

# Dr. Chethana R.

Academician/ Researcher

	<a href="mailto:chethanar.civ@bmsce.ac.in">chethanar.civ@bmsce.ac.in</a>
	(+91) 9884422341
	Bangalore, India
	<a href="https://www.linkedin.com/in/r-chethana">linkedin.com/in/r-chethana</a>

## EDUCATION

### Ph.D. – Pavement Management

Indian Institute of Technology Madras  
2020, Chennai, India

### Master of Technology - Transportation Engineering and Management

B.M.S. College of Engineering  
2013, Bengaluru, India

### Bachelor of Engineering - Civil

Dayananda Sagar College of Engineering  
2011, Bengaluru, India

## PROFESSIONAL EXPERIENCE

### Assistant Professor

B.M.S. College of Engineering  
February 2021 – Present

### Teaching Assistant

Civil Engineering Dept, IIT Madras  
February 2013 – 2018

### Project Officer

IC & SR, IIT Madras  
2018 - 2020

## RESEARCH INTERESTS

- Pavement Management
- Pavement Construction
- Pavement Design

## CAREER OBJECTIVE

Researcher & Educator with a doctorate in Pavement Management. Having expertise in transportation engineering and a passion for teaching, I integrate my interests towards academics and research that involves decisions that could be implemented by the concessionaire. My technical skills and tools are primarily oriented towards Transportation Engineering and Pavement Management.

## SUMMARY

- Assistant Professor since February 2021.
- Attended 14 Workshops, 7 FDPs, 10 Conferences and published in Q1 Journals.
- Guided 8 Postgraduate (PG) projects.
- Guided 4 Undergraduate (UG) projects.
- Involved in 4 UG/PG NBA Accreditations (2013, 2022, 2023, 2025).

## JOURNALS

- Omprakash G. Holi, Chethana R. and Nandish K. (2025). "Optimizing Pavement Materials to Mitigate Urban Noise Impact". Published in Construction and Building Materials (Elsevier), indexed on ScienceDirect <https://doi.org/10.1016/j.conbuildmat.2025.144466>
- Chethana, R., Ramachandran, S., and Veeraragavan, A. 'Application of System Dynamics to Integrate Pavement Preservation in Flexible Pavement Design Process,' Advances in Civil Engineering Materials, ASTM, Vol. 7(2), 2018, 243-260.

## Conferences

- Sahana Siddu Rakkasagi., Nityananda J., and Dr. Chethana R. 'Validation of Established Criteria for Maintenance and Sensitivity Analysis for Road Improvement Project Using HDM-4' - 9th International Conference on Construction, Real Estate, Infrastructure, and Project Management (ICCRIP 2025), NICMAR University, Pune, 22-23 August 2025. (Paper Id- 7667)
- Omprakash, Holi., Chethana, R. and Nandish K. 'Optimizing Pavement Materials to Mitigate Urban Noise Impact', International Conference on Next Generation Technologies (ICNGT-2024), IIT Madras, Chennai, 13–15 November 2024.
- Omprakash, Holi and Chethana, R. 'Comparative Analysis of Rutting in Flexible Pavement using IITPave and Advanced Finite Element Modelling (FEM)', RASTA Symposium 2024 – Blueprint to Reality: Insights into Innovation in Highway Engineering & Construction Management, RASTA Center for Road Technology, Bengaluru, 24–25 October 2024.
- Chethana R, and A Veeraragavan. 'Development of a Multi-Criteria Decision Support System for Highway Pavement Management'. 18th World Congress

on Engineering Asset Management (WCEAM), New Delhi, India, 23 - 25 October 2024.

## BACHELOR COURSES

- Highway Engineering
- Traffic Engineering
- Transportation Systems Engineering
- Pavement Design
- Contracts, Specification & Estimation
- Geometric Design of Roads

## MASTER COURSES

- Pavement Materials
- Pavement Evaluation and Management
- Transportation Economics
- Pavement Construction

## SOFTWARES & TOOLS

- HDM - 4
- AASHTOWare
- IITPave
- Powersim

## POR

- UG NBA – 2013
- UG NBA – 2022
- PG NBA – 2023
- UG NBA – 2025
- Extensive Survey Camp Officer
- GCIL, India Co-ordinator – 2023, 2024, 2025

## AWARDS & ACHIEVEMENTS

- Best Paper Award – CTSEM -2017
- FRPS Grant, BMSCE - 2022

- Sakthivelan R., Chethana, R., and Veeraragavan, A. 'Multi-Objective Differential Evolution for Optimal Scheduling of Road Network Maintenance', 6th Colloquium of Transportation Systems Engineering & Management, SV NIT, Surat, 23-24 May 2019.

- Sakthivelan Ramachandran., Chethana, R and Veeraragavan, A. 'Optimization of Pavement Maintenance – A Matrix Approach, 5th Colloquium of Transportation Systems Engineering & Management, NIT, Warangal, 17-19 May 2018. (Best Paper Award)

- International conference on Computation methods in Pavement Engineering, CRRI, New Delhi, 2017.

- Sakthivelan Ramachandran, Chethana, R and Veeraragavan, A., 'Selection of Critical Time for Preventive Maintenance Treatment at Project Level', International Conference on Highway Pavements and Airfield Technology, ASCE, Philadelphia, Aug.27-30, 2017.

- Sakthivelan Ramachandran, Chethana, R and Veeraragavan, A. 'Pavement Maintenance Incorporated in Pavement Design', 4th Colloquium of Transportation Systems Engineering & Management, Anna University, Chennai, 12-13 May 2017. (Best Paper Award)

- Recent Advances in Highway Engineering, RVCE, Bangalore, 2013.

### Hosted and Co-ordinated Workshops

- Conducted a webinar to create awareness on Cyber Crime and Security in association with MCA department on the occasion of celebration of "Cyber Jagrookta Diwas".

- Invited lecture by resource person Sri. U.K. Guruvittal (Retd Scientist), CRRI, titled Full Depth Reclamation for Rural Roads, 16 November 2023.

- Invited lecture by resource person Dr. Thanongsak Imjai (Associate Professor, Walailak University, Thailand) titled Recycled Aggregate Concrete in Structural Applications – A Research at Walailak University, 14 February 2025.

- Road Safety Awareness Program, as part of Road Safety Month, 13 February 2024.

- Advanced Industry Innovations in Transportation infrastructure, Prof. C.E.G. Justo 5<sup>th</sup> Endowment Seminar, co-hosted by Association of Bangalore University Highway Engineering Alumni, 11 March 2024.

### Attended Courses and Workshops

- Chaired a session with the track Built Infrastructure at WCEAM (World

## **PROFESSIONAL BODIES MEMBERSHIP**

- Indian Roads Congress

## **INVITED TALK**

- Transpedia Research Talk Series – NATPAC, 27.09.2023.
- Resource Person for an FDP at DSCE, 2023.

## **UG PROJECTS GUIDED**

- Analysis of Grade Separated Intersection: A Case Study.
- Road Safety Audit.
- Sensitivity analysis of material components on the mixture properties for a flexible pavement.
- Evaluation of Noise on Pavements.

## **PG PROJECTS GUIDED**

- Functionality of Skywalks in Bengaluru City – A Case Study.
- Study on Demand and Characteristics of Parking System in Gandhi Bazaar.
- Integrated Approach to Noise Reduction in Urban Pavement Environments.
- IRC – Integrated Expert System for Urban Pavement Maintenance in India.

Conference on Engineering Asset Management) held at New Delhi, November 23 – 25, 2024.

- “Sustainable Approaches in Pavement Engineering (SAPE – 2023)”, organized by Department of Civil Engineering, NIT Roukela, 8 - 12 December, 2023.
- “Pedagogical Innovations”, organized by Teaching Learning Centre, BMSCE, 29 May – 2 June, 2023.
- Attended a training program by CICC in association with Women Cell, BMSCE.
- “Digital Transformations under NEP 2020”, National Level Seminar organized by IQAC, BMSCE in Association with NAAC, 15 July 2022.
- IUCEE workshop on NEP Implementation, 2021.
- “Three Day Training on SAS for Predictive Modelling”, organized by A2Z EduLearningHub, 16 – 18, July 2021.
- GIAN Course – Construction of Sustainable Concrete Pavements – December 2019.
- Workshop on “R”, Reva Institute, Bangalore, 2017.
- GIAN Course – Pavement Preservation and Environmental Impact Assessment of Recycled Materials in Pavement Management - December 2017.
- GIAN Course – Non-Destructive Techniques and Evaluation of Pavements from Cradle to Grave - December 2016.
- GIAN Course – Building Sustainable and Resilient Roadway Infrastructure - December 2016.
- Pavement Design, evaluation and material characterization (PAVE), IIT Kharagpur, 2015.
- Department of Science and Technology, Workshop, IIT Madras 2015.

## **Faculty Development Program (FDPs)**

- “Python Programming: Concepts to Application, organized by BMSCE, 7 – 17 July 2025.
- “Empowering Educators: Leadership, Research and Pedagogical Excellence”, organized by BMSCE, 17 - 19 February 2025.
- “AI and its Applications in Civil Engineering”, organized by RASTA Centre for Road Technology, 20 – 24 January 2025.

- Study on Adjacent Intersections of Vehicle Actuated Control Corridor.
- Evaluation of Pavement Performance under Over-loading Condition.
- Impact of Pavement-Vehicle Interaction on the 4Es Framework.
- Strengthening of Rigid Pavement using Coconut Shell, Coconut Coir and Sugarcane Bagasse Ash.

- NPTEL – AICTE - Sustainable Engineering Concepts and Life Cycle Analysis, July – September 2024.
- “BIM Applications in Civil Engineering and Construction”, organized by Department of Civil Engineering, BMSCE in association with ISTE, BMSCE Chapter, 29 July – 2 August 2024.
- AICTE – Inculcating Universal Human Values in Technical Education ,11 - 15 September 2023.
- “Innovations in Engineering Design and Management”, organized by Department of Mechanical Engineering, Alliance University, 20 – 25, February 2023.

### **Consultancy**

- Provided a design based on the soil report for the construction of roads in a particular housing layout.

### **REFERENCES**

- Prof. A.Veeraragavan (Retd.)  
Department of Civil Engineering  
IIT Madras, Chennai, India  
Contact: 0-9444742710  
aveeraragavan@gmail.com
- Prof. M. Amarnatha Reddy  
IIT Kharagpur, Kharagpur  
West Bengal, India  
Contact: +91-3222-283450  
manreddy@civil.iitkgp.ac.in