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Volume 3, Issue 7

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SIG F2-Transport, Climate Change and Clean Air Special Session @ Montreal 2023



Road freight transport is still contributing substantially to climate change and is highly dependent on fossil fuels. The transition to alternatives seems challenging, and there are still plenty of “green” technologies on the table. In our special session **“Germany’s pilot eHighway: findings from the ELISA project”** in SIG f2 “Transport, Climate Change and Clean Air” we discussed one of the options: the overhead cables

Useful Information and links

1. Publications by SIG A4- Handbook on High-Speed Rail and Quality of Life and Frontiers in High-Speed Rail Development

Both books are free to download.

For details: [Click Here](#)

2. Urban Mobility Research in India transport: Selected proceedings from 13th Research Symposium of 15th Urban Mobility India Conference & Expo 2022

For details: [Click Here](#)

3. A new Transport Research and Education Network to help ESCAP member States achieve sustainable transport

For details: [Click Here](#)

4. Clean Air Asia National Coordinator Advert

Theme: Clean Air Asia is looking for National Coordinators based in selected Asian countries who will support Clean Air Asia's initiative to reduce

on highways which allow catenary trucks (i.e., trucks with a pantograph or O-trucks) to charge during their trip and allowing them a “unlimited” range.



We learned that the **eHighway** system is the longest O-truck track in the world. Presentations from researchers and industry energized an inspiring discussion. We saw videos and very recent data and insights from more than three years of field test operation on the German autobahn, which includes everyday challenges, the impact on greenhouse gas emissions, information on the technical and operational integration potential of O-trucks by transport companies, availability and downtime reasons of the overhead contact line system, as well as the basic procedure for the analysis of the high amount of vehicle data. With this session, we contribute to the ongoing discussion about the strengths and weaknesses of different alternative drive technologies by considering the **eHighway** as well as other promising solutions.



emissions from the maritime transport sector
For Details: [Click Here](#)

5. 10th International Workshop on Sustainable Road Freight
Theme: Robust decarbonization and resilient logistics: Progress in the last decade and a roadmap to 2035
When: 4th-5th December 2023
Where: Cambridge, UK and online
For Details: [Click Here](#)

6. Special Issue of Transportation Research Part A: Policy and Practice on "Pricing and Regulation in Road Transport"
For details: [Click Here](#)
Paper submission deadline: **November 15, 2023**

7. Special Issue of Transportation Research Part A: Policy and Practice on "Resilience of Transportation systems under uncertainty"
For details: [Click Here](#)
Paper submission deadline: **November 30, 2023**

6. Special Issue of Transportation Research Part D: Transport and Environment on "Ecological

Prof. Patrick Jochem, *Karlsruhe Institute of Technology, Germany. Chair, SIG F2*

Prof. Eva Kaßens-Noor, *TU Darmstadt, Germany.*

Exploring the Linkages between Transport Systems and Quality of Life: Launching "Sustainable Transport and Livability"



Prof. Ashish Verma

Event Title - Exploring the Linkages between Transport Systems and Quality of Life: Launching "Sustainable Transport and Livability"

Date - Tuesday 7th November 2023

Time - 13:30 GMT | 19:00 IST | 15:30 SAST

Location - Online

This session will illuminate the **connection between sustainable transport and quality of life**, which has been a relatively specialized topic until recently. It became an increasingly common consideration throughout the COVID-19 pandemic, which changed – temporarily or permanently – how many people work, commute, or perform their daily activities. Moving on from COVID-19, there is an expectation that transport policy will continue to evolve to promote sustainable travel choices and retain the improved quality of life that cities or regions experienced during the pandemic.

Join us to hear from speakers across academia, government, and NGO, who all share a commitment to creating more sustainable communities. This session supports T&F's new Open Access journal, **Sustainable Transport and Livability**, edited by Dr. Ashish Verma, IISc Bangalore.

Effects of Road
Transportation”

For details: [Click Here](#)

Paper submission deadline:
December 31, 2023

WCTRS society journals

Event page (including link to registration): [Click here](#)

Prof. Ashish Verma, *Indian Institute of Science Bangalore, India. Chair, SIG F4.*

Special Session @ Montreal 2023: Future of Transportation Mobility and Safety

A Keynote Session of Canadian Distinguished Scholars: The
role of logistics industrial clusters in Transport Logistics



Prof. Tarek Sayed

There have been significant changes in transportation over the last few years, and substantial change is expected in the near future. The application of advanced technologies and the availability of a tremendous amount of real-time data “Big Data” are expected to completely change the ways in which transportation systems are designed, built, operated and maintained. The application of innovations that are both progressing and disrupting the status quo represents a significant opportunity for improved transportation mobility and safety. These issues were discussed in a special session on the future of transportation mobility and safety. The session was chaired by **Prof. Tarek Sayed** and included four distinguished presenters.

The first presenter was **Prof. Hesham Rakha**, the Samuel Reynolds Pritchard Professor in the Civil and Environmental Engineering Department at Virginia Tech. His talk dealt with the optimization, modeling and assessment of smart city transportation systems. The presentation discussed the challenges associated with multi-modal transportation system optimization and modeling, the integrated modeling of the transportation and communication systems, some research in the area of multi-objective CAV optimization, and some research in CAV-enabled traffic signal control.



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The second presenter was **Prof. Leandro Coelho**, a Canada Research Chair in Integrated Logistics at Université Laval. He discussed signal optimization strategies for transit operators and heavy trucks using real-time traffic data. The strategies led to considerable mobility benefits. The work demonstrated that advanced analytics, optimization, and strong collaboration between industry and academia can provide convincing results for society as decreased travel times, improved transit systems, better financial performances, and lower emissions.

The third presenter was **Prof. Lina Kattan**, a Canada Research Chair in Integrative Transportation Systems Through Automation and Connectivity at the University of Calgary. Prof. Kattan argued that the performance of an urban transportation network is usually disrupted due to non-recurrent events resulting from extreme and rare occurrences of events leading to severe deterioration in infrastructure performance. She discussed novel data-driven vulnerability and resilience analysis tools that capture the spatiotemporal impact of urban road collisions by monitoring the dynamic propagation of congestion patterns with consideration to the unique topography of the transportation network. The developed tools were demonstrated using a case study of the City of Calgary downtown network and its extensive multi-year travel time and collision data. The developed framework successfully captured the enduring spatiotemporal impact of incidents in a large-scale road network.

The final presenter was **Prof. Tarek Sayed**, a Canada Research Chair in Transportation Safety and Advanced Mobility and the Director of the Engineering Bureau of Intelligent Transportation Systems and Freight Security at the University of British Columbia. He emphasized that new vehicle and sensing technologies such as connected and autonomous vehicles (CAVs) and the availability of a large amount of real-time data “Big Data” and advanced artificial intelligence (AI) techniques are expected to completely change the management of transportation systems. One particular area that can benefit significantly from the application of these advanced technologies is road safety. These advanced technologies offer an opportunity to substantially advance and fundamentally transform the road safety profession—enabling continuous, real-time, proactive safety evaluation and optimization. The presentation discussed several advanced safety applications using AI techniques and big data with example projects from agencies worldwide.

Prof. Tarek Sayed, *University of British Columbia, Canada.*



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Research Newsletter

Report on Session G3-S15_SS: Special Session @ Montréal 2023

Interrogating a paradigm shift for transport planning in the era of smart cities and sustainable development



Dr Sophie Sturup

Starting from acceptance of the radical change to transport necessitated in response to climate change, sustainable development goals, and ‘smart’ technology the aim of this session was to **discuss ideas and consider how we might (re)define transport planning and how differently transport planning should address problems and opportunities related to mobility in cities**. Discussion included changes needed in how we define transport problems; the range of planning objectives; and the impacts considered when evaluating the options.

Dr Sangjin Han (Seoul National University) kicked off the session with a discussion on the need to radically rethink the primacy of vehicles as road users. This primacy, he argues, is a product of Corbusier type thinking, which sees vertical separation of people and cars as a logical outcome of high rise buildings, large block size, and attendant wide roads. Thinking inside the need for sustainable walking environments, he called for a repositioning of the pedestrian as the primary road user.

Following this presentation, **Dr. Sophie Sturup** (Xi’an Jiaotong-Liverpool University) pushed the idea of this repositioning further. Reporting a key finding from the work of **Nathan Pittman** (PhD, University of Melbourne) that one of the core features of transport planning is the facilitation of movement or circulation, she observed how this naturally limits transport planning’s ability to be about less movement. From a transport planner’s point of view LUTI and TOD do not reduce movement, they merely shift the focus of the transport planner to how to move between TODs (circulation). Access without presence (e.g. working from home) is not the domain of transport planning. Consequently, a fundamental paradigm shift is necessary if

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transport planning is to contribute adequately to sustainable development. One avenue to access such a shift might be to reconnect moving from place to place (what transport planning has concerned itself with) with the idea of being 'transported', or 'moved' as a shift in being (as occurs sometimes in the presence of music). She asked whether a focus on transporting being could bring about a consciousness of the value of the journey, the transformation entailed in the journey, and concomitantly the quality of the journey.

Dr Juhyun Lee (Xi'an Jiaotong-Liverpool University) continued the exploration of accessibility, asking whether and how Autonomous Vehicles (AVs) enhance accessibility for all across a city? Her research shows that despite optimism regarding technological advancement for transport, social outcomes from AVs are highly uncertain, and dependent on unknowns, including technology and transport mode. The presentation considered how different mobility futures influence accessibility and demonstrated the need to include spatial changes that could be induced by AVs in different situations and the impact such changes can have on accessibility across a city and social groups in transport planning decision making.

Finally, **Mathieu Goetzke** (Commissioner of Transportation, Region of Waterloo) provided two case studies (Lille, France and Waterloo Region, Canada) on how, if done well, planning for public transit systems can contribute to flourishing sustainable cities. His experience showed the importance of early development of growth scenarios and continuous dialogue between land use and transportation plans. Staying close to the market and working with other partners to ensure they contribute to the process is also critical, as is understanding the catalyst role of public transit in terms of supporting a 24/7 urban life, seamless integration with pedestrian activities and creating modular capacity.

In the discussion that followed, several key points were explored. The case studies showed the connection between transport and land use can be harnessed to produce more sustainable outcomes. One of the ways this can be achieved is through focusing on what kind of life citizens want to lead. There was some tentative agreement that consideration of how our movement is affecting our being could enable some interesting avenues for exploration. It was observed that arguably transport planning's obsession with accessibility planning has moved to sustainable mobility because accessibility planning is limited. But we should not forget that for some facilities like hospitals, access must be fundamentally readdressed, least we plan for an inequitable future.

Dr Sophie Sturup, Xi'an Jiaotong Liverpool University, China.

WCTRS YII @ Montréal 2023: Highlights of the research work presented as part of the special session for PhD grant holders

Vaibhav Puri

Vaibhav Puri is a doctoral candidate at the Faculty of Management Studies - University of Delhi, and an assistant professor at the Department of Economics, Sri Guru Gobind Singh College of Commerce, University of Delhi, India.



Vaibhav's research focus is on the **impact of Mass Rapid Transit Systems (MRTS), specifically the Delhi Metro, on the urban landscape of Delhi and its neighboring regions**. This study delves into the sequential expansion of this metro system and its direct contributions to the growth of urban areas around these stations.

The findings highlight a noteworthy pattern: areas in close proximity to Metro stations have undergone substantial and positive transformations, experiencing accelerated urban development compared to distant zones. This research underscores the intricate relationship between transportation networks, like the Delhi Metro, and urban growth. The insights derived from this study are valuable for urban planning and development strategies, emphasizing the importance of well-integrated transportation systems in fostering sustainable urban development and growth.

Debarshee Bhardwaj

Debarshee Bhardwaj is a Ph.D. candidate and Research Associate working under the guidance of Prof. Aseem Kinra at the esteemed University of Bremen in Germany.



Debarshee's research delves into the field of **global business operations, with a specific focus on the complex process of making facility location decisions**, which represents a critical strategic choice for companies. This involves considering various factors, including country logistics and performance metrics. His investigation is characterized by meticulous attention to detail, culminating in a series of intellectually stimulating experiments. These experiments thoroughly investigate the challenges faced by decision-makers when establishing hierarchies to guide such pivotal choices, using Analytic Hierarchy Process (AHP)

hierarchies as a foundation. Furthermore, the research probes into both macro and micro attributes that exert significant influence on the decision-making process, as well as the influence of location attributes on the overall outcome.



The research goes beyond being solely an academic pursuit; it offers valuable insights that can be applied in the business world. This study aims to provide

companies with the necessary insights to make strategic choices in facility location selections, taking into account the complexities, trade-offs, and attribute considerations that managers often encounter. By doing so, companies can better position themselves in the global marketplace. These contributions are commendable and are poised to significantly impact the future of global decision-making.

Karyn Scerri

Karyn Scerri is a Ph.D. candidate affiliated with the Institute for Climate Change and Sustainable Development at the University of Malta. Her research, titled

'Understanding the Impact of Pedestrian Intervention on Laziness and Car Dependency Reduction in a European Island,' was presented during a Special Session at the World Conference on Transport Research Society Young Researchers' Initiative (WCTRS-Y) on July 18, 2023.



Karyn's research is deeply rooted in the fascinating realm of human behavior and transportation choices. Through a meticulous exploration of the theoretical framework surrounding the concept of "lazy user behavior," this study provides valuable insights into the complex dynamics governing modal choices for short-distance trips. The research conducted here

sheds light on the intriguing phenomenon of laziness within the context of decision-making processes in transportation.



In the present work, a thorough examination of the benefits associated with embracing active travel is presented. Active travel encompasses various pedestrian interventions that serve as potent tools for analyzing and understanding the potential impact of promoting active travel. In an era marked by the increasing importance of sustainable mobility, her pioneering efforts stand out as valuable contributions towards innovative solutions that have the potential to create tangible positive effects.

Dr. Eeshan Bhaduri, Institute for Transport Studies, University of Leeds, UK. Young Online Facility Volunteers, WCTRS-Y 4th Edition.

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