Director); Rs. 1.5 Lakhs; Funded by IIT Madras; 2022-2023
- 8) Condition Assessment and Repair Strategy for Lawyers' Chambers Building, Rohini Court Complex, New Delhi; Project Team: Thomas John (Joint Director), Sony JSD (Deputy Director), Rakesh T Menon (Deputy Director), Sankar V (Assistant Director), Thulasi J (Assistant Director); Rs. 6.5 Lakhs; Funded by IIT Madras; 2023-2024
- 9) Condition Assessment of Jain's Westminster Apartments; Project Team: Thomas John (Joint Director), Sony JSD (Deputy Director), Rakesh T Menon (Deputy Director), Sankar V (Assistant Director), Thulasi J (Assistant Director); Rs. 10 Lakhs; Funded by IIT Madras; 2023-2024.

- 10) Load Testing of Perumpuzhakadavu Bridge; Project Team: Thomas John (Joint Director), Sony JSD (Deputy Director), Sankar V (Assistant Director), Thulasi J (Assistant Director); Rs. 1.6 Lakhs; Sponsored by Irrigation Department, Government of Kerala; 2022-2023
- 11) Condition Assessment of Reinforced Concrete (RC) Slabs of District Hospital Chengannur; Project Team: Thomas John (Joint Director), Sankar V (Assistant Director), Rs. 1.35 Lakhs; Client: Heather Construction. 2023-2024

RESEARCH WORKS

- 1) Development of Ultra-High-Performance Concretes (UHPCs) for Road/Bridge Infrastructure in Urban Areas; Investigators: Project Team: Sri. Sony JSD, Deputy Director & Sri, Sankar V, Assistant Director, in collaboration with Prof. Bijily Balakrishnan, IITT, Radhakrishna G Pillai, Surender Singh, IITM, Elson John, MACE, K. Jayachandran, NITC; Rs. 1.89 Crores; 2022-2025
- 2) Health Monitoring of Structures Using Sensors; Project Team: Thomas John (Joint Director), Sony JSD (Deputy Director), Sankar V (Assistant Director), Thulasi J (Assistant Director); Rs. 30 Lakhs; Sponsored by Kerala Highway Research Institute (KHRI), Govt. of Kerala 2022-2023
- 3) Electrochemical and Structural Repairs for Extending the Service Life of Kadalundikkadavu Bridge, Kerala by Twenty-Five Years; Investigators: Thomas John (Joint Director), Sony JSD (Deputy Director), Sankar V (Assistant Director) ; Rs. 5 Lakhs; Collaboration with Prof. Radhakrishna G Pillai, IIT Madras. 2019–2020
- 4) Durability-Based Studies to Enhance the Service Life of Valiyazeekal Bridge, Kerala; Project Team: Thomas John, Joint Director, KHRI, Sri, Sankar V,; Rs. 5 Lakhs; Collaboration with Prof. Radhakrishna G Pillai, IIT Madras (PI); 2019–2020
- 5) Utilization of Construction & Demolition (C&D) Waste for Sustainable Concrete Development; Project Team: Jeejabhai P T, Joint Director, Divya S, Deputy Director and Sankar V, Assistant Director, Sponsored by Kerala Highway Research Institute (KHRI) Project Cost Rs. 5 Lakhs 2018–2019

EVENTS ORGANISED AND LECTURES DELIVERED

- 1) Delivered a lecture on ‘Non-Destructive and Partially Destructive Testing of Concrete Structures’ at the Faculty Development Programme, College of Engineering Trivandrum; Sponsored by the Directorate of Technical Education, Kerala. The session aimed to provide attendees with a comprehensive understanding of the latest techniques for assessing the condition of concrete structures. December 2023
- 2) Organised a three-day certificate course on non-destructive testing of concrete structures from 8th February 2023 to 10th February 2023 at Kerala Highway Research Institute. Faculty: Sankar V, Thulasi J, Sarath S, Kerala Highway Research Institute.
- 3) Organised a three-day training programme on condition assessment, repair & rehabilitation of concrete structures from 14th December 2022 – 16th December 2022 at

Kerala Highway Research Institute. Faculty: Prof. Bhupinder Singh IIT Roorkee , Sankar V.

- 4) Organised a two-day training programme on ‘Condition monitoring of Structures using Sensors’ from 26th October 2022 – 27th October 2022 at Kerala Highway Research Institute. Prof. U. Saravana, IIT Madras; H. Chandrasekhar HBK, Sankar V.
- 5) Organised a series of 65 webinars on various topics related to civil engineering (repair-rehabilitations, cathodic protection, durability of structures etc.) collaboration with Abhijith Ravi Kumar, Assistant Director, Kerala Highway Research Institute, and Prof. Radhakrishna G. Pillai, IIT Madras, successfully fostering knowledge sharing and professional development during the COVID-19 pandemic.
- 6) Organised a training on ‘Statistical Quality Control of Concrete’ on 14th December 2018 at Kerala Highway Research Institute. Faculty: Prof. Bhupinder Singh IIT Roorkee.
- 7) Organised an training session on ‘Advanced Concrete Technology (ACT)’ from 7th November 2018 – 9th November 2018 at Kerala Highway Research Institute. Faculty: Prof. Radhakrishnan G Pillai, Prof. Manu Santhanam; IIT Madras; Prof. Elson John; MACE, Prof. Sunitha S; IIT Palakkad, Prof. Dhanya B. S; RIT.
- 8) Organised a two-day training programme on ‘Testing of concrete in structures’ from 14th July 2019 – 15th July 2019 at Kerala Highway Research Institute): Faculty: Prof. Bhupinder Singh; IIT Roorkee.
- 9) Organised a workshop on ‘Mix Design of High Strength Concrete’ from 20th November 2017 – 21st November 2017. Faculty: UltraTech Cements, Sankar V.