

Approaches in Travel Behavior Research for Transportation Planning and Policy Decision Support

MHRD Scheme on Global Initiative on Academic Network (GIAN)

Overview

The increased focus on demand centric approaches has resulted in the emergence of traffic engineering and management, demand management, travel behaviour, and transportation planning and policy as key research areas of transportation engineering (TE) today. Problem solving in demand centric approaches of transportation engineering is heavily based on modelling, optimization, and data sciences (probability and statistics). In this context, travel behavior research has particularly emerged as an important investigative area covering mathematical modeling aspects such as agent-based activity-travel demand modeling and new econometric modeling structures. Such analyses are critical to implementing informed and effective transportation plans and policies. Further, activity based travel behaviour analysis and modelling framework is fundamentally different than the traditional travel demand modeling approach in terms of using an activity episode as the basic unit of modelling rather than the individual trip. The basic premise is that travel is a derived demand and is typically undertaken to pursue activities dislocated in space. Thus, modelling activity episode type choice, duration, and location, along with the associated travel, can result in better and more robust models that are sensitive not just to transportation infrastructure changes but also to transport policies such as congestion charging, parking policy, mixed land use, and fare rationalization.

The proposed GIAN course will cover various theoretical approaches and case studies related to the above mentioned facets of travel behavior research to build capacity in this domain for effective decision support on transportation planning and policy in India.

Course Objectives	<ul style="list-style-type: none"> ▪ To build capacity of field and academic professionals, and students working in the area of Transportation Engineering and Planning to use approaches in Travel Behavior Research for Transportation Planning and Policy Decision Support for India. ▪ To demonstrate the effective use of theoretical approaches through case studies on travel behavior analysis and modeling.
Dates	9 th August 2019 to 13 th August 2019
Beneficial for	<ul style="list-style-type: none"> ▪ Executives, engineers and researchers, students at all levels (BTech/MSc/MTech/PhD) ▪ Faculty from reputed academic institutions and technical institutions
Fees	<p>The participation fees for taking the course is as follows:</p> <ol style="list-style-type: none"> 1. Participants from abroad (other than SAARC countries): US \$500 2. Participants from India & SAARC countries: <ul style="list-style-type: none"> ▪ Professionals from Industry/ Govt. organizations/ Think Tanks or NGOs: Rs. 30,000 ▪ Professionals from Academic Institutions/ Research Organizations: Rs. 10,000 ▪ Students: Rs. 2,000 <p>The above fee include all instructional materials, computer use for tutorials and assignments, laboratory equipment usage charges, 24 hr free internet facility. The participants will be provided with accommodation on payment basis.</p>

The Faculty



Prof. Dr. Chandra R. Bhat is the Director of the Data-Supported Transportation Operations and Planning (D-STOP) Tier 1 USDOT University Transportation Center and the Joe J. King Chair in Engineering at The University of Texas at Austin. His areas of teaching include transportation systems analysis and transportation planning.

He also served as the Associate Chairman of the Department of Civil, Architectural and Environmental Engineering, and Director of the Center for Transportation Research.

Dr. Bhat is recognized nationally and internationally as a leading expert in the area of travel demand modeling and travel behavior analysis. His substantive research interests include land-use and travel demand modeling, activity-based travel modeling, policy evaluation of the effect of transportation control and congestion pricing measures on traffic congestion and mobile-source emissions, marketing research of competitive positioning strategies for transportation services, use of non-motorized modes of travel, and physical health and transportation. His methodological research interests and expertise are in the areas of econometric and mathematical modeling of consumer behavior, including discrete choice analysis, discrete-continuous econometric systems, and hazard duration models.



Prof. Dr. Ashish Verma is the Associate Professor for Transportation Systems Engineering in Indian Institute of Science (IISc). He is also the President of the Transportation Research Group of India (TRG); Member of the Steering Committee, Vice-Chair (Conference) of Scientific Committee, Vice-Chair (SIG H2) and Vice-Chair

(SIG G5) of the World Conference on Transport Research Society (WCTRS).

His research areas include; Sustainable Transportation Planning & Policy, Public Transport Planning and Management, Non-Motorized Transport Planning & Policy, Geo-informatics, Big data in Transportation Engineering, Pedestrian and Crowd Flow Modeling and Simulation & Road Safety, Travel behavior etc.

Course Co-ordinator

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