

Conference Information Booklet

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1. Background and Objective:

Asia needs a large number of high-quality infrastructure development projects to catalyze its economy and improve the quality of life. Asian countries are seeking policy measures for attracting private sector investment in transport infrastructure. The COVID-19 pandemic's significant impact on cities and transportation networks has given rise to the urgent need for interdisciplinary research addressing human mobility, infrastructure, supply chains, logistics, and integrated mobility models.

The Asian Development Bank Institute (ADBI), in association with the Center for Sustainable Development and Global Smart City, and Chubu Institute for Advance Studies at Chubu University, Japan will host a virtual conference on Transport Infrastructure Development, Spillover Effects and Quality of Life on 12-16 October 2020. To address the emerging research topics, ADBI in association with WCTR Society formed in 2019 a [Special Interest Group \(SIG\) on High-Speed Rail: Policy, Investments and, Impacts \(WCTRS-SIG: A4\)](#). This conference will also provide a forum for members of this SIG A4.

The objective of this virtual conference is to enhance capacity and increase knowledge among senior officials and experts on critical issues related to the planning, implementation, and operation of transport infrastructure in Asia, with a special focus on high speed rail (HSR) development. The conference comprises ten sessions in which policy makers, practitioners, and academics can exchange views and share experiences on transport infrastructure projects and their spillover impacts on the economy, environment, society, and the quality of life.

In 2018-2019, ADBI hosted a conference on *"Spill-over Effects of High-Speed Railway and Quality of Life"* in November 2018 at Tokyo, Japan; and five special sessions on *"Transport and Quality of Life"* at the 15th World Conference on Transport Research (WCTR) during 26-31 May 2019, at the Indian Institute of Technology (IIT) Bombay, India. Together, the conference and special sessions highlighted critical issues and delivered key messages on the broad research on High-Speed Rail and Quality of Life. ADBI published selected papers in the ["Handbook on High-Speed Rail and Quality of Life"](#), released during the Virtual Conference on Transport Infrastructure Development, Spillover Effects, and Quality of Life in March 2020. In the context of Covid-19, ADBI also hosted three webinars on HSR in May-June 2020.

Organizers: ADBI, Chubu University, WCTRS SIG A4

Supporting organizations: MLIT, JICA, JARTS, JR East, NHSRL

Conference Co-chairs: KE Seetha Ram and Y Hayashi;

Secretariat: Ayushman Bhatt, Noriko Nogami (ADBI); Dr Takeshita, Mayumi Takeuchi (Chubu)

ADBI Events Webpage: <https://www.adb.org/news/events/transport-infrastructure-development-spillover-effects-quality-in-life>

Participants/Registration:

https://us02web.zoom.us/webinar/register/WN_MKnexloxSnmA6RxFdbjS6g

Output: Edited Volume by ADBI Press

2. Schedule Overview

Time – JST (hr : mm)	Day 1 12 October 2020 Monday	Day 2 13 October 2020 Tuesday	Day 3 14 October 2020 Wednesday	Day 4 15 October 2020 Thursday	Day 5 16 October 2020 Friday
09:30 to 10:30 (17:30 Vancouver Time(-1 day); 20:30 EST (-1 day) 09:30 Korean Time. 08:30 Chinese/Taipei Standard Time)			Club of Rome Symposium (14:00- 16:30 JST)	Session 4: Competition and Cooperation between Air, Rail and Roads for inter-city travel (90 min)	
10:30 to 11:30					Session 7 Graduate Students Colloquium (90 min)
11:30 to 12:30					
13:30 to 15:30 (20:30 AKDT (-1 day); 10:00 IST; 11:30 Vietnam/Central Indonesian Time; 16:30 NZST)		Session 2: Capacity Building for Engineering, Research, Innovation, and Construction Technology Management in Sustainable Transport Infrastructure Development (90 min)		Session 5: Policy and Innovation for Transport 2.0 - Building a National Network of HSR in Asian Countries (120 min.)	Session 8: Quantifying and Simulating Quality of Life (90 min)
15:30-16:30					
16:30 to 18:30 (09:30 CET; 13:00 IST)	Opening Plenary/Special Session on High- Speed Rail and Quality of Life (90 min)	Session 3: Transport Infrastructure and its Wider Economic Impacts (90 min)		Session 6: Transport-Urban Interactions (90 min)	Closing Plenary & Emerging Research topics (90 min)
22:00 to 00:00 (06:00 Vancouver Time; 09:00 EST; 15:00 CET; 18:30 IST)	Session 1: Impacts of COVID- 19 on Transport (co-organized with WCTRS COVID-19 Task force) (90 min.)				

Note: The effective duration of sessions are 90 minutes (except session 5), however including the pre- and post-event chat, a slot of around 120 minutes is secured.

Color Codes for Sessions and Session Items	
	Special Opening and Closing Plenary on HSR and QoL
	Inter-related sessions for HSR, Spill over Effects and QoL
	Inter-related sessions for COVID-19 impacts on transport and logistics
	Inter-related sessions for Capacity building and Innovation for transport Infrastructure Development
	Session Chairs
	Key note Speakers and Panelist
	Discussions
	Paper Presentations
	Short highlights/comments of Papers already presented in March Virtual Conference

3. Session Agenda and Compendium of Abstracts

Opening Plenary and Special Session on high-speed-rail and quality of life

Day 1: October 12, 2020 (16:30 to 18:30 JST)

[09:30 CET; 13:00 IST; 14:30 Vietnam time/Central Indonesian Time]

Session Overview:

In the last 5 decades, the advancing technologies in rail transport including the high-speed rail (HSR) marked the “second age of rail”. During this time, HSR networks have grown rapidly around the world and have shrunk the “time-space” geography. Consequently, HSR is also inevitably tied to an intricate web that overlaps urban–regional functions and the geographic expanses of human life. These overlaps although may induce complexity, but if developed as an integrated system can also bolster the overall betterment of life. Several countries are planning to develop HSR networks, and there is a need to introduce a new point of view on the impact of transport infrastructure on quality of life. This special session along with the opening of this conference, aims to provide the highlights of complex implications of transport infrastructure on economy and quality of life (QoL), thereby projecting its importance for sustainable development. Illustrious keynote presentations, an expert panel discussion on transport infrastructure for economy and sustainable development, and an open Q&A session are planned, where pertinent issues relating to the development of HSR will be covered. This session also commemorates the 80th anniversary of Chubu University (Japan) and will be presided by the Chancellor of Chubu University and the Dean of Asian Development Bank Institute (ADBI).

Session Agenda:

S. No.	Time	Paper Title	Speaker/Author(s)
1	16:30 to 16:45 JST	<i>Meeting room opens and pre-event chat</i>	
Part 1: Welcome Addresses (16:45 to 17:05 JST)			
2	16:45 to 16:55 JST	Opening Remarks/ Overview of the Conference	Yoshitsugu Hayashi , Chubu University (Transport, QoL and Climate Change)
3	16:55 to 17:00 JST	<i>Welcome by Dean, ADBI</i>	Tetsushi Sonobe , Dean and CEO, ADBI, Tokyo, Japan
4	17:00 to 17:05 JST	Special Keynote presentation	Osamu Ishihara , President, Chubu University, Japan
Part 2: Special Session on HSR and QoL (17:05 to 18:30 JST)			
5	17:05 to 17:15 JST	Mechanisms to capture the spill-over effects of transport infrastructure: Land Trust and Spill-over Effects of Infrastructure Investment	Naoyuki Yoshino , Professor Emeritus, Keio University, Japan

6	17:15 to 18:00 JST	<p>Panel Discussion on Transport Infrastructure for Economic and Sustainable Development (45 minutes)</p> <p>Moderator: Chul Ju Kim/ K E Seetha Ram, ADBI</p>	<p>Panelist 1: Achal Khare Managing Director, NHSRCL, India</p> <p>Panelist 2: Werner Rothengatter, KIT, Germany</p> <p>Panelist 3: Yoshitsugu Hayashi, Chubu University</p> <p>Panelist 4: K. N. Satyanarayana, IIT Tirupati, India</p> <p>Panelist 5: Kazuaki Hiraishi, Mitsubishi Research Institute, Japan</p>
7	18:00 to 18:15 JST	Open Discussions/Q&A	
8	18:15 to 18:20 JST	Closing remarks	K E Seetha Ram, ADBI
9	18:20 to 18:30 JST	Post event chat	

Session 1: Impacts of COVID-19 on Transport

(co-organized with WCTRS COVID-19 Task Force)

Day 1: October 12, 2020 (22:00 to 24:00 JST):

[06:00 Vancouver Time/Pacific Time; 09:00 EST; 15:00 CET; 18:30 IST; 23:00 ACT]

Overview:

The World Conference on Transport Research Society (WCTRS) has established a Task Force (WCTRS COVID-19 Task Force) comprising of leading academics and experts in the field of transport and logistics (TLOG). The task force aims to investigate the impacts of COVID-19 and support emergent transport policy decisions on mitigation of identified impacts to alleviate the spread of COVID-19. This jointly organized session will illustrate the task force's key findings, recommendations and action plans, and will facilitate an associated roundtable discussion task force's country coordinators and other experts to report the status and findings in their respective countries and discuss policy lessons.

Session Agenda:

S. No.	Time	Paper Title	Speaker/Author(s)
1	22:00 to 22:05 JST	<i>Meeting room opens and pre-event chat</i>	
2	22:05 to 22:15 JST	<i>Opening Remarks/Keynote presentation by Session Chair</i>	Yoshitsugu Hayashi, <i>Professor, Chubu University, Japan ; Co- Chair of WCTRS Covid-19 Task force</i>
3	22:15 to 22:25 JST	<i>A new policymaking framework for addressing the impacts of COVID-19 and future pandemics: PASS approach and its applications</i>	Junyi Zhang, <i>Professor, Hiroshima University, Japan; Co-Chair of WCTRS Covid-19 Task force</i>
4	Roundtable Discussion chaired by Junyi Zhang (Professor, Hiroshima University) 22:25 to 23:55 JST		
4.1	22:25 to 22:35 JST	<i>Policy measures for addressing the impacts of COVID-19 in mainland China</i>	Yacan Wang, Huiyu Zhou <i>Beijing Jiaotong University, China</i>
4.2	22:35 to 22:45 JST	<i>Policy measures for addressing the impacts of COVID-19 in Taiwan</i>	Cheng-Min Feng, , <i>National Chiao Tung University, Taiwan</i>
4.3	22:45 to 22:55 JST	<i>Policy measures for addressing the impacts of COVID-19 in India</i>	Senathipathi Velmurugan, <i>CSIR - Central Road Research Institute, India</i>
4.4	22:55 to 23:05 JST	<i>Policy measures for addressing the impacts of COVID-19 in Australia</i>	Hitomi Nakanishi <i>University of Canberra, Australia</i>
4.5	23:05 to 23:15 JST	<i>Policy measures for addressing the impacts of COVID-19 in United States</i>	Giovanni Circella, <i>UC Davis, USA</i>

4.6	23:15 to 23:25 JST	<i>Guidance Note on COVID-19 and Transport in Asia and the Pacific</i>	<i>James Leather, Asian Development Bank</i>
4.7	23:25 to 23:35 JST	<i>Policy measures for addressing the impacts of COVID-19 in Low Income Countries</i>	<i>Holger Dalkmann, CEO Sustain 2030 & Senior Adviser High Volume Transport Program (HVT)</i>
5	23:35 to 23:55 JST	<i>Open Discussion</i>	<i>All Speakers</i>
6	23:55 to 24:00 JST	<i>Closing remarks</i>	

Session 2: Capacity Building for Engineering, Research, Innovation, and Construction Technology Management in Sustainable Transport Infrastructure Development

Day 2: October 13, 2020 (13:30 to 15:30 JST):

[20:30 AKDT (-1 day); 10:00 IST; 11:30 Vietnam/Central Indonesian Time; 12:30 Chinese Standard Time]

Overview:

The complexity involved in the successful design, construction, O&M and adopting of new technologies for sustainable infrastructure development cannot be handled in isolation as the project influences and gets influenced by stakeholders with diverse needs. Project sustainability requires a harmonious relationship between all the involved stakeholders and the diverse project needs including aspects related to technological advancements, human resource development, quality, safety, reliability, risk etc. are required to be accommodated in the capacity development framework. This session highlights the needs for innovation, research, engineering, and technology management for sustainable transportation infrastructure development, and aims to critically consider the constraints related to capacity building in these areas.

Session Agenda:

S. No.	Time	Paper/Presentation Title	Speaker/Author(s)
1	13:30 to 13:45 JST	<i>Meeting room opens and pre-event chat</i>	
2	13:45 to 13:57 JST	<i>Opening Remarks and Session Overview by Session Chair</i>	Sudhir Misra, Professor, IIT Kanpur, India
3	13:57 to 14:09 JST	<i>The Concept of Experimental Platform on Next-Generation Shinkansen Development: Type E956 Shinkansen Test Train named ALFA-X</i>	Koji Asano Director, Advanced Railway System Development Center, JR East, Japan
4	14:09 to 14:21 JST	<i>5G Key Technologies for Intelligent High-Speed Railway</i>	Bo Ai Beijing Jiaotong University, China
5	14:21 to 14:33 JST	<i>Artificial Intelligence based Spatial Exploration for Computer-Aided High-speed Railway Alignment Development</i>	Sandeepan Roy, Avijit Maji IIT Bombay, Mumbai, India
Discussions			
6	14:33 to 15:15 JST	<i>Title TBC</i>	Invited Discussant: Ashwin Mahalingam Professor, IIT Madras

		<i>Estimating Direct, Indirect, and Induced Employment from Highway Construction in India</i>	<i>Vinod Vasudevan, Sudhir Misra, Tanika Chakrobarty, Prasanna Behera, Ayushman Bhatt</i> <i>IIT Kanpur/University of Anchorage, Alaska, USA</i>
7	15:15 to 15:20 JST	<i>Closing remarks</i>	
8	15:20 to 15:30 JST	<i>Post event chat</i>	

Note: Papers already presented in March Virtual Conference will be invited for short highlights/comments during discussions

Compendium of Abstracts:

- Title:** The Concept of Experimental Platform on Next-Generation Shinkansen Development
Authors/Speaker: Koji Asano, Osamu Kawakami, Masaaki Hara, and Satoshi Oomata,
Abstract: JR East decided on a next-generation train project targeting route extension to Sapporo via Hokkaido Shinkansen for FY 2030. In our policy, it is essential and of utmost priority to keep safe and stable operation as high-speed transportation, while providing new values for passengers who take long-distance travel to take advantage of the extra time available during long-distance travel to enjoy the experience. Therefore, we established four development concepts, namely "Achieving greater safety and stability", "Improving comfort", "Alleviating the environmental burden" and "Reforming maintenance" utilizing the AI technologies of IoT and big data analysis. To accomplish these development concepts, we decided to build a new high-speed Shinkansen test train as an experimental platform named as "ALFA-X" for extended use into the future. It is named after taking capital letters of "Advanced Labs for Frontline Activity in rail experimentation."
- Title:** 5G Key Technologies for Intelligent High-Speed Railway
Author/Speaker: Bo Ai
Abstract: The 5th generation mobile communication technology (5G) is a hotspot of research and attention in the international academia and industry. Multi-scene, multi-target and multi-technology integration are the important characteristics of 5G. High-speed railway (HSR) is one of the typical vertical application industries of 5G. This report aims at the business and application requirements of future HSR development, and the application of 5G technology in the future HSR communication systems are discussed in the aspects of service model, millimeter-wave communication, IoT-R, large-scale antenna array, beam management, mobile edge calculation, etc.
- Title:** Artificial Intelligence-based Spatial Exploration for Computer-Aided High-speed Railway Alignment Development
Authors: Sandeepan Roy and Avijit Maji,
Abstract: High-speed railway alignment development is a constrained multi-objective decision-making process. While developing an alignment, various objectives that a transportation planner tries to optimize are construction cost, operations cost, environmental impact, user cost, etc. On the other hand, a developed alignment should meet the geometric requirements of the high-speed railway track and connect the stations located in the intermediate cities. The traditional high-speed railway alignment development process relies on human judgment and expertise. As

an infinite number of alternatives may exist between two end points, this process may overlook potential alternatives. Due to this complexity, researchers attempted to develop alignment using various heuristic-based optimization algorithms. In these approaches, the decision variables i.e., station locations and point of intersections (PIs), were selected from predefined orthogonal sections, offset points or grids. Thus, the decision variables were confined to certain predefined locations and possibly affected the quality of the generated alignment. This study proposes a low-discrepancy point sampling-based approach to spatially explore the study area for potential PIs. An artificial intelligence-based algorithm identifies suitable PIs from these potential PIs to develop a high-speed railway alignment that minimizes the objectives considered while meeting the constraints imposed. It is a computer-aided automated process with the capability of developing and evaluating an exhaustive list of alternatives before suggesting possibly the best high-speed railway alignment. The proposed approach is applied to a real-world case study where the location-dependent cost and construction cost were considered as objective functions and avoiding environmentally sensitive land parcels and connecting intermediate station locations as the constraints. This case study demonstrates the proposed method's ability to automate the high-speed railway alignment development.

4. **Title:** Estimating Direct, Indirect, and Induced Employment from Highway Construction in India
Authors: Vinod Vasudevan, Sudhir Misra, Tanika Chakraborty, Prasanna Kumar Behera, and Ayushman Bhatt,
Abstract: Highway construction is a major employment generator across the world. The overall employment generated from highway construction can be divided into three categories: 1) direct employment; 2) indirect employment; and 3) induced employment. While direct employment includes all the employment directly related to the construction activities, indirect employment consists of employment in sectors and sections which support the construction activities. Indirect employment mainly includes employment created due to supply of construction materials, and sub-contract work which are not directly carried out at the highway construction sites. Induced employment from highway construction, on the other hand, considers the employment generated in the economy once the highway has been constructed. While the estimation of direct and indirect employments relies on data from contractors of ongoing projects, the estimation of induced employment depends heavily on secondary data and primary survey data. The objective of this presentation is to illustrate the methodology to develop estimates of employment generation in India from highway construction. Four projects, two each in Uttar Pradesh and Maharashtra, were selected for estimating direct and indirect employment. While direct employment numbers varied based on the scope of project and the project execution structure, indirect employment was mainly dependent on consumption of materials. The average per lane kilometre direct employment estimate, based on data from three projects with similar scope, is found to be around 4,722 man-days. For estimating induced employment, four completed highway segments were selected for data collection. Results indicated that rural areas benefited more from highway construction in terms of induced employment generation than urban areas.

Session 3: Transport Infrastructure and its Wider Economic Impacts

Day 2: October 13, 2020, (16:30 to 18:30 JST)

[09:30 CET; 13:00 IST; 14:30 Vietnam time/Central Indonesian Time]

Overview:

Investments in transportation infrastructure generate long-term and step wise economic impacts that are often not directly attributable to a specific project. Consequently, the conventional cost–benefit analysis (CBA) is not sufficient to evaluate the overall project’s feasibility, and there is a need of investigation of other spillover effects including the wider economic impacts (WEI) which may be realized or catalyzed through transport infrastructure development. This session aims to consider and illustrate several such indirect and long-term economic impacts, with a special focus on HSR infrastructure and highlight the different dimensions that may be considered by policy makers in addition to the conventional CBA while deciding a project’s feasibility.

Session Agenda:

S. No.	Time	Paper Title	Speaker/Author(s)
1	16:30 to 16:45 JST	<i>Meeting room opens and pre-event chat</i>	
2	16:45 to 17:00 JST	<i>Opening Remarks and Session Overview by Session Chair</i>	Werner Rothengatter, <i>Professor Emeritus, Karlsruhe Institute of Technology (KIT), Germany</i>
3	17:00 to 17:15 JST	<i>Wider Impacts and Spill-over Effects of High-Speed Rail Infrastructure Investments in Europe: The Case of Spain</i>	Angel Aparicio, <i>Professor, Universidad Politécnica de Madrid, Spain</i>
4	17:15 to 17:30 JST	<i>Estimating the Environmental Benefits from Development of High-Speed Rail in Vietnam</i>	An Minh Ngoc, Le Thu Huyen <i>Lecturer, University of Transport and Communication, Vietnam</i>
Discussions			
5	17:30 to 18:15 JST	<i>Title TBC</i>	Invited Discussant: Michael Wegener, <i>Spiekermann & Wegener Urban and Regional Research, Germany</i>
		<i>Assessing the wider economic impacts of transport infrastructure investment with an illustrative application to the North-South High-Speed Railway project in Vietnam</i>	Thi My Thanh Truong, Sybil Derrible, <i>University of Transport Technology Vietnam,</i>

		High Speed Rails and Knowledge Production- A Global Perspective	Ayushman Bhatt, Hironori Kato The University of Tokyo, Japan
6	18:15 to 18:20 JST	Closing remarks	
7	18:20 to 18:30 JST	Post event chat	

Note: Papers already presented in March Virtual Conference will be invited for short highlights/comments during discussions

Compendium of Abstracts:

- Title:** Estimating the Environmental Benefits from Development of High-Speed Rail in Vietnam
Authors/Speaker: Pham Thi Kim Ngoc, **An Minh Ngoc**, Le Thu Huyen
Abstract: Despite the fact that interest in the environmental benefits of the high speed rail (HSR) network is on the rise, little empirical work has been done with a focus on examining the impact of HSR as a result of the weakening climate hazards in transport activity at national and local level. This is partially due to the complicated nature of bottom-up approach in this case, given the presence of issues such as detail of vehicle travelled, number of vehicles by type, modal shift, and fuel consumption. This paper aims to fill this gap by providing some new evidence, with a focus on examining the impact of HSR on addressing climate change using indicators of economic growth, vehicle growth, modal shift, and vehicle kilometer travelled (VKT). The scope of this study is narrow down to Vietnam, where road accounts for much of interprovincial passenger traffic, i.e., 94.4% and 66.9% in terms of passengers and passenger-kilometers, respectively. Currently, road is the largest emitter of greenhouse gas (GHG) among transport sub-sectors in Vietnam and the transport sector would be responsible for a significant reduction in GHG emissions in future. In fact, the HSR network has still under developed in Vietnam but from decision makers' perspective, it can provides a good case for studying its impact on environmental activities for countries with planned HSR projects. In this study, development of Business-as-Usual (BAU) and mitigation action with presence of HSR is parallel tested; it shows that the presence of HSR has a significant and positive effect on emission mitigation. By using the four-step model and econometric regression analysis, this study reveals the detailed shift from road long-distance vehicles and air planes to HSR, measured in terms of VKT.
- Title:** Assessing the wider economic impacts of transport infrastructure investment with an illustrative application to the North-South High-Speed Railway project in Vietnam
Authors/Speaker: **Thi My Thanh TRUONG**, Sybil DERRIBLE
Abstract: This paper aims to propose a mechanism to capture the spillover effects of transport infrastructure by identifying the employment agglomeration impact of transport investments through a measure of change in employment density. The analysis covered two steps: (1) measuring the business development and employment density, and (2) measuring the relocation of employment, especially for knowledge-based industry. The agglomeration elasticity measures the change in output productivity as a result of a change in employment density. The approach used data at aggregate level to compute the additional impacts of transport infrastructure change on the wider economy. The model system was applied to the introduction of the North-South High-Speed Railway (NWHHR) project in Vietnam to illustrate the capability of model, identifying a certain markup over the conventional transport user benefit. The study provided an empirical evidence for the project evaluation and prioritization regarding wider economic impacts, that are beneficial for decision makers and project developers.

3. **Title: High-Speed rails and Knowledge Productivity: A Global Perspective**

Authors/Speaker: Ayushman Bhatt, Hironori Kato

Abstract: *This study finds empirical macro-economic evidence for the effect of high-speed rails (HSRs) on national innovation through the analyses of 59 high- and upper-middle-income countries. Knowledge productivity (KP) is assumed to be represented by annual patent applications per million capita. First, associations between HSR development and KP are estimated with a Cobb-Douglas style KP function using panel data for ten years, covering 14 countries that operate HSRs. Next, difference-in-differences analysis is carried out for a treatment group of 15 and a control group of 44 countries. Finally, the average treatment effects of HSR development on KP are estimated using matching techniques for a dataset covering 29 countries, of which 10 received treatment. The results of all three analyses covering about 40 years of HSRs' history, robustly suggest that HSR development can have positive externalities on KP both in the short and long runs. In addition, it is found that the HSRs' impacts on countries with upper-middle income and countries with higher urban population growth are larger than other countries.*

Session 4: Competition and Cooperation between Air, Rail and Roads for Inter-city Travel

Day 4: October 15, 2020 (09:30 to 11:30 JST):

*[17:30 Vancouver Time (-1 day); 20:30 EST (-1 day); 09:30 Korean Time. 08:30 Chinese
Standard Time Standard Time]*

Overview:

HSR development is believed to affect the other transport modes in different ways as it produces major changes in supply of inter-city passenger travel. The most notable impact is argued to be experienced by air transportation industry and the interaction between HSR and air transport for inter-city travel has been a critical research theme lately. Findings in the literature that developed over years suggests mixed evidence for changes in supply and demands, mode choices and extents of substitution, traffic distributions, environmental sustainability etc. While most studies in literature investigated the influence of the entry of the HSR on air transport industry from a perspective of competition, a very few also considered the perspective of the potential co-operation/complementarity between HSR and air travel. Corona virus disease (COVID-19) outbreak has further imposed a new dimension to this critical theme as the aviation market for both domestic and international travel is hit hard due to the witnessing of prolonged periods of lock down and strict restrictions. This session will cover a diverse range of such pertinent issues by illustrating the findings of cutting-edge research and facilitating an expert dialogue for enhancing knowledge of the research fraternity in this area.

Session Agenda:

S. No.	Time	Paper Title	Speaker/Author(s)
1	09:30 to 09:45 JST	<i>Meeting room opens and pre-event chat</i>	
2	09:45 to 10:00 JST	<i>Opening Remarks & Keynote presentation by Session Chair on: "Air-HSR Competition and Cooperation: with added comments on effects of Covid-19"</i>	Tae Hoon Oum, Professor Emeritus at Saunderson School of Business, UBC Canada & President, WCTR Society
3	10:00 to 10:15 JST	<i>Efforts for Optimal Inter-City Modal Split</i>	Sungwon Lee, The Korea Transport Institute, Republic of Korea
4	10:15 to 10:30 JST	<i>What's the impact of Chinese High-Speed Rail on Airline Carbon Emissions?</i>	Jack Strauss, Hongchang Li University of Denver, USA
Discussions			
5	10:30 to 11:10 JST	<i>Competition between high-speed rail and air transport in Japan</i>	Shinya Hanaoka

			Tokyo Institute of Technology, Japan
		<i>Sine Qua Non: High-Speed Rail Forms and Functionalities in Intercity and Urban Areas</i>	Eugene Chao University of Pennsylvania, USA
		<i>Does High-Speed Rail has a Spillover Effect on the Mode Shift for Intercity Travel</i>	Zhenhua Chen , Xiaohong Ren, Ting Dan, Wei Wang, The Ohio State University, USA
6	11:10 to 11:15 JST	<i>Closing remarks</i>	
7	11:15 to 11:30 JST	<i>Post event chat</i>	

Note: Papers already presented in March Virtual Conference will be invited for short highlights/comments during discussions

Compendium of Abstracts:

1. **Title:** Air-HSR Competition and Cooperation: with added comments on effects of Covid-19

Author/Speaker: **Tae Hoon Oum**

Abstract: In view of the rapid development of the high-speed rail (HSR) services in Europe and Asia, especially in China, this paper discusses (a) how massive introduction on HSR services affected the airlines; (b) airlines responses to HSR competition; (c) how HSR speed impact on airline demands, (d) discuss some aspects of Air-HSR cooperation; (e) effects of carbon tax on air-HSR demands. Finally, we attempt to summarize how Covid-19 pandemic are affecting the air and HSR transportation.

2. **Title:** Efforts for Optimal Inter-city Modal Split

Author/Speaker: **Sungwon Lee**

Abstract: Korea is a very densely populated country with relatively well-developed public transport network for both intra-urban and inter-city travel. Contrary to public transit oriented urban travel, many Koreans still prefer private car for inter-city travel. This analysis tries to measure policy effectiveness in increasing public transport patronage. The policy instruments in this analysis include highway toll, fare and time related variables. Since effectiveness of policy measures is dependent on transport users' responsiveness, we should estimate the elasticities of travel demand. Stated preference methodology is employed in the elasticity estimation since it is capable of estimating the elasticities in hypothetical situations and in case of wide policy instrument variations. With these elasticity estimates, we will also estimate both the changes in vehicle usage and modal split so that we could estimate the potential of policy measures towards optimal modal split.

3. **Title:** What's the impact of Chinese High-speed Rail on Airline Demand and Carbon Emissions?

Authors/Speaker: **Jack Strauss**, Hongchang Li, Jingli Cui,

Abstract: We construct an extensive data set comprising all air and high-speed rail (HSR) routes in China, comprising more than 14000 observations from 2009 to 2017. We estimate carbon emissions for air travel and HSR and find that air emits seven times the carbon emissions than HSR. Results demonstrate a strong link between air travel and air carbon emissions as well as a strong negative relationship between HSR and air travel. Difference-in-differences analysis shows that

HSR contributes to significant and large negative impacts on air carbon emissions. We show further that increases in HSR frequency have contributed to an 18% decline in air carbon emissions in recent years, saving the environment an annual 12 million metric tons of carbon emissions. The net carbon emissions savings that include HSR emissions is 10.2 million tons annually. Using these estimates, we calculate that a \$35 carbon tax would generate a decline of air carbon emission of 6 million tons and a net reduction of 5.3 million tons annually. The tax would raise \$2.1 billion annually.

4. **Title:** Competition between high-speed rail and air transport in Japan

Authors/Speaker: Shinya Hanaoka

Abstract: Japanese high-speed rail called Shinkansen, covers most large cities in Japan in a dense network. During last recent years, three new Shinkansen routes have opened: Kyushu Shinkansen between Hakata and Kagoshima in 2011, Hokuriku Shinkansen between Tokyo and Kanazawa in 2015, and Hokkaido Shinkansen between Aomori and Hakodate in 2016. In the past, airlines have stopped operating their scheduled flights on routes where new Shinkansen lines opened; however, some flights are operated at a minimum level despite the competitive situation. This presentation shows the current status and trend of the competition between Shinkansen and aviation for the three newly opened and other representative routes, and discusses the significant factors of passenger's choice.

5. **Title:** Sine Qua Non: High-speed Rail Forms and Roles in Intercity and Urban Areas

Authors: Eugene Chao, Vukan R, Vuchic

Abstract: Dissecting many of the world's most prosperous cities, rail infrastructure serves as a strong element to bind the city's total transport network together. Rail lines and stations influence the city's form and functionality due to their permanence and considerable investment. With the global trend of urbanization, we are seeing construction of more high-speed rails (HSR, in the American term: high-speed intercity passenger rails) and urban transit systems. Digesting historical land use theories from distinguished experts and successful HSR operations from creditable agencies, a critical topic has not discussed yet. Opinions differ about geometric shape and operating strategies for HSR networks influence future patterns of city development and regional integration. The article evaluates different types of HSR network planning, design, and operations associated with their urban forms. First, the definition, geometric pattern, and corresponding characteristic of various type of lines represent the necessities to differentiate network functionalities in shaping various socioeconomic activities. Second, the reflection of international case studies distills insightful grappling of comparative analyses across independent lines vs. integrated network, trunk vs. branch lines operation, and adding new stations to the existing network vs. extending the line to new geographical areas. Third, the review of selected cities' transformational experience offers common mistakes and meaningful lessons to shape better project success. The practitioner-centric research offers a fine-grained dissection of the sophistication of HSR planning, design, and operations associated with city's form and functionality.

6. **Title:** Does High-speed Rail has a Spillover Effect on the Mode Shift for Intercity Travel

Authors: Xiaohong Ren, Zhenhua Chen, Chunyang wang, Ting Dan, Wei Wang,

Abstract: This paper examines to what extent the development of high-speed rail (HSR) has influenced the mode shift of intercity travel. In particular, it investigates whether the developed HSR system has any spillover effect on people's mode choice for intercity travel. The study was conducted based on a survey of 4,924 passengers who chose conventional trains to travel in Chongqing, China. The motivations and factors that affected their mode choice are examined empirically using multinomial logit regression analysis. The study found that patrons who live more

than 2-hours away from the train stations in Chongqing are found to be more willing to choose a conventional train instead of high-speed trains. This result suggests that although HSR does have a spillover effect on the mode shift, the magnitude of the impact is likely to be diminished after the distance exceeds 2-hour travel time.

Session 5: Policy and Innovation for Transport 2.0 - Building a National Network of HSR in Asian Countries

Day 4: October 15, 2020 (13:30 to 15:30 JST):

*[00:30 EST; 06:30 CET; 10:00 IST; 11:30 Vietnam/Central Indonesian Time; 12:30 Chinese
Standard Time]*

with the support of MLIT, JICA, NHRCL JREast, JARTS, RTRI

Overview:

This session will facilitate a forum for high-level policy dialogue among global leaders and experts for high-speed railway (HSR) development. A wide range of topics related to railway infrastructure development will be covered in this session including but not limited to building capacity for human resource development, technology and innovation for high-speed rail, successful operation of railway business importance of nation-wide network of high-speed railway for inter-city passenger transport, dedicated freight corridors, public private partnerships, corporate approaches and energy related strategies. A special spotlight on India-Japan partnership for building HSR network is planned.

Session Agenda:

S. No.	Time	Title	Speaker/Author(s)
1	13:15 to 13:30 JST	<i>Meeting room opens and pre-event chat</i>	
Part 1: Welcome addresses and Keynotes (13:30 -14:00 JST)			
2	13:30 to 13:40 JST	Opening Keynote presentation	Vinod Kumar Yadav <i>Chairman & Chief Executive Officer of Railway Board, Ministry of Railways, India</i>
3	13:40 to 13:45 JST	Policies and Programs to transfer knowledge and experience from Japan to support other countries build HSR	Yasaburo Hikasa <i>Assistant Vice-Minister for International Affairs, Ministry of Land, Infrastructure, Transport and Tourism (MLIT)</i>
4	13:45-13:55 JST	Programs to assist and develop capacity in Asian countries to build HSR	Kenichi Yamamoto <i>Director General, JICA</i>
Part 2: High-level Panel Discussion : Policy and Innovation for Transport 2.0 (14:00 -14:50 JST) (Moderated by Chul Ju Kim) <i>(8 minutes each panelist in 2 rounds like a conversation/dialogue- without using slides)</i>			
5	14:00 - 14:40 JST	How to build local capacity to successfully construct, operate and maintain HSR?	Haruhiko Kono <i>President, Japan Railway Technical Service (JARTS)</i>

6		<i>Education & Training of SHIN, KANSEN specialists – Establishment of SHINKANSEN General Management Department</i>	Masatoshi Kawai <i>Senior Executive officer, JR East</i>
7		<i>Technology and innovation for HSR</i>	Tetsuo Uzuka <i>General Director, RTRI, Japan</i>
8		<i>Indigenous Solutions and opportunities for HSR in India</i>	Achal Khare <i>Managing Director, NHSRCL, India</i>
9		<i>Policies and priorities for developing domestic capacity for building high quality infrastructure</i>	K. N. Satyanarayana, <i>Director IIT Tirupati, India</i>
10	14:40 to 14:50 JST	Panelist respond to questions from participants	
Part 3: Open discussion with panelists and participants on Issues, Innovation, and Investments to develop national networks of HSR in Asian Countries (14:50 – 15:40 JST) (Facilitated by KE Seetha Ram - With the use polls and interactive responses)			
11	14:50 to 15:00 JST	<i>Development of high-speed rail will be a “game changer” for Asian countries</i>	Masafumi Shukuri <i>Chairman, International High-Speed Rail Association</i>
Discussants representing Asian and European countries: <i>Sungwon Lee (KOTI, Korea); Ko Sakamoto (ADB Manila); Surya Raj Acharya (Nepal), Angel Aparicio (Spain); Aseem Kinra (Germany); Haixiao Pan (PRC); Hiroyuki Takeshita (Japan)</i>			
12	15:40 to 15:45 JST	<i>Closing Remark by Prof. Hayashi and Post event chat</i>	

Session 6: Transport-Urban Development Interactions

Day 4: October 15, 2020 (16:30 to 18:30 JST):

[09:30 CET; 13:00 IST; 14:30 Vietnam time/Central Indonesian Time]

Overview:

Large transport infrastructure development projects generate effects on different spatial scales viz. regional, local, corridors and stations. While many Asian mega cities are planning and implementing extensive investment in mass transit networks following the transit-oriented development (TOD) principles, others are reaching an automobile-oriented saturation level and struggling to overcome increasing congestion problems. TOD policies, hence being a critical pillar of the future regional and urban development plans of Asian megacities are required to be considered in greater details and given its due emphasis. Urban development using railways has been an important theme in TOD policy as it can generate benefits for urban transportation, socioeconomic development, and environmental protection, although often require long amount of time to be realized. High Speed Rail corridors which stretches over long distances and connects urban cities varying sizes put forward a challenging dimension before planners and TOD policy makers due to the changes in demands and induced demands that is generated through HSR development. Hence, HSR station planning require to be well integrated with the urban development and TOD plans that include urban railways to exploit and realize HSR's various spillover effects and quality of life implications to the fullest. This session will cover a wide range of issues associated with TOD planning for rail-oriented cities and illustrate diverse experiences from Asia and the Pacific. An expert discussion will be facilitated to discuss this pertinent research theme in the context of HSR development in Asian countries.

Session Agenda:

S. No.	Time	Paper Title	Speaker/Author(s)
1	16:30 to 16:45 JST	<i>Meeting room opens and pre-event chat</i>	
2	16:45 to 17:00 JST	Opening Remarks/Keynote presentation by Session Chair: Factors Influencing the Ridership of a Proposed Metro Rail System	K.V.K Rao, Professor, IIT Bombay, India
3	17:00 to 17:12 JST	Land Use and Urban Development Effects of HSR	Kenichi Kudo Director for Urban Transport Planning Office, City Bureau, MLIT Japan
4	17:12 to 17:24 JST	Development around the newly built station	Hiroyuki Takeshima, Life-style Business Development HQ, General Manager, JR East, Japan
5	17:24 to 17:36 JST	Land Value Capture (LVC) for Transit-Oriented Development (TOD) in the Philippines	Akihiro Sato Oriental Consultants, Japan
6	17:36 to 17:48 JST	High Speed Rail Station Location Serviceability Quantification: Socio-Economic, Environmental, and Accessibility Implication	Sandeepan Roy, Avijit Maji, Prasanta Sahu IIT Bombay, Mumbai

Discussions			
7	17:48 to 18:25 JST	Promoting Logistics by Bullet Train in the Corona Pandemic Era	Yoshitaka Ishii , Former President and Chairman, JR Kyushu
		Exploring a dynamic relationship between transportation strategies and community liveability: a case of Kolkata Urban Agglomerations (KUA)	Arpan Paul , Joy Sen IIT Kharagpur
		TRANSPORT INVESTMENT AND QUALITY OF LIFE: EVIDENCE FROM ASIAN COUNTRIES	Md Aslam Mia Universiti Sains Malaysia, Penang, Malaysia
8	18:25 to 18:30 JST	Closing remarks	
9	18:30 to 18:40 JST	Post event chat	

Note: Papers presented in March Virtual Conference will be invited for short highlights/comments during discussions

Compendium of Abstracts:

- Title:** Factors Influencing the Ridership of a Proposed Metro Rail System
Author/Speaker: Chetan Kumar H., Mayank Bansal, and **K. V. Krishna Rao**
Abstract: Rapid urbanization coupled with increased income levels has resulted in increased demand for improvements in urban commuting standards. Towards satisfying this demand, most of the metropolitan cities in developing countries like India, started implementing metro rail systems. Metro Line 3 in Pune city in India is one such transit line being implemented under public private partnership scheme. Understanding the influence of factors like fare, quality of service, multimodal integration, land use and station area development on the passenger demand and revenues becomes very essential in making such high investment transit systems financially sustainable. In this study, the importance of these identified factors was assessed through user preference surveys. Subsequently, the influence of these factors on ridership were studied using a travel demand model. Through this study, it was found that favourable land use policies allowing mixed dense development in and around station areas will result in substantial increase in ridership.
- Title:** Development around the newly built station
Author/Speaker: **Hiroyuki Takeshima**
Abstract: In this presentation, JR East will introduce the matters necessary for successful business development around the newly built station based on the practical experience of JR East. In the presentation, completed ANNAKA housing development project and ongoing MAKUHARI SHINTOSHIN hotel development project is picked up as case studies. Through the cases, JR East shares the importance of to establish and change the legal frameworks such as land transaction regulations and city planning, and the shared roles between the public and private sectors for qualitatively improvement of connectivity of stations and surrounding area. In addition JR East will explain the cost-bearing scheme regarding on enhancing the functions of station facilities with other property-developers as peripheral development progresses rapidly in accordance with increase of ridership of station.

3. **Title:** *Land Value Capture for Transit-oriented Development in the Philippines*

Author/Speaker: *Akihiro Sato*

Abstract: This is a report on the ongoing NSCR-EX Railway Project in the Philippines that illustrated the increase in land value attributable to the rail project and highlighted the importance of investing more in TOD as it encourages responsible urbanization of areas surrounding the mass transit. Using the Hedonic method, future land prices were estimated, and it was found that land values increased by 1.8 times of the total project cost. Following that, TOD concept plan for sample areas and the use of LVC tools for support facilities were proposed. The study emphasized the value of TOD and provides the impetus for utilizing Value-Add from the Rail as a potential fund source for the Philippine Government's TOD initiative. Finally, it was concluded that, in order for urban development to be maximized as a result of railway development, the concept of TOD using LVC to answer any financing gap must be considered.

4. **Title:** *"Socio-Economic, Environmental, and Accessibility Assessment of High-Speed Rail Station Location using GIS Network Analyst"*

Authors/Speaker: *Sandeepan Roy, Avijit Maji, and Prasanta Sahu*

Abstract: Utility or benefit quantification of a location would be useful to the planners in assessing and determining the most suitable station locations for a high-speed rail (HSR) station. The potential HSR station location can affect the net positive socio-economic and environmental impacts, areawide local accessibility to the station, intermodal integration with existing transportation infrastructure (e.g., airports, train stations, and bus stops), transit network and services (e.g., commuter rail, road network, and feeder bus service), right of way cost, environmentally sensitive land parcels (e.g., water bodies, wetlands, and forest), and socio-economic development hubs (e.g., commercial and industrial land uses within the actual service area of a potential HSR station location). This study quantifies the overall utility of an HSR station using suitable utility functions, which analyze the extent a potential location satisfies each of these indicators. The cumulative utility of a location was then estimated as the weighted summation of these individual utility scores. A geographical information system (GIS)-based framework was used for geo-processing, mapping, and analyzing the geospatial data and result representation. The utility quantification is more realistic and thorough as the accessibility of a potential location from existing transportation infrastructure, considers the actual service area of said transportation infrastructure that is dependent on the existing road and transit network, over simple buffer analysis. The proposed methodology was used to quantify the utility of the planned station locations at four major cities connected across the Mumbai-Ahmedabad HSR corridor in India and compare the obtained results with other potential locations across these cities.

5. **Title:** *Exploring a dynamic relationship between transportation strategies and community livability: a case of Kolkata Urban Agglomeration (KUA)*

Authors/Speaker: *Arpan Paul, Joy Sen*

Abstract: Researches on interdependence of transportation planning and community livability are gaining significant grounds when understood spatially, and over time. The mosaic of a vast urban agglomeration across an initial transportation feeder like a maritime channel is an important working economic base line. Temporarily, the evolution of the indwelling community agglomerating over time is the other part. Therefore, such researches are advanced when the two are coupled and an appropriate case is explored to best understand the intertwined role. The present paper explores the case of Kolkata Urban Agglomeration (KUA), which has evolved spatially and temporarily across both the banks of the river Hooghly catalyzing the beginning of the British colonization in India, and earmarking the future of the celebrated 'City of Joy', the well-known livable cultural capital of India. The paper assesses the spatial dimensions by considering the evolution of the conurbation in four phases, and by looking at a cumulative

causation of the sequence of impacts of maritime, road, rail, air and ITeS communication networks on livability within the urban agglomeration based on a three-part framework.

6. **Title:** Transport Investment and Quality of Life: Evidence from Asian Countries

Authors/Speaker: Md Aslam Mia

Abstract: *Recently, Asian countries have witnessed massive investment in infrastructure development, particularly in the transportation and communication sector, largely financed by local resources and international development lenders (e.g., World Bank, Asian Development Bank etc.) Moreover, most developing countries in Asia are also experiencing a rapid expansion in the transportation sector, fueled by the support of China's Belt and Road Initiative (BRI). Despite the increasing mega transportation projects being embarked upon in many Asian countries, the impact of these investments on the quality of life remains an important question. Hence, this study analyzes the effect of transport and communication investment on the quality of life index and its components using a panel dataset of nine Asian countries over the six years from 2012 to 2017. Our findings revealed that transport investment has significant negative and positive effects on traffic commute and pollution index respectively. Moreover, macroeconomic factors (e.g., gross domestic product per capita, education and inflation) can also partly explain various aspects of the quality of life.*

Session 7: Graduate Students' Colloquium

Day 5: October 16, 2020 (10:30 to 12:30 JST):

[21:30 EST (-1 day); 03:30 CET; 07:00 IST; 09:30 Chinese Standard Time]

Overview:

This colloquium aims to provide an interactive virtual platform to students of any university in the world to help them develop their research interests. Graduate students working under the broad umbrella of planning, economics, engineering, O&M, and management of sustainable rail infrastructure development. Select number of graduate students will make a brief 3-minutes presentation on any topic of their interest related to rail infrastructure development. Feedback and rich discussions by senior academics/professional mentors will be facilitated to graduate students to help them build their research.

Session Agenda:

S. No.	Time	Paper Title	Speaker/Author(s)
1	10:30 to 10:45 JST	Meeting room opens and pre-event chat	
2	10:45 to 10:55 JST	Opening Remarks by session co-chairs	Daniel del Barrio Alvarez, University of Tokyo, Japan and Nikhil Bugalia IIT Madras, India
3	A select no. of presentations (in 3min presentation format) will be featured		TBD
4			
5			
6			
7	11:30 to 12:10 JST	Open Discussions	
8	12:10 to 12:15 JST	Closing remarks	Alok Tripathi GM Innovation, NHRCL, India
9	12:15 to 12:30 JST	Post event chat	

Note: Students working/interested in any field relevant to the conference theme are eligible to make submissions.

Session 8: Quantifying and Simulating Quality of Life

Day 5: October 16, 2020: (13:30 to 15:30 JST):

[00:30 EST; 06:30 CET; 10:00 IST; 11:30 Vietnam/Central Indonesian Time; 12:30 Chinese Standard Time]

Overview:

Quality of life (QOL) is at the top of the three crucial impacts of transportation infrastructure development viz. the direct transport system impact, economic and financial impact, wider economic impact (WEI), and quality of life (QOL) impact. It is the measurement of happiness. The QOL method considers different needs for various categories of people—young and old, men and women, rich and poor that living in various places—city centers, suburbs, rural areas at different times—past, now, and the future. It not only includes attributes covered by the CBA and WEI methods, but also incorporates other values influenced by transport infrastructure. This session covers several critical topics that are pertinent for QoL research in the context of transportation infrastructure development.

Session Agenda:

S. No.	Time	Paper Title	Speaker/Author(s)
1	13:30 to 13:45 JST	<i>Meeting room opens and pre-event chat</i>	
2	13:45 to 14:00 JST	<i>Opening Remarks and Keynote presentation by Session Chair on QoL Research</i>	Yoshitsugu Hayashi, Professor, Chubu University, Japan
3	14:00 to 14:12 JST	<i>Empirical Analysis on Industrial Sectors for QOL Improvement along High-Speed Rail Corridors</i>	Shuji Sugimori, Yoshitsugu Hayashi, Hiroyuki Takeshita, Akash Yewale, Chubu University & IIT Bombay
4	14:12 to 15:10 JST	<i>Discussions</i>	
		<i>Transportation mode choice in Vietnam intercity trips</i>	Le Thu Huyen, An Minh Ngoc Lecturer, University of Transport and Communication, Vietnam
		<i>Urban transportation systems in selected small developing island states: A comparative Analysis</i>	Khan Urwah, Juan Gonzalez Nagoya University, Japan
5	15:10 to 15:15 JST	<i>Closing remarks</i>	
6	15:15 to 15:30 JST	<i>Post event chat</i>	

Note: Papers already presented in March Virtual Conference will be invited for short highlights/comments during discussions

Compendium of Abstracts:

1. **Title:** Empirical Analysis of Industrial sectors for QOL improvement along High-Speed Rail Corridors
Authors/Speaker: Shuji Sugimori, Yoshitsugu Hayashi, Hiroyuki Takeshita, Akash Yewale,
Abstract: High Speed Rail (HSR) has been commonly recognized as one of the most important intercity transport modes, for regional economic impacts, and its energy effectiveness. HSR may also bring improvement of Quality of Life (QOL), which is based on persons' individual perception. The goal of this research is to clarify whole mechanism of QOL improvement along HSR corridors, aiming at the concept 'No one left behind' of SDGs. QOL along HSR corridors would be affected by two steps. One is by time shortening for HSR users in shorter term, and the other is by industry interactions in longer term. Focusing on the latter, the number of employees in each industry could be explained by 'Industrial Location Model'. In this research, the model is first applied to Kyushu Shinkansen in Japan as an example for HSR constructed in recent years, also introducing empirical analysis with actual economic data.

2. **Title:** Transportation mode choice in Vietnam intercity trips
Authors: Le Thu Huyen, An Minh Ngoc
Abstract: With its advantages in journey travel time, high-speed railway (HSR) is expected to induce additional travel and modal shift. However, in recent decades, there have been a lot of discussion and debates about the decision to develop the HSR system in Vietnam. This article describes work undertaken to provide a better understanding of competitiveness of HSR over other modes of transport and what might be done to better position their role in providing inter-provincial mobility. For this purpose, a comprehensive questionnaire survey with both Revealed Preference (RP) information (an inter-city trip diary) and Stated Preference (SP) information was conducted in 2018. The RP Survey provides the evidence on how travellers react to attributes of various modes of transport. Road users' sensitivity, with the purpose of their trip and their income and gender, to various attributes of different transport modes has been successfully estimated. Though people do not have the same response to the fluctuation of these attributes, the survey results provides generally reliable results that can be used to identify, evaluate and apply the best initiatives to achieve sustainable objectives. In the SP part, not only HSR, but also existing road long-distance vehicles, current railway and air planes are included in the choice set. The Survey also collected data on the awareness and using road transport in the households of respondents. Different options of combining VOT and fares for the future system of HSR have been designed for SP survey to better understanding the choice of travellers. Lessons learned and potential solutions valuable for Vietnam government in the efforts of developing an efficient and more environment-friendly mode of transport could be widely informative across East Asia and other regions where developing cities are facing similar challenges.

3. **Title:** Urban Transportation Systems in Selected Small Developing Island States: A Comparative Analysis
Authors: Khan Urwah, Juan Gunzalez,
Abstract: This paper performs comparative analysis of urban transportation system in capital cities of selected Small Island Developing States (SIDS) sharing similar socio-economic characteristics. This paper examines the performance of the urban transportation systems of capital cities of 2 Caribbean countries (Kingston-Jamaica, Havana-Cuba), 2 Pacific countries (Suva-Fiji, Port Moresby-Papua New Guinea) and 2 Indian Ocean countries (Port Louis-Mauritius, Malé-Maldives). For the Pacific Countries, we exerted Sustainable Urban Transport Index (SUTI) developed by UN Economic and Social Commission for Asia and the Pacific to investigate the overall performance of the urban transportation system over a framework of 10 indicators. For Port Moresby, the

aggregate sustainable transport performance is generally placed in the lower half of the 0-100 range, while Suva city above the middle range. The paper is aimed to be used to identify knowledge gaps and guide the design and evaluation of future transport investments.

Closing Plenary and Emerging Research Topics

Day 5: October 16, 2020 (16:30 to 18:30 JST):

[09:30 CET; 13:00 IST; 15:30 Chinese Standard Time]

Overview:

This closing plenary of ADBI-Chubu University conference on “Transport infrastructure development, spillover effects and quality of life”, in addition to summarizing the key messages from conference, aims to discuss the future research needs and develop an agenda for future research. Three illustrious key note presentations on various pertinent themes of this conference will enlighten about the emerging research topics that require attention in future. A round table discussion among global experts including these presenters and session chairs of previous sessions will further project critical issues that are to be researched in future.

Session Agenda:

S. No.	Time	Paper Title	Speaker/Author(s)
1	16:30 to 16:45 JST	<i>Meeting room opens and pre-event chat</i>	
2	16:45 to 16:55 JST	Opening Remarks and Session Overview by Session Chair	KE Seetha Ram, ADBI
3	16:55 to 17:10 JST	Capacity Building for HSR Development	Hironori Kato, <i>Department of Civil Engineering, The University of Tokyo, Japan</i>
4	17:10 to 17:25 JST	Emerging Research Topics relating to <i>(i) Artificial intelligence and transport; (ii) Transport and logistics – improving efficiency; (iii) Rural connectivity; and (iv) Road safety</i>	B. N. Puri <i>Director (Research), Asian Institute of Transport Development, New Delhi</i>
5	17:25 to 17:40 JST	Deriving Policies from Land Use-Transport Interactions for Sustainable High-Speed Rail Development in Asia	Francesca Pagliara, <i>University of Naples Federico II</i>
6	17:40 to 18:10 JST	Round Table Discussions moderated by Prof Hayashi	Invited panelists: <i>KVK Rao, IIT Bombay, India Tetsuo Kidokoro, University of Tokyo (TBC) Werner Rottengatter, KIT, Germany Sudhir Misra, IIT Kanpur, India Junyi Zhang, Hiroshima University, Japan (TBC) Aseem Kinra, University of Bremen, Germany</i>
7	18:10 to 18:15 JST	Summary of Conference and Closing remarks	Yoshitsugu Hayashi, <i>Chubu University, Japan</i>
8	18:15 to 18:30 JST	<i>Post event chat</i>	

Compendium of Abstracts:

1. **Title:** Capacity Building for HSR Development

Authors/Speaker: Hironori Kato

Abstract: Human capital is one of the most important factors to successfully introduce and operate high-speed railway (HSR). Railway development needs a wide range of engineering disciplines such as civil engineering, computer engineering, electrical engineering, mechanical engineering, industrial engineering, and production engineering. In addition to railway engineering, HSR development also requires more multi-disciplinary approach, including spatial/regional and transportation planning, economic development, industrial and innovation strategy, energy system, and social and environmental policy. However, many engineers typically in emerging economies are educated in classical engineering education program with a narrow scope. They often have insufficient capacity to design long-term strategies based on appropriate identification and structuring of social problems, and face difficulties to take a leadership through adequate communications with other stakeholders. How can we produce professionals with high-level capability who can contribute to HSR development in higher education? This presentation raises some cases of trials in education program to answer this question.

2. **Title:** Emerging Research Topics relating to (i) Artificial intelligence and transport; (ii) Transport and logistics – improving efficiency; (iii) Rural connectivity; and (iv) Road safety

Authors/Speaker: B N Puri

Abstract: The Asian Institute of Transport Development (AITD) is an autonomous, non-profit institution engaged in research, studies and training in an inter-disciplinary perspective in the area of infrastructure with focus on the transport sector. AITD has identified three areas to carry out research studies which align with the institution's objectives to promote sustainable development and foster regional cooperation. The first study aimed at application of artificial intelligence for providing integrated approach to transport and logistics sectors with a view to achieve optimal intermodal mix as also for realizing higher operational efficiency. The second study seeks to optimize benefits of rural connectivity, through facilitating greater community participation, and integration with other pro-poor measures. Alarmed by an increasingly large number of road accidents various countries including India have been taking steps to improve road safety. The third area of research aims to understand the comparative effectiveness of various measures to determine their relative contribution towards improving road safety which would help in refining road safety recommendations as also on prioritizing them. The present advocacy and awareness programmes are general in nature and do not take into account the behavioural patterns of human beings in risk loaded situations. The study is aimed at evolving a strategy that will facilitate development of targeted advocacy programmes. AITD, having recently implemented a Government of India project which viewed the dynamics of road safety issues in multi-dimensional perspective and having a niche in capacity building promote road safety, proposes to organize a training program in collaboration with ADBI.







3. **Title:** Deriving Policies from Land Use-Transport Interactions for Sustainable High-Speed Rail Development in Asia







Authors/Speaker: Francesca Pagliara, Yoshitsugu Hayashi, K E Seetha Ram

Abstract: In the last decades, significant investments in HSR systems have been carried out around the globe. This work promotes new research aimed at unresolved questions related to the land use-transport interactions of HSR development. Firstly, the development of mode choice models at the national scale, rather than on single corridors. Secondly, the estimation of a theoretical model explaining the mechanisms through which metro areas integrate into megalopolises and the role of HSR systems in this respect. Thirdly, the study of the link between HSR systems and the tourism

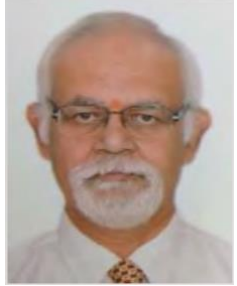





market with new modelling approaches. Fourthly, the estimation of the impact of HSR on temporary office location choice. Fifthly, the analysis of the effects of long-distance rail accessibility on the property market. Sixthly, the link between HSR systems and equity issues. Seventhly, Stakeholders Engagement in HSR project evaluation.

4. List of Speakers in Various Sessions

Opening Plenary and Special Session on high-speed-rail and quality of life Day 1: October 12, 2020 (16:30 to 18:30 JST)	
<p><i>Prof. Yoshitsugu Hayashi</i></p> <ul style="list-style-type: none"> • <i>Professor, Chubu University, Japan, and Emeritus Professor, Nagoya University</i> • <i>Former President of WCTRS (consisting over 1500 members from 67 countries)</i> • <i>Co- Chair, WCTRS COVID-19 Task Force</i> 	
<p><i>Osamu Ishihara,</i></p> <ul style="list-style-type: none"> • <i>5th President of Chubu University, Japan</i> • <i>Holds a Ph.D. from University of Tennessee, USA</i> 	
<p><i>Prof. Tetsushi Sonobe</i></p> <ul style="list-style-type: none"> • <i>Dean and CEO, ADBI Tokyo</i> • <i>Former Vice President of the National Graduate Institute for Policy Studies (GRIPS), Tokyo</i> • <i>Holds a Ph. D. in economics from Yale University</i> • <i>Has more than 20 years' experience analyzing the role of human capital, institutions, and management in industrial development</i> 	
<p><i>Prof. Naoyuki Yoshino</i></p> <ul style="list-style-type: none"> • <i>Emeritus Professor, Keio University, Japan</i> • <i>Director of Financial Research Center (FSA, Japan)</i> • <i>Holds a Ph. D. from Johns Hopkins University</i> • <i>Former Dean, ADBI Tokyo</i> 	
<p><i>Mr. Chul Ju Kim</i></p> <ul style="list-style-type: none"> • <i>Deputy Dean, ADBI Tokyo</i> • <i>Former secretary to the President of Republic of Korea for economic and financial affair</i> • <i>Over 30 years experience in key policy making, dealing with a wide range of macroeconomic, financial, and social issues.</i> 	
<p><i>Dr. Werner Rothengatter</i></p> <ul style="list-style-type: none"> • <i>Emeritus Professor of Economics at the Karlsruhe Institute of Technology</i> • <i>Former President of WCTRS: 2001-2007.</i> • <i>Has worked at Universität Kiel, German Institute for Economic Research (DIW) in the past.</i> 	

<p>Mr. Achal Khare</p> <ul style="list-style-type: none"> Managing Director of National High-Speed Rail Corporation of India Former Adviser/Infrastructure Ministry of Railways, Government of India Experienced in international cooperation, public private partnerships in railways, construction of tall bridges and long tunnels, O&M of railway tracks 	
<p>Dr. K N Satyanarayana</p> <ul style="list-style-type: none"> Professor and Director, Indian Institute of Technology Tirupati, India Former Professor at Department of Civil Engineering, Indian Institute of Technology Madras, India Chairman of the Academic Advisory Group, Project Management Institute (PMI) India; Holds MS and Ph.D. degrees with specialization in Construction Engineering and Management from Clemson University, USA 	
<p>Dr. Kazuaki Hiraishi</p> <ul style="list-style-type: none"> General Manager of Research Center for Policy and Economy of Mitsubishi Research Institute (MRI) since October 2013. Worked for the Institute for Transport Policy Studies which is a research organization under the supervision of Ministry of Land, Infrastructure and Transport of Japan Experienced in regional planning, transport planning and transport economics. 	
<p>Session 1: Impacts of COVID-19 on Transport (co-organized with WCTRS COVID-19 Task Force) Day 1: October 12, 2020 (22:00 to 24:00 JST):</p>	
<p>Prof. Yoshitsugu Hayashi</p> <ul style="list-style-type: none"> Professor, Chubu University, Japan, and Emeritus Professor, Nagoya University Former President of WCTRS (consisting over 1500 members from 67 countries) Co- Chair, WCTRS COVID-19 Task Force 	
<p>Prof. Junyi Zhang</p> <ul style="list-style-type: none"> Professor, Hiroshima University, Japan Director, Center of Asian Sustainable Mobility Research at Hiroshima University, Japan Co-chair, WCTRS COVID-19 Task Force 	
<p>Prof. Yacan Wang</p> <ul style="list-style-type: none"> Professor, Department of Economics, Beijing Jiaotong University, China Research interests are Operations Management, Logistics, Sustainable Supply Management, Transport Economics, Transport Behavior Response 	

<p><i>Prof. Cheng-Min Feng</i></p> <ul style="list-style-type: none"> • <i>Professor, Department of Transportation and Logistics Management, National Chiao Tung University</i> • <i>Deputy Director General and Acting Director General, Institute of Transportation, Ministry of Transportation and Communications</i> • <i>President, Eastern Asia Society for Transportation Studies, EASTS</i> 	
<p><i>Dr. Senathipathi Velmurugan</i></p> <ul style="list-style-type: none"> • <i>Principal Scientist at CSIR- Central Road Research Institute, India</i> • <i>Served as Head of Traffic Engineering and Safety Division</i> 	
<p><i>Asso. Prof. Hitomi Nakanishi</i></p> <ul style="list-style-type: none"> • <i>Associate professor in Urban and Regional Planning, University of Canberra</i> • <i>Dean's Award for Research Impact, 2013, University of Canberra Faculty of Business, Government & Law</i> 	
<p><i>Dr. Giovanni Circella</i></p> <ul style="list-style-type: none"> • <i>Director of the 3 Revolutions Future Mobility Program and the Honda Distinguished Scholar for New Mobility Studies at the University of California, Davis</i> • <i>Interests include travel behavior, emerging mobility services, travel demand modeling and travel survey methods</i> 	
<p><i>Mr. James Leather</i></p> <ul style="list-style-type: none"> • <i>Chief of the Transport Sector Group at the Asian Development Bank</i> • <i>30 years of experience in transport, working internationally with development organizations, governments, private sector and research institutions</i> 	
<p><i>Mr. Holger Dalkmann</i></p> <ul style="list-style-type: none"> • <i>Director, Strategy and Global Policy, EMBARQ Director, WRI Ross Center for Sustainable Cities</i> • <i>Twenty years of experience working in the field of transport, sustainability and climate change</i> 	

Session 2: Capacity Building for Engineering, Research, Innovation, and Construction Technology Management in Sustainable Transport Infrastructure Development Day 2: October 13, 2020 (13:30 to 15:30 JST):	
<p>Prof. Sudhir Misra</p> <ul style="list-style-type: none"> • Professor at the Department of Civil Engineering, Indian Institute of Technology Kanpur • Worked with consulting and construction companies during his 35 years of professional experience. • Served as Head, Construction Research Development & Innovation, in a leading construction company in India. 	
<p>Mr. Koji Asano</p> <ul style="list-style-type: none"> • Director, Advanced Railway System Development Center, East Japan Railway Company • Project leader of the next-generation Shinkansen development of JREast • Experienced in developments about ride comfort for railway vehicle and running safety for railway vehicle 	
<p>Prof. Bo Ai</p> <ul style="list-style-type: none"> • Professor, Beijing Jiaotong University • Executive Deputy Director, State Key Lab of Rail Traffic Control and Safety • Published several academic books, and journal papers in Chinese and English. • Holds 32 invention patents; 21 proposals adopted by the ITU, 3GPP etc. 	
<p>Mr. Sandeepan Roy</p> <ul style="list-style-type: none"> • PhD research scholar of Transportation Systems Engineering, Department of Civil Engineering at Indian Institute of Technology Bombay • Former student of Indian Institute of Technology Kharagpur, and Indian Institute of Technology (BHU), Varanasi 	
<p>Prof. Ashwin Mahalingam</p> <ul style="list-style-type: none"> • Professor, Building Technology and Construction Management, Civil Engineering Department, Indian Institute of Technology Madras • Co-founder and Director of Okapi Advisory Services Pvt. Ltd. • PhD in Infrastructure Project Management from Stanford University 	
<p>Asso. Prof. Vinod Vasudevan</p> <ul style="list-style-type: none"> • Associate Professor of Civil Engineering at the University of Alaska Anchorage • Holds rich experience of working at Institute of Technology Kanpur for 8 years, and the University of Nevada, Las Vegas (UNLV) for over 6 years 	

<p>Mr. Jitendra Sondhi</p> <ul style="list-style-type: none"> • <i>Management and Engineering Consultant - Railway Sector, World Bank (Short Term Consultant)</i> • <i>Over 50 years' experience on railways and as a consultant with the World Bank, Asian Development Bank, USAID, GTZ, DFID and others.</i> • <i>Has carried out consulting work in India, China, Africa, Asia, and Europe.</i> • <i>Has acquired valuable experience in the areas of policy and strategic issues in the railway sector.</i> • <i>Has first-hand experience of the planning, evaluation and implementation of the high-speed railway program in China for over 10 years.</i> • <i>Has co-authored several papers covering modernization and expansion of railways in China, adoption of modern railway technologies and the process adopted for efficient implementation of high-speed railway projects.</i> 	
<p align="center">Session 3: Transport Infrastructure and its Wider Economic Impacts Day 2: October 13, 2020, (16:30 to 18:30 JST)</p>	
<p>Dr. Werner Rothengatter</p> <ul style="list-style-type: none"> • <i>Emeritus Professor of Economics at the Karlsruhe Institute of Technology</i> • <i>Former President of WCTRS: 2001-2007.</i> • <i>Has worked at Universität Kiel, German Institute for Economic Research (DIW) in the past</i> 	
<p>Dr. Angel Aparicio</p> <ul style="list-style-type: none"> • <i>Professor at Technical University of Madrid and In-charge of the Presentation and Monitoring of PEIT 2020</i> • <i>Worked 20 years at the Spanish Ministries of Transport and Environment.</i> • <i>Director General of the CEDEX: 2004~2009</i> 	
<p>Prof. An Minh Ngoc</p> <ul style="list-style-type: none"> • <i>Senior lecturer at University of Transport and Communications and a senior transport specialist.</i> • <i>Consulted several projects in Vietnam, for transport sector issues such as transport planning, traffic safety, public transport, travel demand and electric mobility.</i> • <i>Research and Teaching Interests: transport connectivity, urban mobility, traffic safety and low-carbon mobility.</i> 	

<p>Dr. Michael Wegener</p> <ul style="list-style-type: none"> Retired Professor and former Director of the University of Dortmund's Institute of Spatial Planning. Partner in Spiekermann & Wegener Urban and Regional Research since 2001 Also worked at the Battelle Institut in Germany, International Institute for Applied Systems Analysis in Austria, and University of Tokyo. 	
<p>Dr. Thi My Thanh Truong</p> <ul style="list-style-type: none"> Lecturer at University of Transport Technology Vietnam Experienced in field of Transport Planning and Transport Economics with a special focus on green mobility. Research interests: Sustainable transport system, transport policy and innovation, socio-economic impacts assessment of transport infrastructure and services, the development of infrastructure project based on PPP scheme, policy issues in developing Asian countries. 	
<p>Mr. Ayushman Bhatt</p> <ul style="list-style-type: none"> Ph.D. Candidate in Civil Engineering Department at the University of Tokyo, and Research Associate at ADBI, Tokyo. Worked as Teaching and Research Assistant at the University of Tokyo and Indian Institute of Technology Kanpur. Research Interests: Transport Economics, High-Speed Rail policy, Infrastructure development and management. 	
<p>Session 4: Competition and Cooperation between Air, Rail and Roads for Inter-city Travel Day 4: October 15, 2020 (09:30 to 11:30 JST)</p>	
<p>Prof. Tae Hoon Oum</p> <ul style="list-style-type: none"> Professor Emeritus, Sauder School of Business, University of British Columbia, Canada President, WCTRS, and Founding chair of the Air Transport Research Society (ATRS) Research interests: Economic, Policy/Strategy Analysis for transport, logistics and telecom sector. Has published 35 books, and more than 250 papers and reports 	
<p>Dr. Sungwon Lee</p> <ul style="list-style-type: none"> Chief Research Director of the Korea Transport Institute (KOTI), Republic of Korea which is a government affiliated research institution in Korea. Has worked as advisor to the Minister of the Ministry of Land, Infrastructure and Transport, Vice President of KOTI and Senior Research Fellow at OECD in Paris. Research interests: economic and econometric analysis of policy measure's effectiveness, estimation of environmental values, infrastructure investment and climate change policy 	

<p><i>Prof. Jack Strauss</i></p> <ul style="list-style-type: none"> • <i>Miller Chair of Applied Economics at University of Denver, USA</i> • <i>Experienced in international policy experience in the areas of forecasting,</i> • <i>Worked with Central Bank of Azerbaijan, Indonesia, Egypt and Ukraine.</i> 	
<p><i>Prof. Shinya Hanaoka</i></p> <ul style="list-style-type: none"> • <i>Professor at the Department of Transdisciplinary Science and Engineering, School of Environment and Society, Tokyo Institute of Technology, Japan.</i> • <i>He is currently a chair of SIG H1 “Transport Policy, Planning and Financing in Developing Countries” in WCTRS.</i> • <i>Research interests: transport development studies, air transport and transport logistics.</i> 	
<p><i>Dr. Zhenhua Chen</i></p> <ul style="list-style-type: none"> • <i>Assistant professor in City and Regional Planning at the Ohio State University, USA.</i> • <i>He has also been a visiting fellow of the Asian Development Bank.</i> • <i>Research Interests: infrastructure planning and policy, risk and resilience assessment.</i> • <i>Has published five books, and over 50 academic publications in leading academic journals.</i> 	
<p><i>Dr. Eugene Chao</i></p> <ul style="list-style-type: none"> • <i>Faculty Research Associate at the Wharton Business School Finance Department, University of Pennsylvania, USA</i> • <i>Research Interests: High-Speed Rails and Livable cities</i> 	
<p align="center">Session 5: Policy and Innovation for Transport 2.0 - Building a National Network of HSR in Asian Countries Day 4: October 15, 2020 (13:30 to 15:30 JST):</p>	
<p><i>Vinod Kumar Yadav,</i></p> <ul style="list-style-type: none"> • <i>Chairman & CEO of Railway Board, Ministry of Railway , Govt. Of India</i> • <i>Former General Manager, South Central Railway, Government of India</i> • <i>Officer of Indian Railway Service of Electrical Engineers (IRSEE)</i> • <i>Holds an MBA (Technology Management) from La Trobe University, Australia</i> 	
<p><i>Mr. Yasaburo Hikasa</i></p> <ul style="list-style-type: none"> • <i>Assistant Vice-Minister for International Affairs, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan</i> • <i>Holds M.Sc. in International Economics from University London, UK.</i> 	

<p>Mr. Kenichi Yamamoto</p> <ul style="list-style-type: none"> • <i>Director General of Japan International Cooperation Agency</i> 	
<p>Mr. Haruhiko Kono</p> <ul style="list-style-type: none"> • <i>President of Japan Railway Technical Service (JARTS)</i> • <i>Has rich experience of working with Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan Overseas Infrastructure Investment Corporation for Transport & Urban Development (JOIN); Japan Railway Construction, Transport and Technology Agency (JRTT)</i> 	
<p>Mr. Masatoshi Kawai</p> <ul style="list-style-type: none"> • <i>Senior Executive Officer, Director General of Shinkansen General Management Department, Deputy Director General of Railway Operations Headquarters East Japan Railway Company (JR East)</i> 	
<p>Dr. Tetsuo Uzuka</p> <ul style="list-style-type: none"> • <i>General Director on Railway Technical Research Institute, Japan</i> • <i>Worked 30 years at the RTRI, doing and managing R & D about fixed installations of AC electric railway.</i> • <i>Holds M. Eng. with instrumentation from KEIO University, Japan and Ph.D. degrees with power electronics technique from Nihon University, Japan</i> 	
<p>Mr. Achal Khare</p> <ul style="list-style-type: none"> • <i>Managing Director of National High-Speed Rail Corporation of India</i> • <i>Former Adviser/Infrastructure Ministry of Railways, Government of India</i> • <i>Experienced in international cooperation, public private partnerships in railways, construction of tall bridges and long tunnels, O&M of railway tracks</i> 	
<p>Dr. K N Satyanarayana</p> <ul style="list-style-type: none"> • <i>Professor and Director, Indian Institute of Technology Tirupati, India</i> • <i>Former Professor at Department of Civil Engineering, Indian Institute of Technology Madras, India</i> • <i>Chairman of the Academic Advisory Group, Project Management Institute (PMI) India;</i> • <i>Holds MS and Ph.D. degrees with specialization in Construction Engineering and Management from Clemson University, USA</i> 	

<p>Mr. Masafumi Shukuri</p> <ul style="list-style-type: none"> • <i>Chairman of the International High-speed Rail Association (IHRA)</i> • <i>Former Vice-Minister of the Ministry of Land, Infrastructure, Transport and Tourism (MLIT): 2008-2012</i> • <i>Presently, the Visiting Professor of the Graduate School of Public Policy at the University of Tokyo since 2013, and the Chairman of the Japan Transport and Tourism Research Institute (JTTRI) since 2018</i> 	
<p>Dr. Sungwon Lee</p> <ul style="list-style-type: none"> • <i>Chief Research Director of the Korea Transport Institute (KOTI), Republic of Korea which is a government affiliated research institution in Korea.</i> • <i>Has worked as advisor to the Minister of the Ministry of Land, Infrastructure and Transport, Vice President of KOTI and Senior Research Fellow at OECD in Paris.</i> • <i>Research interests: economic and econometric analysis of policy measure's effectiveness, estimation of environmental values, infrastructure investment and climate change policy</i> 	
<p>Mr. Surya Raj Acharya</p> <ul style="list-style-type: none"> • <i>Research Professor at Institute of Engineering (IOE), Tribhuvan University, Kathmandu</i> 	
<p>Dr. Angel Aparicio</p> <ul style="list-style-type: none"> • <i>Professor at Technical University of Madrid, Spain and In-charge of the Presentation and Monitoring of PEIT 2020</i> • <i>Worked 20 years at the Spanish Ministries of Transport and Environment.</i> • <i>Director General of the CEDEX: 2004~2009</i> 	
<p>Prof. Aseem Kinra</p> <ul style="list-style-type: none"> • <i>Professor for Global Supply Chain Management at the University of Bremen, Germany.</i> • <i>One of the founding members of the Special Interest Group E1: Transport Systems Analysis and Economic Evaluation of World Conference on Transportation Research Society (WCTRS).</i> • <i>Research Interests: barriers and complexity in cross-border supply chains, especially in relation to logistics and transportation systems.</i> 	
<p>Dr. Haixiao Pan:</p> <ul style="list-style-type: none"> • <i>Professor at the Department of Urban Planning of Tongji University.</i> 	

<p>Dr. Hiroyuki Takeshita:</p> <ul style="list-style-type: none"> • Senior Assistant Professor of Special Programs at Chubu University 	
<p align="center">Session 6: Transport-Urban Development Interactions Day 4: October 15, 2020 (16:30 to 18:30 JST):</p>	
<p>Prof. K.V.K. Rao</p> <ul style="list-style-type: none"> • Professor at Indian Institute of Technology Bombay, India • Around 30 years of teaching, research, and consultancy experience in Transportation Engineering. • Research interest include Sustainable Urban Transportation Planning, Travel Demand Modelling, Urban Land Use Transport Modelling, Transit Oriented Development, Traffic Design and Analysis. 	
<p>Mr. Kenichi Kudo</p> <ul style="list-style-type: none"> • Director for Urban Transport Planning Office, City Bureau. • Government official of MLIT for around 20 years. • Master's degree of Civil Engineering from Hokkaido University. • One of his duties includes station area development of High-Speed Rail in India. 	
<p>Mr. Hiroyuki Takeshima</p> <ul style="list-style-type: none"> • General Manager, Development Promotion Division, Life-style Business Development Headquarters. • General Manager, Tokyo Branch Office Life-style Business Division • Deputy General Manager, Singapore Office • General Manager, Corporate Strategy Division, Life-style Business Development Headquarters • Working in East Japan Railway Company since April 1990 – present 	
<p>Mr. Akihiro Sato</p> <ul style="list-style-type: none"> • Consultant at Oriental Consultants Global Co. Ltd. • Have more than 20 years experience in transport planning and business development since 2012 in Indonesia, Mongolia, Thailand, Bangladesh, and India. • From 2016 till now, he has been involved in several railway projects in the Philippines, specifically engaged to undertake railway planning and finance for transit-oriented development. 	

<p>Mr. Sandeepan Roy</p> <ul style="list-style-type: none"> • PhD research scholar of Transportation Systems Engineering, Department of Civil Engineering at Indian Institute of Technology Bombay • Former student of Indian Institute of Technology Kharagpur, and Indian Institute of Technology (BHU), Varanasi 	
<p>Dr. Arpan Paul</p> <ul style="list-style-type: none"> • Urban Geographer and Urban Planner • PhD from Indian Institute of Technology Kharagpur, India in 2020. • Experienced in Livable Urbanism, Regional Development, Comprehensive Planning, and Public policy. • Research area include Livability Potential assessment within a metropolitan urban agglomeration 	
<p>Dr. Md Aslam Mia</p> <ul style="list-style-type: none"> • PhD degree in Development Economics (specialized in microfinance) from University of Malaya, Malaysia. • Currently Senior Lecturer at the School of Management (SOM), Universiti Sains Malaysia (USM) • Research interests: productivity, market structure, poverty, and development economics with special focus on microfinance • Dr. Mia have published around 35 journal articles and book chapters. 	
<p align="center">Session 7: Graduate Students' Colloquium Day 5: October 16, 2020 (10:30 to 12:30 JST):</p>	
<p>Dr. Daniel del Barrio Alvarez</p> <ul style="list-style-type: none"> • Assistant Professor at the University of Tokyo, Japan • Ph. D from the University of Tokyo, Japan • Experienced in facilitating innovation workshops at i.school • Research Interests: Energy, sustainability transition, social innovation 	
<p>Dr. Nikhil Bugalia</p> <ul style="list-style-type: none"> • Visiting Assistant Professor at Indian Institute of Technology Madras, India • Ph. D from the University of Tokyo, Japan • Research Interests: High-Speed Rails, Safety management, Systems thinking, Infrastructure Management 	
<p>Mr. Alok Tripathi</p> <ul style="list-style-type: none"> • General Manager-Innovation, National High-Speed Rail Corporation Limited, India 	

Session 8: Quantifying and Simulating Quality of Life Day 5: October 16, 2020: (13:30 to 15:30 JST)	
<p>Prof. Yoshitsugu Hayashi</p> <ul style="list-style-type: none"> • Professor, Chubu University, Japan, and Emeritus Professor, Nagoya University • Former President of WCTRS (consisting over 1500 members from 67 countries) • Co- Chair, WCTRS COVID-19 Task Force 	
<p>Mr. Shuji Sugimori</p> <ul style="list-style-type: none"> • Ph.D. Student at the department of Civil Engineering in Chubu University. • Engaged in Mumbai-Ahmedabad High Speed Rail (HSR) project in India, which is supported by Japanese Government. • Working in construction sector of East Japan Railway company from 2005 	
<p>Dr. Le Thu Huyen</p> <ul style="list-style-type: none"> • Senior Lecturer and Director of Center for Transport Development (TRANCONCEN) at University of Transport and Communications, Vietnam. • Has also worked at Leeds University, Great Britain, Hiroshima University, Japan. • Holds a Dr.-Ing. degree in Transport Planning and Traffic Engineering, Darmstadt University of Technology, Germany in 2009. 	
<p>Mr. Khan Urwah</p> <ul style="list-style-type: none"> • Research Assistant at Education and Center for Sustainable Co-Development at Nagoya University, Japan. • Worked at the Ministry of Planning, Development and Reforms, during which he successfully completed and independently supervised a project titled “Waigumo-Rud Khajuri –Bewata N-70”, funded by ADB in Pakistan. 	
Closing Plenary and Emerging Research Topics Day 5: October 16, 2020 (16:30 to 18:30 JST):	
<p>Prof. Hironori Kato</p> <ul style="list-style-type: none"> • Professor at Department of Civil Engineering, the University of Tokyo, Japan • Specialized in transport planning, transport policy, transport economics, finance, and travel behavioral analysis • Editor-in-chief of Asian Transport Studies, Academic Editor in PLOS ONE Editorial Board, Associate Editor of Urban Rail Transit, and member of Sustainability Reviewer Board 	

Mr. B N Puri

- *Director of Asian Institute of Transport Development, New Delhi, India.*
- *Has worked as head of Transport Division of Planning Commission, Government of India.*
- *Has worked as Member-Secretary, National Transport Development Policy Committee set up by the Government of India.*
- *Hold a rich experience of over four decades at National and International level, in the field of transportation.*





Dr. Francesca Pagliara

- *Assistant Professor, University of Naples Federico II, Italy*
- *Co-editor of textbooks on location choices, published by Springer*
- *Visiting Professor at University of Southampton, University of Madrid, University of Wuhan, University of Valencia, Technical University of Munich, University of Castilla-La Mancha, University of Las Palmas, and Beijing Jiaotong University*



5. Conference Secretariat Information

Conference Co-Chairs	
<p><i>Prof. Yoshitsugu Hayashi</i></p> <ul style="list-style-type: none"> • Professor, Chubu University, Japan, and Emeritus Professor, Nagoya University • Former President of WCTRS (consisting over 1500 members from 67 countries) • Co-Chair of WCTRS Special Interest Group (SIG) on High-Speed Rail: Policy, Investments and, Impacts (WCTRS-SIG: A4) • Co- Chair, WCTRS COVID-19 Task Force 	
<p><i>Dr. K E Seetha Ram</i></p> <ul style="list-style-type: none"> • Senior Capacity Building and Training Specialist, ADBI Tokyo • Visiting Professor at the University of Tokyo, Japan • Special Advisor to JR East for India High-Speed Rail • Co-Chair of WCTRS Special Interest Group (SIG) on High-Speed Rail: Policy, Investments and, Impacts (WCTRS-SIG: A4) 	

Conference Secretariat (ADBI):

1. Noriko Nogami (Administrative Assistant, ADBI Tokyo)
2. Ayushman Bhatt (Research Associate, ADBI Tokyo)
3. Deepanshu Agarwal (Research Associate, ADBI Tokyo)

Conference Secretariat (Chubu University):

1. Hiroyuki Takeshita (Senior Assistant Professor, Chubu University)
2. Mayumi Takeuchi (Chubu University)