



The 1st Conference of Transportation Research Group of India (CTRIG)

The Vivanta by Taj - Yeshwantpur,
Bangalore, India.
7th – 10th Dec, 2011

Organized By:

Transportation Research Group Of India (TRG)

In Association with:

- * Transportation Research Board (TRB) of the National Academies, USA
- * Transport And Development Institute (T&DI), American Society of Civil Engineers (ASCE)
- * Association of Transportation Professionals of Indian Origin (ATPIO)

CONFERENCE BROCHURE

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About Conference

Ever since the onset of economic reforms in early 1990s, India has experienced rapid economic growth along with increase in prosperity and income levels of citizens. However, this economic growth has also resulted in exponential growth of private vehicle ownership and use (similar to what US and Europe have experienced in early 1950s and late 1960s, respectively), which coupled with increase in population and other related factors, has resulted in transportation problems, namely accident, congestion, and pollution, at a severe level. All this and similar developments have brought home the urgency of recognizing that an efficient transportation system is necessary for increasing productivity and enabling the country to compete effectively in the world market. Adequacy and reliability of transport infrastructure and services are important factors that contribute towards the ability of the country to compete in the field of international trade and attract foreign direct investment. Considering these aspects, Planning Commission of India in its 11th five-year plan clearly recognizes the necessity to foster the development of the various transport modes in an integrated manner that will lead to the realization of an efficient, sustainable, safe, and regionally balanced transportation system, where each mode of transport operates in its field of economy and usefulness, with competitive and non-discriminatory prices that are adequate to support progressive development of transport infrastructure and services. However, all these efforts made by government puts an onus on transportation researchers, educators, managers, and policymakers across all transport sectors to orient their actions and works towards facilitating the achievement of desired outputs expected from the current and proposed investments by the government and to ultimately harbor the overall growth of the country. Currently, there is no appropriate platform in India for professionals across all modes of transport, to come together and interchange ideas and knowledge. Also, there is no regular avenue in India at present to collate and publish the research literature across all transportation sectors and modes for better inter-modal understanding. TRG wishes to bridge this gap by providing such a platform/ avenue in India and become partner in the overall growth of the country

Conference Objective

The objective of the conference is to provide a unique forum within India for the interchange of ideas among transportation researchers, educators, managers, policymakers from India and all over the world, with the intention of covering all modes and sectors of transport (road, rail, air, and water; public and private; motorized and non-motorized) as well as all levels (urban, regional, inter-city, and rural transport) and for both passenger as well as freight movement, in India. At the same time, to also address the transportation related issues of; safety, efficiency, economic and social development, local and global environmental impact, energy, land-use, equity and access for the widest range of travelers with special needs etc.

Initially, this conference will be held biannually starting 2011; however the frequency may change as per the decision of Transportation Research Group of India (TRG) from time-to-time.

Conference Partners

1st CTRG will be organized by TRG in association with the following partners:-

- Transportation Research Board (TRB) of the National Academies, USA.
- Transport and Development Institute (T & DI), American Society of Civil Engineers (ASCE).
- Association of Transportation Professionals of Indian Origin (ATPIO).

Technical Papers





About 310 abstracts were received for CTRG, out of which about 130 full technical papers (from more than 10 countries) will be presented finally, after going through a 2-level double-blind review process for each paper.



List of Confirmed Keynote Speakers for the 1st Conference of Transportation Research Group of India (CTRG), 7th to 10th December 2011, Bangalore, India.

Theme	Name & Affiliation	
Pavement Engineering	Prof. B. B. Pandey, Professor Department of Civil Engineering IIT Kharagpur Kharagpur 721302	
Transport and Environment	Dr. S. Gangopadhyay Director Central Road Research Institute Delhi-Mathura Road, P.O. CRRI New Delhi – 110020, India	
Sustainable transportation planning and policies	Prof. Raghava Chari Retd. Professor Emeritus, NIT Warangal House No.587, Saleem Nagar, Malakpet, Hyderabad – 500036	
Sustainable Transportation Planning	Prof. Kumares C. Sinha Edgar B. and Hedwig M. Olson Distinguished Professor of Civil Engineering Purdue University School of Civil Engineering, CIVL G237 550 Stadium Mall Drive West Lafayette, IN 47907-2051, USA	
Accessible Transportation and Mobility	Prof. Lalita Sen Professor Doctoral Coordinator Department of Urban Planning & Environmental Policy Barbara Jordan-Mickey Leland School of Public Affairs Texas Southern University Houston, TX 77004, USA	
Transport Network and Operations	Prof. Michael G H Bell Professor of Transport Operations Department of Civil and Environmental Engineering Room 608, Skempton Bldg. Imperial College London SW7 2AZ, U.K.	
Pavement Engineering	Prof. Imad L. Al-Qadi The Founder Professor of Engineering Illinois Center for Transportation, Director Advanced Transportation Research and Engineering Lab, Director Dept of Civil and Environmental Eng., MC 250 205 N. Mathews Ave. University of Illinois at Urbana-Champaign Urbana, Illinois 61801	
Freight transportation	Prof. Rosário Macário Professor and Researcher in Transportation Departamento de Engenharia Civil e Arquitectura Instituto Superior Técnico Av Rovisco Pais 11049-001 Lisboa, Portugal	



Theme	Name & Affiliation	
Transport network and ITS	Prof. Srinivas Peeta Professor, Purdue University School of Civil Engineering 550 Stadium Mall Drive West Lafayette, IN 47907-2051, U.S.A.	
Sustainable Transport and Environment	Prof. Yoshitsugu Hayashi Professor & Director, International Research Center for Sustainable Transport and Cities, Graduate School of Environmental Studies Nagoya University, Nagoya 464-8603 C1-2(651) Japan	
Pavement Engineering	Prof. Serji Amirkhonian Director of Research and Development Phoenix Industries 215 Sedgefield Dr Clemson, SC 29631	
Road Safety	Prof. P.K. Sikdar President Intercontinental Consultants and Technocrats Pvt. Ltd. (ICT), A-8, Green Park, New Delhi - 110 016 India.	

Tutorials

The following parallel 3-hour tutorial sessions (9:00 hrs. to 12:00 hrs) will be organized on the 1st day of conference i.e. 7th Dec. 2011. Each tutorial has a limited capacity of 50 registrants and a registration fee of Rs.300/- is applicable for each tutorial. The registration is open to all on first-cum-first serve basis.

1. “Road Safety Audit and its importance for India” by Prof. A. Veeraragavan, Professor, Dept. of Civil Engineering, Indian Institute of Technology Madras.
2. “Optimization/Evolutionary Algorithms and their application in transportation” by Prof. Partha Chakroborty, Professor, Dept. of Civil Engineering, Indian Institute of Technology Kanpur.
3. “Intelligent Transport System (ITS) and its potential for India” by Dr. V. Lelitha Devi, Asst. Professor, Dept. of Civil Engg., IIT Madras.
4. “Activity Based Modelling (ABM) and its potential for India” by Prof. Chandra Bhat, University Distinguished Teaching Professor, Adnan Abou-Ayyash Centennial Professor in Transportation Engineering, Department of Civil, Architectural, and Environmental Engineering, University of Texas at Austin.



CTRG 2011 Tentative Schedule At a Glance

Time	Day 1(7 th Dec)	Day 2(8 th Dec)	Day 3(9 th Dec)	Day 4(10 th Dec)	
8:00 - 9:00 [am]	Registration	Registration			
9:00 - 9:15 [am]	Tutorial Session TT - 1 TT - 2 TT - 3 TT - 4	Inaugural Function	Keynote Session KS - 5 KS - 6 KS - 7 KS - 8	Keynote Session KS - 9 KS - 10 KS - 11 KS - 12	
9:15 - 9:30 [am]		Tea Break			
9:30 - 9:45 [am]					
9:45 - 10:00 [am]					
10:00 - 10:15 [am]		Keynote Session KS - 1 KS - 2 KS - 3 KS - 4	Tea Break		
10:15 - 10:30 [am]					
10:30 - 10:45 [am]					
10:45 - 11:00 [am]					
11:00 - 11:15 [am]		Break	Lunch Break	<u>Technical Sessions</u> TRB-2, D4, H3, I3, D5, ATPIO - 2	Workshops WS - 1 WS - 2 WS - 3 WS - 4 WS - 5 WS - 6
11:15 - 11:30 [am]					
11:30 - 11:45 [am]					
11:45 - 12:00 [pm]					
12:00 - 12:15 [pm]					
12:15 - 12:30 [pm]	Technical Visit TV - 1 [BMTC] TV - 2 [KSRTC] TV - 3 [TMC] TV - 4 [NAL]	Lunch Break	Lunch Break	Lunch Break	
12:30 - 12:45 [pm]					
12:45 - 1:00 [pm]		<u>Technical Sessions</u> ATPIO-1, C1, D1, E1, F1, H1, I1	Lunch Break	Lunch Break	Workshops WS - 1 WS - 2 WS - 3 WS - 4 WS - 5 WS - 6
1:00 - 1:15 [pm]					
1:15 - 1:30 [pm]					
1:30 - 1:45 [pm]					
1:45 - 2:00 [pm]		Tea Break	<u>Technical Sessions</u> TRB - 3, D-6, ATPIO-3, J2, MS1, MS2	Tea Break	Tea Break
2:00 - 2:15 [pm]					
2:15 - 2:30 [pm]					
2:30 - 2:45 [pm]					
2:45 - 3:00 [pm]	<u>Technical Sessions</u> D2, H2, I2, A1, J1, TRB-1, D3	Special Sessions (Details will be updated soon)	Valedictory Function		
3:00 - 3:15 [pm]					
3:15 - 3:30 [pm]					
3:30 - 3:45 [pm]					
3:45 - 4:00 [pm]	Conference Registration	Exhibition and Poster Presentations (EP)			
4:00 - 4:15 [pm]					
4:15 - 4:30 [pm]					
4:30 - 4:45 [pm]					
4:45 - 5:00 [pm]					
5:00 - 5:15 [pm]	Welcome Drinks	Cultural Program			
5:15 - 5:30 [pm]					
5:30 - 5:45 [pm]					
5:45 - 6:00 [pm]					
6:00 - 6:15 [pm]	Gala Dinner				
6:15 - 6:30 [pm]					
6:30 - 6:45 [pm]					
6:45 - 7:00 [pm]					
7:00 - 7:30 [pm]					
7:30 - 8:00 [pm]					
8:00 - 9:00 [pm]					
9:00 - 9:30 [pm]					

TT - Tutorial, **TV** - Technical Visit, **KS** - Keynote Session, **WS** - Workshop Session, **SS** - Special Session. **EP** - Exhibition and Poster Presentation
BMTC - Bangalore Metropolitan Transport Corporation, **KSRTC** - Karnataka State Road Transport Corporation, **NAL** - National Aerospace Laboratory, **BMRCCL** - Bangalore Metro Rail Corporation Ltd.

A - Transport Modes, **C** - Integrated Freight Transport and Logistic System, **D** - Traffic Operations Management and Control, **E** - Activity and Transport Demand Analysis, **F** - Transport Economics, Finance and Evaluation, **H** - Sustainability in Transportation, **I** - Transport Planning, Policy and Management, **J** - Pavement Engineering and Management, **MS** - Mixed Track

TRB - Transportation Research Board of National Academics, USA, **ATPIO** - Association of Transportation Professionals of Indian Origin

[* To be confirmed]



Special Sessions during CTRG

Besides, various keynote and technical sessions a number of special sessions will also be organized during 1st CTRG. These special sessions will focus on a specific theme and may consist of contributed papers, panel discussion, or theme presentations. The following special sessions will be organized during CTRG.

1. **ATPIO Special Session - 1** on *"Pragmatic Issues in Transportation Engineering in India"* Co-ordinated by **Dr. Murthy V.A. Bondada**, President, Urban Transportation Engineers and Planners, Orlando, US

Session Description - India has unique transportation system and its problems are also quite different from many countries not only developed but also developing countries. Cost-effective and implementable solutions are to be developed through research and demonstration to resolve the existing problems (or pragmatic issues) and improve mobility in Indian cities. The research should be oriented to reduce congestion and highway-related accidents and at the same time enhance the mobility to people of all income groups via all modes: walk, bicycle, motorcycle/scooter, auto-rickshaws, transit, and automobile. This session will include four or five papers selected from the papers submitted for presentation at the conference that directly deal with developing cost-effective and implementable solutions through pragmatic research and/or demonstration in resolving existing problems. The papers will deal with research and experience (if any) that led to immediate positive results in solving the existing problems.

2. **ATPIO Special Session - 2** on *"Briefings on the 2009 AASHTO Transportation Systems Delegation to India and Update on Collaborative Efforts Since"* Co-ordinated by Mr. Hardik Shah, PE (American Structurepoint, Inc., USA), President, ATPIO.

Session description - A high level delegation led by Mr. John Horsley, the Executive Director of AASHTO visited India in November 2009. The delegation was composed of a diverse group of ten U.S. high level transportation professionals from public, private and academic sectors. The purpose of the delegation was to gain perspective on the Indian policies, programs, practices, initiatives and issues relating to transportation infrastructure development. The expert panelists on this roundtable session will provide briefing on the discussions and meetings held with the key policy makers, planners and administrators in India during this delegation. The panelist will also focus on the progress made since the delegation in establishing collaboration and cooperation between India and USA in various area of transportation. Following are the participants in this panel discussion:

- > **Dr. Kiran Bhatt** (K. T. Analytics, Inc., USA) – Member of AASHTO Delegation Team.
- > **Shashi Nambisan**, Iowa State University - Member of AASHTO Delegation Team.
- > **Mr. Hardik Shah** (American Structurepoint, Inc., USA) – Member of AASHTO Delegation Team
- > **Officials from NHAI and/or Indian Transportation Ministry (To Be Determined)**

3. **ATPIO Special Session - 3** on *"Solutions/Alternatives for Congestion Relief, Road Infrastructure Financing and Safety"* Co-ordinated by Dr. Ramakrishna R. Tadi, Asst. District Traffic Manager, California Department of Transportation

Session description - Too much traffic demand and not enough supply (capacity) causes congestion. Congestion is no longer limited to only developed nations but also to developing countries as well. The implementation of innovative strategies in traffic operations is more important than ever before. This session will explore the application of congestion pricing including high occupancy toll (HOT) lanes and advanced technologies and will also look into potential financing options for road infrastructure. A few real world examples from the U.S. will be presented and their applicability to Indian road conditions will be briefly discussed. Following are the participants in this panel discussion:

- > **Chandra Bhat**, University of Texas - Congestion Pricing and Travel Behavior Responses.
- > **Srinivas Pulugurtha**, University of North Carolina – Traffic Safety & Congestion: Need for an Integrated Approach.
- > **Shashi Nambisan**, Iowa State University - Potential Financing Options for Road Infrastructure and Safety Investments.
- > **Ramakrishna Tadi**, State of California Dept. of Transportation – Are Carpool Lanes Suitable for Indian Traffic Conditions?
- > **Dr. Kiran Bhatt**(K. T. Analytics, Inc., USA) –Road Pricing: An overview of experience, Impacts & Potential

Besides the above three special sessions, three more special sessions from TRB and two more special sessions on “Transport Research & beyond” with focus on speakers from industry & government, will be conducted.



Proposed Technical Tours during CTRG

The following parallel technical tours (13:00 hrs. to 17:00 hrs) will be organized on the 1st day of conference i.e. 7th Dec. 2011. Each technical tour has a limited capacity of 50 registrants. Only the registered conference delegates will be allowed to register for one of the technical tours. The technical tour registration is open to all on first-cum-first serve basis, and the online portal for the same will be opened shortly on CTRG website.

1. Tour to Bangalore Metropolitan Transport Corporation (BMTC), Bangalore.
2. Tour to Karnataka State Road Transport Corporation (KSRTC), Bangalore.
3. Tour to Traffic Management Centre (TMC) of Bangalore Traffic Police.
4. Tour to National Aerospace Laboratories (NAL), Bangalore.

Parallel Workshops during CTRG

Details of Workshops

1. Workshop-A: Transport Modes and Inter-modal issues

Description of theme: Airports and Aviation; Maritime Transport and Ports; Rail Transport; Urban Transport Modes; Inland water transport; Inter-modal Issues; Role of para-transit modes; Infrastructure and Institutional integration; Multi-modal urban transit integration; etc.

2. Workshop-B: Integrated Freight Transport and Logistics Systems

Description of theme : Integrated Supply Chain Management; Integrated Freight and Fleet Management; Inter-modal Freight

3. Workshop-C: Traffic Operations, Management and Control

Description of theme : Traffic Theory and Modelling; Traffic Control and Management; Traffic Network Analysis; Safety Analysis and Policy; Intelligent Transport System; Highway Asset Management; etc.

4. Workshop-D: Pavement Engineering and Management

Description of theme : Recent trends in pavement materials characterization; Analysis and design of highway and airfield pavements; Pavement performance evaluation and prediction; Recent trends in pavement construction, Pavement Maintenance & Rehabilitation; highway Drainage; Recycling technique applications in pavement construction; New materials in highway construction, application of geosynthetics in pavement construction, accelerated pavement testing green highways

5. Workshop-E: Sustainable Transport Planning and Policy

Description of theme : Challenges to sustainable Urban Mobility; Environmentally sustainable transport; NMT role and planning; Inclusion of disabled and poor sections in transport planning; Sustainable highway infrastructure; Integrated Land Use and Transport Planning/ Implementation; Urban and Regional Modelling; Local Environmental Impacts due to Urban Land Use and Transport; Monitoring transport emission and effective measures; Transport and Climate Change; Policy Instruments with focus on Land Use and Environment; Institutional Performance and Strategic Change; Decision-making processes and stakeholder involvement; National and regional policy development; Urban Transport Policy; Social Impacts of Transportation; Transport for Tourism, Mass Events and Special Needs; Emerging Policy Issues: Health, Equity, Aging, Special Needs; Rural Transportation Planning and Policy; etc.

6. Workshop-F: Transport Economics, Finance and Evaluation

Description of theme : Integrated Assessment and macroeconomic Impacts of Transport Policies; Transportation System Performance Measurement; Valuation of Internal and External Benefits and Costs; Transportation Finance; Implementation of Pricing in Transport; Transportation Infrastructure Investment and Economic Development; etc.

7. Workshop-G: Travel Behaviour and Demand Analysis

Description of theme : Travel demand modeling; Activity-based analysis and modeling; Travel behaviour; Data collection methods; GIS/GPS/GSM use in travel demand modeling; Transport and Telecommunications; etc.



Conduct of Workshops

- a) All the workshops will be of 3 hours duration (1.5 hours before and after the lunch break) and will be organized in parallel on last day of the conference i.e. 10th Dec. 2011 (after completion of all technical sessions).
- b) All the conference delegates will be distributed among the parallel workshops based on their preferences (obtained at the time of registration at conference venue) as well as based on maintaining a good mix of academic, industry, field/government professionals, foreign delegates, and students for each workshop.
- c) The parallel workshops will be the most important part of the conference, as they will help build the tangible output of the conference in terms of report of each workshop that will be prepared by Chairman and Rapporteur of each workshop. The draft version of these reports will be presented in the Valedictory Session of the conference by Chairperson/Rapporteur of each workshop.
- d) The workshop reports will help build the work agenda for TRG (towards fulfilling its vision, mission and objectives) for the next 2 to 3 years. The idea is that the collective wisdom of many learned delegates attending the conference should set the action plan for TRG to follow instead of just depending on the vision of Executive Board Members.

Workshops Guidelines

- a) The following deliverables are expected from each workshop pertaining to its theme:-
 - a. Research issues/topics that needs to be addressed in immediate future i.e. next 2-3 years.
 - b. Capacity building/training/education issues/topics that needs to be addressed in immediate future i.e. next 2-3 years.
 - c. Collaborative opportunities on research/capacity building issues (as identified above) with industry, field/government organizations, and other countries.
 - d. Any specific major project(s) that needs special attention and TRG's initiation.
- b) The discussion in each workshop should stay **absolutely focused on workshop topic and absolutely ON-TIME**
 - a. Some overlap with other workshop may be inevitable, but needs to be minimized.
 - b. Chairperson/Rapporteur will guide discussion towards meeting deliverable targets
 - c. The workshop participants should not stray or get caught up discussing a specific localized issue or project
- c) The following is the suggested format for the workshop:-
 - a. First 1.5 hours: Initial deliberation/presentation by Chairperson/Rapporteur to give initial feed for discussion, open discussion and deliberation
 - b. Next 1.5 hours: Deliberate and suggest recommendations with respect to the theme of the workshop and under each category of expected deliverables.
 - c. Recommendations - Bullet-wise points giving specific and crisp recommended actions and strategies pertaining to the topic of the workshop.

The payment of Registration/ Membership Fee can be made through Cheque/DD, online Transfer, Credit/ Debit Card. Cheque/DD to be in the Name of "Transportation Research Group of India" and add postal address(Cheque/DD Courier) as our office address (ie) Conferences & Incentives Management (I) Pvt. Ltd. which is given below:

Kindly visit the following link to know the registration details:
http://www.trgindia.org/trg_conference_2011/registration.html

CONFERENCE SECRETARIAT

CIMGLOBAL Conferences & Incentives Management (I) Pvt. Ltd.
(An ISO 9001:2008 Certified Company)
101, First Floor, Infantry Court, 130, Infantry Road,
Bangalore - 560001
Tel: +91 80 40745800, Fax: +91 80 40745899
E-mail: gautam@cimindia.net
Web: www.cimglobal.net

