



**Dr. Sabyasachee Mishra**, is an assistant professor at University of Memphis, and Director of Graduate Studies at Intermodal Freight Transportation Institute (IFTI). IFTI is one of the University Transportation Centers (UTCs) in the United States. He has published over 100 articles in international journals

and peer reviewed conference proceedings. He is an American Society of Civil Engineers (ASCE) Excellence in Civil Engineering Education fellow. He received scholarship to attend the National Science Foundation (NSF) sponsored Pan-American Advanced Studies Institute on Sustainable Urban Freight Systems. He also own Massachusetts Institute of Technology challenge question award on discrete choice modeling. He has received outstanding faculty research award at University of Memphis. He is a registered Professional Engineer (P.E) in the state of Michigan.



**Dr. Prasanta Kumar Bhuyan** is an assistant professor at Transportation engineering division of department of Civil Engineering, NIT, Rourkela, Odisha, India. He received his M. Tech. & Ph.D. from IIT Roorkee & IIT Bombay.

Also he gained post-doctoral research experience from Georgia Tech., USA. He teaches courses at graduate (B. Tech.) and post graduate (M. Tech.) level for more than last five years. He has guided 27 students for their M. Tech. thesis work and presently guiding four Ph.D. scholar. He has published over 40 articles in international journals and peer reviewed conference proceedings. His current research interest is focused on development of research methodologies for operational analysis of motorized and non-motorized mode of transportation.

## ABOUT NIT ROURKELA

NIT Rourkela is one of the premier national level institutions for technical education in the country and is funded by MHRD, Government of India. The Institute established 1961 as Regional Engineering College, Rourkela was elevated to a deemed university under the name of National Institute of Technology, Rourkela in the year 2002. NIT Rourkela has been recognized as an Institute of National importance by National Institute of Technology Act, 2007.

The main objective of the Institute is to produce quality Engineers and Scientists in Graduate and Post-Graduate levels in various branches of Engineering and Science. The Institute with a campus area of 650 acres has twenty departments, three academic centers and six service centers. The Institute accommodates around 6000 students and more than 700 faculties and staffs are contributing their services. The institute has a very vibrant campus life with ten hall of residence for students, residential quarters for employees and two guest houses for visitors. The Institute has been consistently ranked among the best technical institutes in India. The Institute has been modernized by several foreign collaborative research projects and approximately 68 number of sponsored research projects are running at present.

### For More Information

Visit: <http://nitrkl.ac.in/Academic/1Department/ce/CEP/Gian.aspx>

### Contact:

**Prof. Prasanta Kumar Bhuyan**

Course Co-ordinator

Phone.: 0661-246 2313

Mobile: 9658642180

E-Mail: [bhuyanp@nitrkl.ac.in](mailto:bhuyanp@nitrkl.ac.in)

**Prof. Sarat Kumar Patra**

GIAN Course Co-ordinator, NIT Rourkela

Phone.: 0661-246 2457

Mobile: 9437221578

E-Mail: [skpatra@nitrkl.ac.in](mailto:skpatra@nitrkl.ac.in)



## Freight Transportation Demand Modeling



11-19 December 2016



**National Institute of Technology Rourkela**  
Rourkela, Odisha, India

*Under the aegis*



MHRD  
Government of India  
Ministry of Human Resources and development

Course Overview

Over the past few years, India's gross domestic product has grown over 7% with an economic value estimated at US\$ 1.22 trillion per year. Unfortunately, India's freight transportation infrastructure is not adequately build to accommodate this rapidly increasing growth. The purpose of this course is to introduce students, researchers, and practitioners to develop methodological approaches to estimate freight demand in terms of freight generation, distribution, choice of mode and route. The course will introduce participants to key freight industry terms, concepts and issues, and provides a freight big picture based on performance of the major freight transportation modes. It will also discuss available approaches to model freight transportation demand. Concise description of the state-of-the-art mathematical models of freight transportation system, focusing primarily on areas where it deviates from passenger transport models. Such mathematical models can support freight demand model development and facilitate policy design in different ways including: explanation of drivers of freight transport; modeling and forecasting of freight flows; performance assessment of freight systems; and design of freight operations.

Course Objectives

The primary objectives of the course are as follows:

- Familiarize the participants to the concept of freight travel demand modeling, and its distinction from passenger travel demand modeling.
- Develop capability among participants to conceptualize and apply the freight travel demand in the transportation planning process.
- Introduce the participants to practical problems and their solutions, through case studies and real life projects in freight travel demand modeling.
- Identify the input data required for model estimation and application, and how and where the requisite data may be obtained in an efficient and cost-effective manner in a developing country context
- Establish familiarity with course participants on strategies for implementing, adopting, and adapting the freight travel demand modeling in their developing country contexts and varying geographies

Course Outline

The course outline includes but not limited to: Three-layer structure of freight: Global, Regional and Local Freight Generation and Freight Trip Generation Forecasting of freight trip generation; Modelling Inter-Regional Freight Demand with Input-Output, Gravity and Spatial Computable General Equilibrium (SCGE) Models Behavioral analysis of freight mode choice decisions Multi-class traffic assignment; Aggregate-Disaggregate-Aggregate Model Systems Analysis of Urban Freight Use of GPS and Bluetooth Data for Freight Analysis International best practices of freight models.

You Should Attend If...

- You are a transportation engineer/planner or research scientist interested in freight transportation planning and behavior modeling
- You are a student or faculty from academic institution interested in learning behavior based freight modeling and their application

Registration Fees

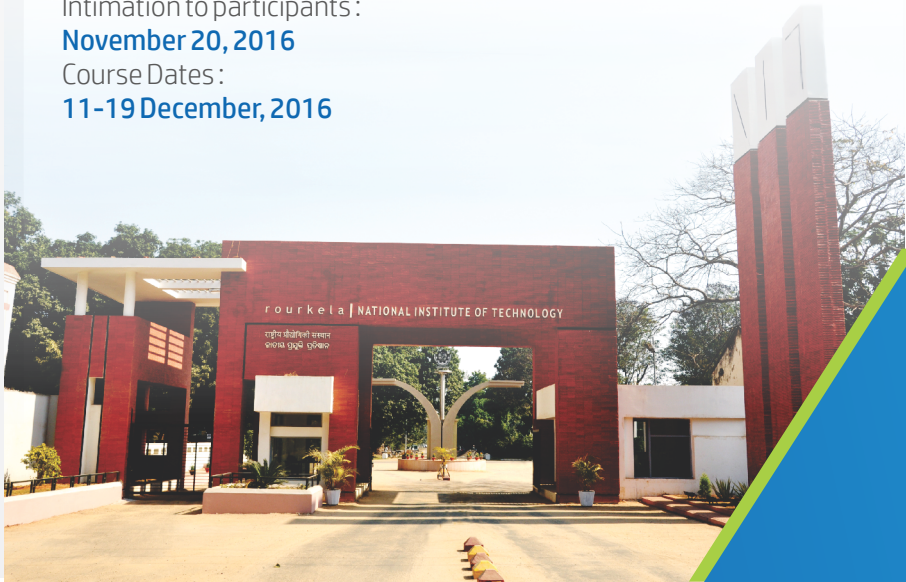
- Faculty and Scientists: Rs. 2000/-  
Participants from Training Organizations/ Industry / Consultancy firms: Rs. 5,000/-  
Students and Research Scholars:
- Without award of grade: Rs 1000/-
  - With award of grade: Rs. 2000/-
  - Participants from abroad: Students: USD 100
  - Other participants from abroad: USD 200

Accomodation

Out station participants will be provided accommodation and boarding in the Institute Guest House in the campus on payment. The charges range from Rs.4000/- to Rs. 5000/- for the entire duration of the course.

Important Dates

Last date for receiving applications :  
**November 10, 2016**  
Intimation to participants :  
**November 20, 2016**  
Course Dates :  
**11-19 December, 2016**



Registration Form

Name: .....  
Designation:.....  
Department: .....  
Address:.....  
.....  
.....  
Email :.....  
Phone :.....

Category of Participant:

- Faculty/Student/Research Scholar of NITR
- Faculty/Student/Res. Scholar of other Institution
- Industry Participant

Accommodation Required:

Yes No

Payment Mode:

Register online @ <http://www.gian.iitkgp.ac.in/GREGN/index>

The registration fee has to be paid through a Demand Draft which should be drawn in favor of ‘Continuing Education, NIT Rourkela’ payable at SBI, NIT Rourkela Branch (Code: 2109).

Please send the DD and online registration print copy by post to Dr. Prasanta Kumar Bhuyan, Department of Civil Engg, NIT Rourkela, Rourkela – 769008. The DD and the registration copy must reach the coordinator on or before 20th November 2016.

Signature of the Applicant  
Date :   
Place: