

## **Faculty Profile**

Name : Dr. Punith B Kotagi  
Designation : Associate Professor  
Department : Civil Engineering  
Contact Details:  
E-mail : punithbkotagi@nie.ac.in  
Phone : 9986998227



**About me:** I am Dr. Punith B. Kotagi, a faculty member in the Department of Civil Engineering with specialization in Transportation Engineering. I completed my Ph.D. in Civil Engineering from the National Institute of Technology Karnataka (NITK), Surathkal, where my doctoral research focused on traffic flow modeling and analysis under heterogeneous mixed traffic conditions. I hold an M.Tech. in Highway Technology from RASTA – Centre for Road Technology, Bengaluru, affiliated to Visvesvaraya Technological University (VTU), Belagavi, and a B.E. in Civil Engineering from PDA College of Engineering, Kalaburagi. My areas of expertise include traffic engineering, highway engineering, traffic flow theory, microsimulation modeling, and urban traffic operations. My research primarily focuses on vehicle interaction behavior, lane utilization characteristics, and speed–flow relationships on urban roads under non-lane-based mixed traffic conditions typical of developing countries. In addition to research, I am actively involved in teaching undergraduate, mentoring UG student projects, guiding Ph.D. research scholars and contributing to academic and research development in the field of transportation engineering.

### **Qualification:**

- Ph.D. in Civil Engineering (Transportation Engineering) – National Institute of Technology Karnataka, Surathkal
- M.Tech. in Highway Technology – RASTA – Centre for Road Technology, Bengaluru (Affiliated to Visvesvaraya Technological University, Belagavi)
- B.E. in Civil Engineering – PDA College of Engineering, Kalaburagi (Affiliated to Visvesvaraya Technological University, Belagavi)

### **Courses Taught:**

- Transportation Engineering
- Highway Construction and Maintenance
- Pavement Evaluation and Management
- Traffic Engineering and ITS

### **Publications:**

### Journal Publication:

- P. Manoj, K. C. Manjunath, and P. B. Kotagi, “Advanced predictive approaches for accident forecasting to enhance road safety,” *Sigma Journal of Engineering and Natural Sciences*, vol. 43, no. 5, 2025.
- P. Manoj, K. C. Manjunath, and P. B. Kotagi, “Machine learning models for proactive road safety: Evaluating regression and ensemble techniques based on road geometry,” *Engineering, Technology & Applied Science Research*, vol. 15, no. 1, 2025.
- P. Manoj, K. C. Manjunath, and P. B. Kotagi, “ANFIS-Based Traffic Accident Prediction Model for Karnataka State,” *International Journal of Computational and Experimental Science and Engineering*, vol. 11, no. 2, 2025.
- P. Manoj, P. B. Kotagi, and K. C. Manjunath, “Enhancing road safety through blackspots mitigative measures—A review,” *Sigma Journal of Engineering and Natural Sciences*, vol. 42, no. 5, pp. 1670–1682, 2024.
- P. B. Kotagi, P. Raj, and G. Asaithambi, “Modeling lateral placement and movement of vehicles on urban undivided roads in mixed traffic: A case study of India,” *Journal of Traffic and Transportation Engineering (English Edition)*, vol. 7, no. 6, pp. 860–873, 2020.
- P. B. Kotagi and G. Asaithambi, “Microsimulation approach for evaluation of reversible lane operation on urban undivided roads in mixed traffic,” *Transportmetrica A: Transport Science*, vol. 15, no. 2, pp. 1613–1636, 2019.

### Conference Proceedings:

- R. Raj P. B., P. V. Pramod, P. Manoj, and P. B. Kotagi, “Travel demand around VVCE campus, Mysuru using SPSS software,” in *Proc. International Conference on Revolutionary Technology in Civil Engineering (ICRTCE)*, 2022.
- P. B. Kotagi, R. A. S. Rohineesha, M. Likhitha, and H. M. Varsha, “Effect of exclusive bus lane on travel time for urban mid-blocks,” in *Proc. International Conference on Innovative Trends in Civil Engineering for Sustainable Development*, National Institute of Technology Warangal, 2019.
- P. B. Kotagi and G. Asaithambi, “Study of impact of modal shift of private vehicles towards public transport using microscopic simulation model: A case study of three metropolitan cities in India,” in *Proc. 98th Annual Meeting of the Transportation Research Board*, Washington, DC, USA, 2019.
- M. Likhitha, R. A. S. Rohineesha, H. R. Yateesha, H. M. Varsha, and P. B. Kotagi, “Study of traffic flow characteristics of urban divided roads,” in *Proc. INFRA RoadTech Conference*, RASTA – Centre for Road Technology, Bengaluru, India, 2019.
- P. B. Kotagi, G. Asaithambi, and M. Krishna, “Development of microscopic simulation model for bidirectional mixed traffic on urban roads,” in *Proc. 97th Annual Meeting of the Transportation Research Board*, Washington, DC, USA, 2018.
- P. B. Kotagi and G. Asaithambi, “Simulation framework for modeling bidirectional mixed traffic,” in *Proc. International Conference on Communication Systems and Networks (COMSNETS)*, IEEE, pp. 443–447, 2017.

- P. B. Kotagi, P. Raj, and G. Asaithambi, “Analysis of lateral placement and movement of vehicles on urban undivided roads in mixed traffic,” in *Proc. 12th Transportation Planning and Implementation Methodologies for Developing Countries (TPMDC)*, Indian Institute of Technology Bombay, 2016.
- P. Raj, P. B. Kotagi, and G. Asaithambi, “Lateral distribution of vehicles on urban undivided roads in non-lane-based traffic conditions,” in *Proc. International Engineering Symposium*, Kumamoto University, Japan, 2016.
- P. B. Kotagi and G. Asaithambi, “Simulation model for bi-directional traffic on urban undivided roads under mixed traffic conditions,” in *Proc. International Conference on Green Urban Futures*, Bengaluru, India, 2014.

#### **Book Chapters:**

- P. B. Kotagi, A. Akbar, N. Naveen, S. Koli, and J. N. Sinchana, “Efficient public transport system through XBL approach,” in *Technologies for Sustainable Transportation Infrastructures*, G. L. Sivakumar Babu, R. H. Mulangi, and S. Kolathayar, Eds., vol. 529, *Lecture Notes in Civil Engineering*. Singapore: Springer, 2024.

#### **Other achievements:**

**Consultancy Projects:** Undertaken major consultancy projects in the area of highway design and construction, geotechnical investigations for clients including BARC, SWR, NHAI, PWD, KIADB, KRIDL, KNNL, CNNL, KUWSDB, RDPR, MUDA, MCC and more.

**Ph.D. Guidance:** Ongoing – 04

\*\*\*