



IIT Tirupati and IIT Kanpur  
Organize

*Short Term Course on*

## Traffic Flow Theory and Simulation

June 12-17, 2023

**Venue: IIT Tirupati**

### Course Overview

The course is designed to provide exposure to the participants on the fundamental knowledge of traffic flow theory and modeling of traffic flow, macroscopic and microscopic models to understand traffic phenomena. This course also aims to outline the development of microscopic traffic simulation models and get hands-on experience with a traffic simulator.

### Course Modules

Traffic flow variables, Traffic data, Continuum theory of traffic flow, Fundamental diagram, Traffic regime and different traffic states, Continuity equation, LWR model, Cell transmission model, Higher-order model, Traffic phenomena and self-organized behaviour, Car-following models, Introduction to traffic simulation, Microscopic traffic simulation (single lane and multi-lane traffic stream), Applications of traffic simulation.

### Course Coordinator



**Dr. Gowri Asaithambi** is an Associate Professor in the Dept. of Civil and Environmental Engg., IIT Tirupati. She has completed Ph.D. from IIT Madras. Her research interests are traffic flow modeling and simulation, traffic operations and management, etc. She has published many research papers in international journals and conferences.

### Resource Person



**Dr. Venkatesan Kanagaraj** is an Assistant Professor in the Department of Civil Engineering, IIT Kanpur. Prior to joining IIT Kanpur, he was a Humboldt post-doctoral fellow and Marie Curie fellow at Technical University Dresden, Germany. His areas of research include traffic flow theory, crowd dynamics, connected and autonomous vehicles, etc. He has published numerous research papers in the international journal of repute.

### Course Details

Interested participants are requested to send an email to [gowri@iittp.ac.in](mailto:gowri@iittp.ac.in). The shortlisted participants will be intimated through email.

### Course Fee and Accommodation

Participants	Course Fee
UG/PG Students and Research Scholars	Rs. 3000 + 18% GST
Faculty Members/ Scientists	Rs. 6000 + 18% GST

The travel expenses have to be borne by the participants. Accommodation (shared) will be provided on a payment basis.

### Important Dates

Last Date to Pay the Fees	08 June 2023
Course Dates	12-17 June 2023

### Venue of the Workshop

Indian Institute of Technology Tirupati  
Yerpedu – Venkatagiri Road, Yerpedu Post  
Tirupati District, Andhra Pradesh - 517619

### Contact

**Dr. Gowri Asaithambi**

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