



Ministry of Housing and Urban Affairs
Government of India



**The 12th Research Symposium on Urban Transport
14th Urban Mobility India Conference 2021
(UMI-RS 2021)
Theme: Mobility for All**

Organized by

**Ministry of Housing and Urban Affairs, Government of India
&
Institute of Urban Transport (IUT), India**

Coordinated by

**IISc Sustainable Transportation Lab. (IST Lab.)
Indian Institute of Science (IISc), Bangalore**

(Online Symposium Microsoft Teams, October 25th, 2021)

Note: There are total three timeslots with three parallel sessions in each slot. Total sessions are nine. 5 papers are presented in each session. The maximum allowable time for each presentation is 15 minutes (12 minutes for PPT + 3 minutes for Q&A).



**IISc Sustainable
Transportation Lab.
(IST Lab.)**

भारतीय विज्ञान संस्थान

Meeting Schedule

Opening Ceremony

Teams Link: <https://teams.microsoft.com/l/meetup-join/19%3aseE5yXxjo3iDLpJTqhOk7RzcbHo4kYmshvNOsIFBoiA1%40thread.tacv2/1634567932734?context=%7b%22Tid%22%3a%226f15cd97-f6a7-41e3-b2c5-ad4193976476%22%2c%22Oid%22%3a%22a6b1885e-38ca-40ac-8838-be5622573c39%22%7d>

Time: 09:30 – 09:55

Time Slot	Details	Speaker	Designation
09:30– 09:35	Scientific Summary of UMI-RS 2021	Prof. (Dr.) Ashish Verma	Professor, Transportation Systems Engg. (TSE), Convenor, IISc Sustainable Transportation Lab. (IST Lab.), Dept. of Civil Engg., Indian Institute of Science (IISc), Bangalore
09:35– 09:42	Opening address by Chair, Dept. of Civil Engg., IISc Bangalore	Prof. Ananth Ramaswamy	Chair, Dept. of Civil Engg., IISc Bangalore
09:42 – 09:52	Address by Chief Guest	Shri Jaideep	Director General (IUT), and OSD, Ministry of Housing and Urban Affairs (MoHUA), GOI
09:52– 09:55	Vote of Thanks	Ms. Almas Siddiqui	Research Scholar, IST Lab, IISc Bangalore

SLOT 1: PARALLEL SESSION 1

Session Chair: Kshama Puntambekar, Assistant Professor, SPA Bhopal

IST Lab Student Volunteer cum Rapporteur: Furqan Ahmad Bhat

Teams Link: <https://teams.microsoft.com/l/meetup-join/19%3aseE5vXxjo3iDLpJTqhOk7RzcbHo4kYmshvNOsIFBoiA1%40thread.tacv2/1634568048487?context=%7b%22Tid%22%3a%226f15cd97-f6a7-41e3-b2c5-ad4193976476%22%2c%22Oid%22%3a%22a6b1885e-38ca-40ac-8838-be5622573c39%22%7d>

Time: 10:00 –11:30

Time Slot	Paper ID & Title	Authors
Theme: Electric Urban Mobility		
10:00– 10:15	15: Feasibility study for Electrification of Public Transport	Aditya Rane and Shivanand Swamy
10:15– 10:30	24: Charging Infrastructure Planning for Electric Vehicles	Riddhi Patel
10:30– 10:45	11: Electrification of Unconventional Modes of Transport- Guwahati's Inland Waterways	Rituraj Sarma
10:45 – 11:00	27: Evaluating the Suitability of Business and Procurement Models for Electric Buses for Indian Context	Janani V
11:00 – 11:15	28: Strategy for Electrification of City Bus Network	Surya Sugathan , Shalini Sinha
11:30– 11:40	Tea/Coffee Break	

SLOT 1: PARALLEL SESSION 2

Session Chair: Rahul T. M., Assistant Professor, IIT Ropar

IST Lab Student Volunteer cum Rapporteur: Karthika P S

Teams Link: <https://teams.microsoft.com/l/meetup-join/19%3aseE5vXxjo3iDLpJTqhOk7RzcbHo4kYmshvNOsIFBoiA1%40thread.tacv2/1634568144430?context=%7b%22Tid%22%3a%226f15cd97-f6a7-41e3-b2c5-ad4193976476%22%2c%22Oid%22%3a%22a6b1885e-38ca-40ac-8838-be5622573c39%22%7d>

Time: 10:00 -- 11:30

Time Slot	Paper ID & Title	Authors
Theme: 2.1- Public Transport & Non-Motorized Transport (NMT)		
10:00– 10:15	40: Alternative Techniques to Augment Public Transport Ridership: A Case Study of Delhi	Abdur Raof Khan, G H V Sai Simha, Akanksha Sangwan and Nandini Ghose
10:15– 10:30	63: Pedestrian-centric Urban Street Design – Lessons from Bengaluru City	Babitha R, Reashma P S and Veeraragavan A
10:30– 10:45	41: Performance of Public Transit Modes for Last Mile Connectivity near the Mass Rapid Transit System- A Case Study of Gurugram City	G H V Sai Simha, Lalit Kumar and Abdur Raof Khan
10:45 – 11:00	13: Active Mobility, Physical Activity, Built Environment and Health an Assessment of Inter-linkages	Nandini Derasari and Shivanand Swamy
11:00 – 11:15	49: Integrating Social Equity in Public Transport Accessibility Planning - Case city of Chennai	Nivedha S and Sanjay Gupta
11:30– 11:40	Tea/Coffee Break	

SLOT 1: PARALLEL SESSION 3

Session Chair: Akhilesh Maurya, Professor, IIT Guwahati

IST Lab Student Volunteer cum Rapporteur: Nipun Choubey

Teams Link: <https://teams.microsoft.com/l/meetup-join/19%3aseE5vXxjo3iDLpJTqhOk7RzcbHo4kYmshvNOsIFBoiA1%40thread.tacv2/1634568181248?context=%7b%22Tid%22%3a%226f15cd97-f6a7-41e3-b2c5-ad4193976476%22%2c%22Oid%22%3a%22a6b1885e-38ca-40ac-8838-be5622573c39%22%7d>

Time: 10:00 -- 11:30

Time Slot	Paper ID & Title	Authors
Theme: 2.2- Public Transport & Non- Motorized Transport (NMT)		
10:00– 10:15	31: Identification of factors for a dynamic bicycle route recommendation system for transit catchment areas.	Niyatha Balan and Debapratim Pandit
10:15– 10:30	38: Enhancing Carrying Capacity of Urban Arterial Road through Public Transport Interventions. Case Area: Bhubaneswar	Subhadeep Nayak and Naina Gupta
10:30– 10:45	30: Impact of Mobility Culture and Population size on Urban Transportation System Performance in Indian Cities	Ravi Kant , Shubhajit Sadhukhan and Anbanandam Ramesh
10:45 – 11:00	60: Governing Factors for Trip in Post Covid-19	Aarti B Desai and Krupesh A Chauhan
11:00 – 11:15	8: Assessing Users' Perceptions about the Delhi Metro's Service Quality: A Comparison of Twitter Data with Conventional Survey	Apoorv Agrawal and Paulose N. Kuriakose
11:30– 11:40	Tea/Coffee Break	

SLOT 2: PARALLEL SESSION 1

Session Chair: Kanika Kalra, Assistant Vice President, UMTC

IST Lab Student Volunteer cum Rapporteur: Hemanthini A R

Teams Link: <https://teams.microsoft.com/l/meetup-join/19%3aseE5yXxjo3iDLpJTqhOk7RzcbHo4kYmshvNOSIFBoiA1%40thread.tacv2/1634568222606?context=%7b%22Tid%22%3a%226f15cd97-f6a7-41e3-b2c5-ad4193976476%22%2c%22Oid%22%3a%22a6b1885e-38ca-40ac-8838-be5622573c39%22%7d>

Time: 11:40 – 13:10

Time Slot	Paper ID & Title	Authors
Theme: 6.1-Smart City & Smart Mobility		
11:40–11:55	34: Intelligent Traffic Management and Artificial Intelligence as a response to Covid-19 pandemic	Chetna Rathee and Shubhajit Sadhukhan
Theme: 5.1- Sustainable Transportation Planning & Policy		
11:55–12:10	62: Mode shift behaviour study of car users concerning mass transit in a metropolitan context	Nipa Desai , Gaurang Joshi and Jainy Shah
12:10–12:25	59: Evaluation of Transport Network of Metropolitan City: A Case Study of Navi Mumbai	Manjusha M , Nandan Dawda and Gurang Joshi
12:25 – 12:40	45: Comparative analysis of mode choice model using conventional and non-conventional technique	Sumit Bilam and Pradip Sarkar
12:40 – 12:55	25: Impact Assessment of Pedestrianizing an Urban Street in terms of Quality of Life	Hemanthini Allirani and Ashish Verma
13:10–14:00	Lunch Break	

SLOT 2: PARALLEL SESSION 2

Session Chair: Bivina G R, MANIT Bhopal

IST Lab Student Volunteer cum Rapporteur: Rohit Singh Nitwal

Teams Link: <https://teams.microsoft.com/l/meetup-join/19%3aseE5yXxjo3iDLpJTqhOk7RzcbHo4kYmshvNOsIFBoiA1%40thread.tacv2/1634568260336?context=%7b%22Tid%22%3a%226f15cd97-f6a7-41e3-b2c5-ad4193976476%22%2c%22Oid%22%3a%22a6b1885e-38ca-40ac-8838-be5622573c39%22%7d>

Time: 11:40 – 13:10

Time Slot	Paper ID & Title	Authors
Theme: 5.2-Sustainable Transportation Planning & Policy		
11:40–11:55	36: Mainstreaming Sustainable Urban Transport Policy through SDG Localization for the city of Bhubaneswar	Aishwarya Dwivedi , Anjali Yeole and Amit Biswal
11:55–12:10	57: Prioritizing and modelling interrelationship between the Barriers for designing an "Integrated Multimodal" and "Sustainable" transport system for developing economies	Nandan Dawda , Gaurang Joshi and Shrinivas Arkatkar
12:10–12:25	52: Urban metabolism realm in sustainable urban transport planning perspective	Chetna Rathee and Shubhajit Sadhukhan
12:25 – 12:40	21: Evaluation of policy options for Sustainable Urban Transport System: A Case Study of Indian metro city	Rupali Zope , N. Vasudevan, Dr. Shrinivas Arkatkar and Dr. Gaurang Joshi
12:40 – 12:55	33: Sustainability Evaluation Considering Implementation of Rapid Transit System	Sujesh Ghodmare and Bhalchandra Khode
13:10–14:00	Lunch Break	

SLOT 2: PARALLEL SESSION 3

Session Chair: Prasanta K. Sahu, BITS Pilani Hyderabad

IST Lab Student Volunteer cum Rapporteur: Ubaid Illahi

Teams Link: <https://teams.microsoft.com/l/meetup-join/19%3aseE5yXxjo3iDLpJTqhOk7RzcbHo4kYmshvNOsIFBoiA1%40thread.tacv2/1634568320179?context=%7b%22Tid%22%3a%226f15cd97-f6a7-41e3-b2c5-ad4193976476%22%2c%22Oid%22%3a%22a6b1885e-38ca-40ac-8838-be5622573c39%22%7d>

Time: 11:40 – 13:10

Time Slot	Paper ID & Title	Authors
Theme: 7.1-Sustainable Urban Freight		
11:40–11:55	19: Developing Sustainable Urban Freight Index for Fruits and Vegetable Markets – Case of South Delhi, India	Dharna Dang and Dr Sanjay Gupta
11:55–12:10	23: Potential of Vaccine Delivery Via Drone [UAV] in CHHATTISGARH, INDIA	Shagun Lakhotiya and Sanjay Gupta
12:10–12:25	26: Supply Chain Management For Food Deliveries during COVID-19	Rohini Singh and Nishchint Srivastava
12:25 – 12:40	32: Urban Freight Logistics of the 21st Century: Towards Circular and Digitally Enabled Business Models	Nausheen Chhipa
12:40 – 12:55	46: Use Of Urban Rail as A Decarbonization Strategy for Good Distribution: A Literature Review of Critical Efforts and Policy Directives	Saloni Gupta and Dr. Sanjay Gupta
13:10–14:00	Lunch Break	

SLOT 3: PARALLEL SESSION 1

Session Chair: Manoranjan Parida, Professor, IIT Roorkee

IST Lab Student Volunteer cum Rapporteur: Almas Siddiqui

Teams Link: <https://teams.microsoft.com/l/meetup-join/19%3aseE5yXxjo3iDLpJTghOk7RzcbHo4kYmshvNOsIFBoiA1%40thread.tacv2/1634568371905?context=%7b%22Tid%22%3a%226f15cd97-f6a7-41e3-b2c5-ad4193976476%22%2c%22Oid%22%3a%22a6b1885e-38ca-40ac-8838-be5622573c39%22%7d>

Time: 14:00 – 15:30

Time Slot	Paper ID & Title	Authors
Theme: 2.3- Public Transport & Non- Motorized Transport (NMT)		
14:00–14:15	53: Mid-Covid Public Transport Passenger Attraction: A Case Study of Thiruvananthapuram City	Sandra Kamar , Shaheem S and Samson Mathew
Theme: 8-Urban Transport Governance		
14:15–14:30	48: Comprehensive Integration of Different Transport Services: Case of Non-Metro Cities	Harshita Sharma and Mayank Dubey
14:30 – 14:45	9: Review and Recommendations for the Approval and Licensing Mechanism for setting up Logistics Infrastructure -A case of Cold Storages in DMIC	Rituraj Sarma , Pramod Rajendran Naidu and Gordon Telling
14:45– 15:00	4: Review of Institutional Framework for Integrated Land Use Transport Planning: Case Study of Bengaluru	Almas Siddiqui and Ashish Verma
15:15–15:45	Break	

SLOT 3: PARALLEL SESSION 2

Session Chair: Nitika Bhakuni, Associate Professor, CEPT University

IST Lab Student Volunteer cum Rapporteur: Gayathri H

Teams Link: <https://teams.microsoft.com/l/meetup-join/19%3aseE5vXxjo3iDLpJTqhOk7RzcbHo4kYmshvNOsIFBoiA1%40thread.tacv2/1634568406688?context=%7b%22Tid%22%3a%226f15cd97-f6a7-41e3-b2c5-ad4193976476%22%2c%22Oid%22%3a%22a6b1885e-38ca-40ac-8838-be5622573c39%22%7d>

Time: 14:00 – 15:30

Time Slot	Paper ID & Title	Authors
Theme: 3- Road Safety for Vulnerable Road Users (VRUs), and Urban Transport Infrastructure Design for All		
14:00–14:15	6: Modelling of Pedestrian Yielding Behaviour at Signalized Midblock Crosswalks Under Mixed Traffic Conditions	Sandeep Manthirikul and Udit Jain
14:15–14:30	14: Investigation of Vehicular Crossing Conflicts at Urban Unsignalized Intersections in India using Post Encroachment Time	Aninda Bijoy Paul , Shriniwas Arkatkar and Gaurang Joshi
14:30–14:45	35: Comparison of Time-to-Collision and Yaw Rate as Conflict Indicators in Less Organized Traffic Conditions	Manish Dutta , Rahul Matade and Suprava Jena
Theme: 6.2-Smart City & Smart Mobility		
14:45 – 15:00	18: A Simulation-based Approach for Studying Unregulated Parking Areas	Prashant Chauhan , Salil Goel and Stephan Winter
15:00 – 15:15	10: Have the Smart Cities in Karnataka Solved the Mobility Conundrum?	Gayathri Harihara Subramanian and Ashish Verma

Theme: 5.3-Sustainable Transportation Planning & Policy

15:15 – 15:30	42: Potential Use of Micro-Mobility Modes for Freight Distribution in Urban Areas- Case Study of Dwarka Sub-City	Soumyasree Chakraborty and Sanjay Gupta
15:30–15:45	Break	

SLOT 3: PARALLEL SESSION 3

Session Chair: Anumita Roy Chaudhury, Executive Director (Research & Advisory) CSE, Delhi

IST Lab Student Volunteer cum Rapporteur: Aitichya Chandra

Teams Link: <https://teams.microsoft.com/l/meetup-join/19%3aseE5yXxjo3iDLpJTqhOk7RzcbHo4kYmshvN0sIFBoiA1%40thread.tacv2/1634568441817?context=%7b%22Tid%22%3a%226f15cd97-f6a7-41e3-b2c5-ad4193976476%22%2c%22Oid%22%3a%22a6b1885e-38ca-40ac-8838-be5622573c39%22%7d>

Time: 14:00 – 15:30

Time	Paper ID & Title	Authors
Theme: 4-Sustainable Mobility & Land Use (LU)		
14:00–14:15	22: Expanding the Value of TOD	Manasa Aluru and Harshitha Mruthyunjaya
14:15–14:30	44: A Framework for Prioritizing Key Transport Accessibility Indicators on Urban Housing Price	Shagufta Pal , Eeshan Bhaduri and Tuhin Subhra Maparu
14:30–14:45	50: Multimodal Transport Hub as a catalyst for Comprehensive Mobility Planning- a case of Thiruvananthapuram, India	Parvathy R and Sanjukta Bhaduri

Theme: 7.2-Sustainable Urban Freight

14:45 – 15:00	51: E-Commerce Characteristics in Emerging Metropolitan Cities in India: A Case Study of Faridabad	Venus Verma and Sanjay Gupta
15:00 – 15:15	54: Exploring E-Commerce Delivery Distribution using Unmanned Aerial Vehicles (UAV) in South Delhi	Arun Kumar , Sairam Dasari and Mayank Mathur
15:15 – 15:30	56: Potential of Bicycles in Hyperlocal Meal Delivery	P Karun Achintya and Chidambara Chidambara
15:30–15:45	Break	

Panel Discussion on

"How university research can support decision-making on Urban Transport policy and planning?"

Moderator: Prof. (Dr.) Ashish Verma, Professor & Convenor, IST Lab., IISc Bangalore

IST Lab Student Volunteer cum Rapporteur: Gayathri H.

Teams Link: <https://teams.microsoft.com/l/meetup-join/19%3aseE5yXxjo3iDLpJTqhOk7RzcbHo4kYmshvNOsIFBoiA1%40thread.tacv2/1634568479903?context=%7b%22Tid%22%3a%226f15cd97-f6a7-41e3-b2c5-ad4193976476%22%2c%22Oid%22%3a%22a6b1885e-38ca-40ac-8838-be5622573c39%22%7d>

Time: 15:45 – 16:45

	Addresser	Designation, Institute
15:45 – 16:45	Sanjay Gupta	Dean Research & Professor of Transport Planning, SPA Delhi
	V. Manjula	Commissioner, Directorate of Urban Land Transport (DULT)
	Shalini Sinha	Associate Professor, CEPT University Ahmedabad
	Manoj M.	Assistant Professor, IIT Delhi

Closing Ceremony

Teams Link: Same as link for panel discussion

<https://teams.microsoft.com/l/meetup-join/19%3aseE5vXxjo3iDLpJTqhOk7RzcbHo4kYmshvNOsIFBoiA1%40thread.tacv2/1634568479903?context=%7b%22Tid%22%3a%226f15cd97-f6a7-41e3-b2c5-ad4193976476%22%2c%22Oid%22%3a%22a6b1885e-38ca-40ac-8838-be5622573c39%22%7d>

Time: 16:45- 17:15

<p>16:45- 17:15</p>	<p>Part One: Technical Session's Summaries of all presentations by Rapporteurs</p> <p>Part Two: Closing Remarks from Shri M.L. Chotani, RDO/Consultant, IUT(I) and Prof. Dr. Ashish Verma, Professor & Convenor, IST Lab., IISc Bangalore</p>
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