



WCTRS-Y

WCTRS-Y: Newsletter of WCTRS Young Researchers' Initiative

Young Initiative of the World Conference on Transport Research Society: Meet us on May 26, 2019 in Mumbai, India!

WCTR 2019 - MUMBAI

Preliminary Programme
at a Glance*:

26 MAY 2019

WCTR-Y CONFERENCE
09:30 - 17:00
WELCOME RECEPTION and
DINNER for the WCTR (full
conference)
19:30 – 21:30

27 MAY 2019

OPENING CEREMONY
and PLENARY KEYNOTES
09:30 – 11:10
TECHNICAL SESSIONS
11:50 – 18:10
CULTURAL PROGRAMME
18:30 – 20:10

28 MAY 2019

TECHNICAL SESSIONS
09:30 - 13:10
GENERAL ASSEMBLY
14:30 - 16:10
TECHNICAL SESSIONS
16:30 - 18:10
GALA DINNER
19:30 – 21:30

29 MAY 2019

TECHNICAL SESSIONS
09:30 - 18:10
CULTURAL PROGRAMME
18:30 – 20:10

30 MAY 2019

TECHNICAL SESSIONS
09:30 - 11:10
CLOSING CEREMONY
18:30 – 20:10
TECHNICAL VISITS
14:30 – 18:10

31 MAY 2019

TECHNICAL TOUR
08:30 – 13:10

* As informed on February 28th, 2019.



Andrés Fielbaum

*Recipient of the World Conference Society's
Innovation grant for his work on 'Exploring
optimal frequencies, capacities and line
structures for public transport systems based
on new technologies'*

Dear WCTR-Young Colleagues,

I am **Andrés Fielbaum**. I am a mathematical engineering, with an MsC in transports and I am currently finishing my PhD in transports, at **Universidad de Chile**. I am 32 and I try to combine in virtuous ways my academic work with a strong political activity (in Chilean Partido Comunes and Frente Amplio). **I study public transport and network theory.**

Sometimes new technologies help societies to live better and to allow this to happen it is necessary to use them wisely, considering all of their effects. **Autonomous vehicles**, in particular, have a great potential; but if they increase **congestion** and shift people from public to private modes, they might have an extremely unequal effect: comfort for the ones that can afford these new technologies, and worse public transport for those who remain there. **This is why it is imperative to adapt and improve transit modes as well.** The paper I am presenting at WCTR-Y deals with this purpose.

More precisely, I explore two relevant ways in which transit may take advantage of new technologies: **enabling massive on-demand transit services** (using massive coordination provided, e.g., by smartphones) **and adapting the design of frequencies, vehicles' sizes and routes to the costs of driverless technology.** To do this, I study a feeder-trunk system, in which feeders carry passengers on-demand to trunks' stations. Trunk vehicles operate with traditional transit lines. It is shown that 1) the on-demand system is feasible with driverless technologies to go to a very attractive common destination, 2) the transit system evolves towards a larger fleet of smaller buses with more direct routes and 3) total costs are reduced in almost a third. Congestion is shown to increase but only marginally.

See you in Mumbai,

Andres Fielbaum

Join us on Facebook & Twitter!

The Facebook page for WCTRS young members has been launched. We will update the recent WCTRS-Y activities and related information on the **Facebook** page: **WCTRS-Young Researchers Initiative - 2019 Edition**. Please join us and share information with the members. You can also follow us on **Twitter (@WCTRY_2019)** for news and information on transportation research, and use #WCTRY2019 to share information on the conference.

THE INTERVIEWS



Gaurav Mittal

Recipient of the World Conference Society's Prestige grant for his work on 'Vernacular Governance of (informal) public transport'

Gaurav Mittal is a President's Graduate Fellow at the Department of Geography, **National University of Singapore (NUS)**. His PhD research explores the issues of **power, scale, and governance in the public transport provisions** of two small cities in India: Dehradun and Shillong. Through this **comparative study**, Gaurav examines the historically entrenched relations and power struggles between (and within) the

government and (various actors in) society to understand the decision-making processes in public transport and its impact on wider urban outcomes in both cities. Through his research on **vernacular governance** of the *Vikrams* (three-wheeled shared auto-rickshaws) in Dehradun, Gaurav examines how over a period of time, the *Vikram*-operators have formulated their own forms of governance mechanisms. **These governance mechanisms have now become the sources of the *Vikram*-operators' power in the city's public transport landscape.** Through this power, the *Vikrams* are able to operate in the city unhindered by legal rulings, which have declared them illegal at various occasions.

Prior to joining NUS, Gaurav has five years of work experience researching on the issues of housing, planning, transport, and governance in many major cities in South Asia. He holds a master's degree in habitat policy and practice and a bachelor's degree in architecture. His research interests lie in the areas of public transport, urban governance and spatial planning.



Nazmul Arefin Khan

Recipient of the World Conference Society's Prestige grant for his work on 'Households' trip based vehicle allocation models for travel accompanying arrangements'

Nazmul Arefin Khan is a PhD candidate in the Civil and Resource Engineering department at **Dalhousie University**. He received his master's and bachelor's degrees in civil engineering from Dalhousie University and BUET, respectively. His research interests include, travel demand modeling, travel behavior analysis, integrated urban modeling, sustainable transportation, travel impacts of new information and communication technologies, transportation data collection and survey methods.

For this research project, Nazmul focuses on examining the **vehicle choice behavior of multicar households for different travel arrangements**. Following the latent class modeling approach, the study develops three travel arrangements model based on accompanying persons (alone, with household members and with non-household members) and categorizes households' vehicle fleet into six classes: subcompact, compact, midsize, SUV, vans and luxury vehicles. Results of this study offer critical insights and have important policy implications.

For instance, results suggest that individuals are more likely to prefer larger vehicles during their work trips irrespective of travel arrangements. To support such commute trips, policies could be implemented that encourage using alternative transportation services such as shared mobility and ride-hailing. This might contribute in decreasing the number of larger vehicles in the traffic networks, thus reduce daily emission and fuel consumption. The study contributes significantly to the existing literature by developing flexible latent class models that evaluate the determinants of individuals' vehicle choice behavior while traveling alone, with spouse/partner and children, and with relatives, friends and co-workers.



Manu Sasidharan

Recipient of the World Conference Society's Prestige grant for his work on 'Risk based asset management for sustainable transport maintenance. Importance of the nature of the work on rail maintenance costs in developing countries'

Manu Sasidharan is a Research Fellow at the **University of Birmingham**, focusing on **risk-informed asset management of linear modes of transportation**. He investigates questions related to quality, safety and costs associated with operation and maintenance of railway infrastructure, both from an engineering and welfare economics perspective. Additionally, he looks at transport as a means to sustainable development; in the context of everyday mobility of rural and urban population.

Manu is currently working on a project funded by UK's Engineering and Physical Sciences Research Council (EPSRC) via the **Impact Acceleration Account to develop a risk informed decision-making tool for the economic appraisal of railway infrastructure investment decisions**; commercialising a key output from his PhD. Within the railway industry of developing and developed countries, the issue of managing the existing system is often larger than the decision to constructing new linkages. The situation is exacerbated in developing countries, since their increasing transport demands are not often met by the allocated maintenance budgets.

To this end, Manu's research represents a very **significant advancement for the railway infrastructure asset management**, as it will help to optimise the maintenance regimes based on risk, and enable effective balancing of investment against the impact of asset failure. It would aid the decision makers to invest in the most appropriate strategies for the railway network, so that the maximum return on investment can be achieved for the whole transport system.



Jeroen Bastiaanssen

Recipient of the World Conference Society's Prestige grant for his work on 'Youth mobility and access to economic opportunities'

Jeroen Bastiaanssen is a PhD-Student at the Institute for Transport Studies (ITS), based at the **University of Leeds**. He holds an MSc. in Transport Planning from the Radboud University, the Netherlands, where he was awarded the biennial thesis prize 2014 by the Social and Economic Council of the Netherlands for his master's thesis on transport poverty among job seekers in Rotterdam. After his studies, Jeroen worked at the Radboud University on research related to transport poverty and accessibility measurement with associate prof. Karel Martens, a renowned expert on transport and social justice.

During this period, Jeroen was awarded two grants for short scientific missions at ITS (2014) and LNEC (2016) within the framework of EU Cost Action 1209: Transport Equity Analysis. In 2016 Jeroen was awarded a LARS-scholarship by the University of Leeds, where he started his PhD-research on youth mobility and access to employment with prof. Karen Lucas, a world-leading expert in the area of transport-related social exclusion. His research explores the extent to which **young people's poor employment outcomes in the UK and mainland Europe are partially caused by poor job accessibility, resulting from inadequate public transport services and lack of access to private vehicles**.

The empirical findings in this research are important in that they support recent studies, implying that **job seekers may benefit from public policies targeted at improving public transport accessibility, in particular in areas with low access to employment opportunities**. The findings of his research are used to inform public transport policies in West Yorkshire and the Randstad region, through close collaboration with the local transport authorities.

ABOUT MUMBAI

The WCTRS Conference & Young Researchers' Conference will be held at the Indian Institute of Technology Bombay (IIT Bombay). IIT Bombay is one of the premier research institutes in India and is recognized worldwide as a leader in the field of engineering education. The IIT Bombay is located in Powai, in the suburb of Mumbai, and is flanked by the Powai and Vihar lakes. Conference attendees will be able to enjoy the rich flora and fauna of a campus known for its natural beauty, while benefiting from the close proximity with Mumbai, the capital city of Maharashtra. Popular tourist attractions include the Gateway of India, Elephanta Caves and the Haji Ali Dargash mosque.

JOB OPPORTUNITIES

Research assistant in Transport investment and spatial economy

Lisbon School of Economics & Management, Portugal

<https://rem.rc.iseg.ulisboa.pt/prj/tituss/#jobs>

Deadline: March 17th, 2019

Lecturer in Circular Economy Innovation

School of Water, Energy and Environment, Cranfield

University, UK: <https://jobs.cranfield.ac.uk/vacancies.html>

Deadline: April 14th, 2019

Researcher positions in Transport & Mobility

IFSTTAR, France, <https://bit.ly/2EEtBe5>

Deadline: April 26th, 2019

Head of competence unit in Transportation Infrastructure Technologies & Mobility Systems

Austrian Institute of Technology, Austria

<https://jobs.ait.ac.at/Job/103486?culture=en>

Deadline: Open until filled

Assistant Professor in Highway / Transportation engineering

UAE University, College of Engineering, United Arab

Emirates <https://jobs.uaeu.ac.ae/index.jsp>

Deadline: Open until filled

Post-doctoral Research Fellow in Civil Engineering

Nanyang Technological University, Singapore

<https://bit.ly/2tICsVL>

Deadline: Open until filled

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<http://www.leeds.ac.uk/terms>.

WCTR YOUNG CONFERENCE

"The Future of Transportation"

26 MAY 2019

08:30 - 09:00 **Participants Registration**

09:00 - 18:10 **Opening Session**

09:30 - 10:15 **Keynote Speech**

10:15 - 11:15 **Session 1**

11:15 - 11:30 **Coffee Break**

11:30 - 12:30 **Session 2**

12:30 - 13:30 **Lunch**

13:30 - 15:45 **Session 3**

15:45 - 16:00 **Coffee Break**

16:00 - 16:45 **Session 4**

16:45 - 17:15 **Closing Session**

* As informed on February 28th, 2019.

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