6.4 Oral Programme

TOPIC A: TRANSPORT MODES - GENERAL

A1: Air Transport and Airports

Monday, 27 May 2019

A1 – OS1 – Airlines
Room: VMCC 01
Session Chair: Christian Bontemps

14:30-15:30	A1_OS1_01	**Size versus efficiency: A case study of US commercial carriers** B. Unsal*, M. Aroney*, M. Badr*, *Embry Riddle Aeronautical University, USA*
	A1_OS1_02	**Will low-cost carriers also disrupt long-haul services?** A. Knorr*[1], A. Eisenkopf[2], A. Lueg-Arndt[3], *[1]German University of Administrative Sciences Speyer, Germany, [2]Zeppelin University Friedrichshafen, Germany, [3]Frankfurt University of Applied Sciences, Germany*
	A1_OS1_03	**A two-stage model of airline competition** C. Bontemps*[1,2], K. Remmy[2], *[1]Ecole Nationale Aviation Civile, France, [2]Toulouse School of Economics, France*

Tuesday, 28 May 2019

A1 – OS2: Airports
Room: VMCC 01
Session Chair: Kun Wang

09:30-11:00	A1_OS2_01	**Optimization methodology for departure slots at slot coordinated passenger airports based on processing element bottlenecks** S. Weerasekara*, V. Adikariwattage, *University of Moratuwa, Sri Lanka*
	A1_OS2_02	**The impact of logistics and intermodality on airport efficiency** X. Fernández*, J. Gundelfinger, P. Coto-Millán, *Universidad Cantabria, Spain*
	A1_OS2_03	**Evaluating passenger stress at airports to enhance passenger experience** D. Amorim Da Cunha*[1], B. Aguiar[1], R. Macário[1,2], V. Reis[1], *[1]Universidade de Lisboa, Portugal, [2]University of Antwerp, Belgium*
	A1_OS2_04	**Airport pricing when airport congestion affects passengers' concession consumption** K. Wang*[1], L. Corbo[2], W. Xia[3], T. Oum[3], *[1]University of International Business and Economics, China, [2]Universidade Católica Portuguesa, Portugal, [3]University of British Columbia, Canada*
	A1_OS2_05	**Analysing and modelling the relationship between air freight movement and airport characteristics in India** M. Veerappan*[1], P. Sahu*[1], A. Pani*[1], G. Patil[2], A. Sarkar[1], *[1]Birla Institute of Technology and Science Pilani, India, [2]Indian Institute of Technology Bombay, India*

A1 – OS3: Emerging market, Economic impact and Tourism - 1
Room: VMCC 01
Session Chair: Katsuya Hihara

11:30-13:30	A1_OS3_01	**Modelling of air traffic demand forecasting using a dynamic systems for assessment of readiness on the development of Indonesian airports** E. Yuliawati*, *Research and Development Agency Ministry of Transportation Indonesia, Indonesia*
	A1_OS3_02	**A critical review on regional connectivity scheme of India** K. Iyer, N. Thomas*, *Indian Institute of Technology Delhi, India*

	A1_OS3_03	**Economic impacts of business aviation in Europe** S. Maertens*[1], N. Nahas[2], D. Shah[3], C. Wollersheim[3], A. Leipold[1], H. Keimel[4], *[1]German Aerospace Center, Germany, [2]Booz Allen Hamilton, USA, [3]Formerly Booz Allen Hamilton, USA, [4]Formerly German Aerospace Center, Germany*
		A1 – OS4: Emerging market, Economic impact and Tourism - 2 Room: VMCC 01 Session Chair: Dimitrios Dimitriou
16:30-18:10	A1_OS4_01	**A review of domestic air transportation in India** B. Kodanda*[1], P. Bhanumurthy[2], *[1]CSIR-National Aerospace Laboratories, India, [2]Jawaharlal Nehru Technological University, India*
	A1_OS4_02	**Air transport development in Eastern Europe in relation to economic growth** S. Zaharia*, C. Pietreanu, *Politehnica University in Bucharest, Romania*
	A1_OS4_03	**Appraisal of economic impact diversification by a new airport development** D. Dimitriou*[1,2], M. Sartzetaki[1,2], *[1]Democritus University of Thrace, Greece, [2]Athens International Airport, Greece*

Wednesday, 29 May 2019

		A1 – OS5: Network - 1 Room: VMCC 01 Session Chair: Jose Sallan
09:30-11:10	A1_OS5_01	**Complex networks of the air passenger traffic in Monterrey´s airport** O. Shirai Reyna*, I Flores De La Mota*, *UNAM, Mexico*
	A1_OS5_02	**An analysis of the effect of bundled airport privatization on an airline network** R. Tani*[1], I. Takashima[1], T. Kato[2], T. Tamura[3], K. Uchida[1], *[1]Hokkaido University, Japan, [2]Saitama University, Japan, [3]Hokkai School of Commerce, Japan*
	A1_OS5_03	**Evaluation of flights schedule at tourist airports towards network connectivity** D. Dimitriou[1,2], M. Sartzetaki*[1,2], A. Karagkouni[1,2], *[1]Democritus University of Thrace, Greece, [2]Athens International Airport, Greece*
	A1_OS5_04	**The significance of air cargo revenues at the selection process of new destinations for passenger transport. nice-to-have or crucial contribution?** W. Dewulf*, H. Meersman, E. Van de Voorde, *University of Antwerp, Belgium*
		A1 – OS6: Network - 2 Room: VMCC 01 Session Chair: Xiaowen Fu
11:30-13:10	A1_OS6_01	**Network assessment of Tier–II Indian cities' airports in terms of type, accessibility, and connectivity** S. Bansal*, J. Sen, *IIT Kharagpur, India*
	A1_OS6_02	**Airport transfer dependency on neighbour hubs – the case of Taoyuan Airport's aviation network** Y. Chang*, W. Lee, *National Taiwan Ocean University, Taiwan*
	A1_OS6_03	**Effects of affecting factors on air route frequency** Y. Wang*, J. Wong, *National Chiao Tung University, Taiwan*
	A1_OS6_04	**Passengers' perception of safety and its relationship with demographics, service quality, satisfaction and loyalty in airlines sector** N. Shiwakoti*, H. Jiang, A. Nguyen, *RMIT University, Australia*
	A1_OS6_05	**The evolution of China's international aviation markets from a policy perspective on air passenger flows** J. Wang*[1], H. Yang*[2], H. Wang[3], *[1]Chinese Academy of Sciences, China, [2]East China Normal University, China, [3]Beijing International Engineering Consulting Co., Ltd, China*

A1 – OS7: New technology and Innovation Room: VMCC 01 Session Chair: Chantal Roucolle		
16:30-18:10	A1_OS7_01	**Potential policy issues with flying car technology** A. Mofolasayo*, *N/A, Canada*
	A1_OS7_02	**Disruptive and sustainable innovation at airports: The case of hydrogen** I. Laplace*[1], E. Malavolti[1,2], *[1]Ecole Nationale de l'Aviation Civile, France, [2]Toulouse School of Economics, France*
	A1_OS7_03	**Does innovation give incentives to innovate in air transport?** I. Laplace[1], C. Roucolle*[1], T. Denis[2], *[1]Université de Toulouse, France, [2]Université Panthéon - Assas, France*
	A1_OS7_04	**Passenger comfort and trust on first-time use of a shared autonomous shuttle vehicle** D Paddeu*, G. Parkhurst, J. Flower, M. Ricci, I. Shergold *University of the West of England, United Kingdom*
Thursday, 30 May 2019		
A1 – OS8: Operation Room: VMCC 01 Session Chair: Suiling Li		
09:30-11:10	A1_OS8_01	**Large-scale model and solution for integrated maintenance routing and tail assignment problem in airline industry** A Jayaraj*, R. Sridharan*, V V Panicker*, *National Institute of Technology Calicut, India*
	A1_OS8_02	**Developing a framework to incorporate risk considerations in to runway high speed exit design** S Galagedera*, H Pasindu*, V. Adikariwattage, *University of Moratuwa, Sri Lanka*
	A1_OS8_03	**Service level analysis of airline baggage handling counter at Penghu airport** S Li*, *National Penghu University of Science and Technology, Taiwan*
	A1_OS8_04	**Some strategies of enhancing airline schedule reliability and airfield operation performance for congested airports** S Li*, *National Penghu University and Science and Technology, Taiwan*
	A1_OS8_05	**Benefits of emotional labor for airlines** N Okabe*, *Yokohama National University, Japan*

A2: Maritime Transport and Ports		
Monday, 27 May 2019		
A2 – OS1: Port Typologies Room: VMCC 02 Session Chair: Joost Hintjens		
14:30-16:10	A2_OS1_01	**A critical analysis of seaport research field classifications: Explicit and implicit shortcomings in methodologies and categorizations** K Ibrahimi*[1,2], S. Ibrahimi[3], *[1]Independent Researcher, Albania, [2]Global Humanistic University, Curaçao, [3]University of Vlora, Albania*
	A2_OS1_02	**Container ports taxonomy and capacity appraisal of container terminals. Application to the United Kingdom's deep-water container ports system.** M Buitrago*, *University of Southampton, United Kingdom*
	A2_OS1_03	**Critical data quality elements in ports: The case for port rankings** K Ibrahimi*[1,2], S. Ibrahimi[3], *[1]Independent Researcher, Albania, [2]Global Humanistic University, Curaçao, [3]University of Vlora, Albania*

	A2_OS1_04	**Major ports of India – Paradigm strategy** S. Kavita*, *Cochin University of Science and Technology, India*
	A2_OS1_05	**Traffic evolution and competition among Italian containers terminals** S. Carrese[1], S. Giambattista[1], T. Murgia[2], M. Nigro[1], M Petrelli*[1], A. Renna[1], [1]*Roma Tre University, Italy,* [2]*Via dell'Arco de' Ginnasi, Italy*

A2 – OS2: Port Performance		
Room: VMCC 02		
Session Chair: Edwin van Hassel		
16:30-18:10	A2_OS2_01	**Why container specialisation make a difference: An efficiency analysis of the Spanish port authorities** X Fernández*, S. Hidalgo, S. Perez, P. Coto-Millán, *Universidad Cantabria, Spain*
	A2_OS2_02	**Container terminal efficiency: Case of Le Havre – Hamburg** S Nduna*, T. Vanelslander, E. Van de Voorde, H. Meersman, *University of Antwerp, Belgium*
	A2_OS2_03	**Efficiency and productivity of Nigerian seaports in the pre and post concessioning periods** O Ugboma*[1], K Oyesiku*[2], [1]*Lagos State University, Nigeria,* [2]*Olabisi Onabanjo University, Nigeria*
	A2_OS2_04	**Introducing critical quality elements in port research: The case for port research field classifications** K Ibrahimi*[1,2], S. Ibrahimi[3], [1]*Independent Researcher, Albania,* [2]*GHU Global Humanistic University, Curaçao,* [3]*University of Vlora, Albania*
	A2_OS2_05	**Port activity and technical efficiency: determinants and external factors** H. Ghiara[1], A Tei*[2], [1]*University of Genoa, Italy,* [2]*Newcastle University, United Kingdom*

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A2 – OS3: Shipping Strategies		
Room: VMCC 02		
Session Chair: Valentin Carlan		
09:30-11:10	A2_OS3_01	**A tripartite model of shipping digitalization: Findings from a multi-case study** M Lambrou*[1], D. Watanabe[2], J. Iida[3], [1]*University of the Aegean, Greece,* [2]*Tokyo University of Marine Science and Technology, Japan,* [3]*National Institute for Land and Infrastructure Management, Japan*
	A2_OS3_02	**Ex-ante performance assessment of the vessel train project: Testing the applicability of key 'transport infrastructure indicators' for non-infrastructure transport projects** E Moschouli*, *University of Antwerp, Belgium*
	A2_OS3_03	**Belt and road: More competition between sea and rail? A generalized cost approach** H. Meersman, N. Sutalo, E. Van de Voorde, E Van Hassel*, T. Vanelslander, *University of Antwerp, Belgium*
	A2_OS3_04	**Cooperative and collaborative spirit indices between supply chain members** C. Kim[1], J. Dinwoodie[2], S Roh*[2], [1]*Ministry of Oceans and Fisheries, Korea, Republic of,* [2]*University of Plymouth, United Kingdom*

A2 – OS4: Shipping Impacts		
Room: VMCC 02		
Session Chair: Jeroen Pruyn		
16:30-18:10	A2_OS4_01	**Effects of BRI strategy on Mediterranean shipping transport** F. Claudio[1], A Tei*[2], [1]*University of Genoa, Italy,* [2]*Newcastle University, United Kingdom*
	A2_OS4_02	**Factors affecting the growth of maritime centers in west and central Africa: evidence from Nigeria** I Ogwude*, *Federal University of Technology, Nigeria*

	A2_OS4_03	Socio-economic evaluation of alternative technologies to mitigate sulphur emissions in maritime container transport S Mohseni*, E Van Hassel*, C Sys*, T Vanelslander*, *University of Antwerp, Belgium*
	A2_OS4_04	The economic impact of marine environmental emission reduction policy on shipowners and social welfare – CBA perspective E Ben Hakoun[*1], E. Van De Voorde[2], Y. Shiftan[1], *[1]Israel Institute of Technology, Israel, [2]Antwerp University, Belgium*

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A2 – OS5: Shipping Operations
Room: VMCC 01
Session Chair: Alessio Tei

09:30-11:10	A2_OS5_01	Benchmarking delivered bulkers on the energy efficiency of their design J Pruyn*, *Delft University of Technology, Netherlands*
	A2_OS5_02	Constructing the defence strategies criteria for maritime piracy attack in the shipping companies P Tseng[*1], Z. Her[2], N. Pilcher[3], *[1]Feng Chia University, Taiwan, [2]Taichung Port, Taiwan, [3]Edinburgh Napier University, United Kingdom*
	A2_OS5_03	Environmentally sound management of ship wastes: challenges and opportunities for European ports G Argüello*, *University of Gothenburg, Sweden*
	A2_OS5_04	Baltic Exchange index changes and FFA hedging efficiency R Adland*, G. Aarheim, O. Holseter, *Norwegian School of Economics (NHH), Norway*

A2 – OS6: Supply Chain Strategies
Room: VMCC 02
Session Chair: Eleni Moschouli

14:30-16:10	A2_OS6_01	Cooperation in the hinterland of adjacent seaport authorities, empiricalization for the European TEN-T core ports J Hintjens*, *University of Antwerp - TPR, Belgium*
	A2_OS6_02	A queue model to reduce truck waiting time in sea-port: The Port of Chennai, India R Das*, H. Tashiro, *Nippon Koei Co., LTD, Japan*
	A2_OS6_03	Blockchain technology as key contributor to the integration of maritime supply chain: myth or reality V Carlan[*1], F. Coppens[2], C. Sys[1], T. Vanelslander[1], G. Van Gastel[2], *[1]University of Antwerp, Belgium, [2]National Bank of Belgium, Belgium*
	A2_OS6_04	Modeling different European freight scenarios and impacts for north Rhine Westphalia C. Doll[1], J. Köhler[1], W. Schade[2], S. Mader[2], E Van Hassel[*3], T. Vanelslander[3], *[1]ISI, Germany, [2]M-Five GmbH, Switzerland, [3]TPR, University of Antwerp, Belgium*

A3: Rail Transport

Monday, 27 May 2019

A3 – OS1: Strategic Issues
Room: VMCC 03
Session Chair: John Preston

14:30-16:10	A3_OS1_01	Mega transportation infrastructure: A sustainable foresight K. Gharehbaghi, K. Robson, F Rahmani*, *RMIT University, Australia*

	A3_OS1_02	**Transportation development for regional infrastructure: Implications for Australian rural areas** K. Gharehbaghi, I. Clarkson, N. Hurst, F Rahmani*, *RMIT University, Australia*
	A3_OS1_03	**"Side-business" development in Japanese major private passenger railways — What can we learn from their experiences?** R. Miki*[1], H. Ieda*[2], *[1]Tobu Railway Co. Ltd., Japan, [2]Graduate Research Institute for Policy Studies, Japan*
	A3_OS1_04	**Fare strategies and head-on competition. The case of Italian rail market** P Beria*[1], S. Tolentino[1], A. Bertolin[1], G. Filippini[2], *[1]Politecnico di Milano, Italy, [2]META Planning srl, Italy*
	A3_OS1_05	**Comparative analysis of Delhi metro travel demand post phase 2 expansion** D Bhatt*[1], M. .[2], A. U. Ravi Shankar[1], *[1]National Institute of Technology Karnataka, India, [2]CSIR-CRRI, India*

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	A3 – OS2: Rail Operations I Room: VMCC 03 Session Chair: John Preston	
09:30-11:10	A3_OS2_01	**A concept for situation- and demand-responsive collective passenger information in regional trains** T Monzert*[1], M Boltze*[1], L Fornauf*[2], *[1]Technische Universität Darmstadt, Germany, [2]DB Regio AG, Germany*
	A3_OS2_02	**Risk assessment model for railway passengers on crowded platforms** T Kato*, S. Terabe, H. Yaginuma, N. Kang, K. Tanaka, *Tokyo University of Science, Japan*
	A3_OS2_03	**Developing an operational philosophy for Britain's Railways** J Armstrong*[1], J. Preston[1], I. Hood[2], *[1]University of Southampton, United Kingdom, [2]Arup, United Kingdom*

	A3 – OS3: Rail Operations II Room: VMCC 03 Session Chair: John Preston	
11:30-13:10	A3_OS3_01	**Overtakes and dwell time delays for Japanese commuter trains** C Palmqvist*[1,2], N. Tomii[3], *[1]K2 – The Swedish Knowledge Centre for Public Transport, Sweden, [2]Lund University, Sweden, [3]Chiba Institute of Technology, Japan*
	A3_OS3_02	**Exploring the effects of inter- and intra-modal competition on prices and frequencies in the railway markets: Evidence from Europe** F Laroche*, A. Lamatkhanova, *University of Lyon, France*
	A3_OS3_03	**Railway commuter line passengers' perceive service quality: Hedonic and utilitarian framework** I. G. Mahatma Yuda Bakti, T. Rakhmawati, S Sumaedi*, S. Damayanti, *Indonesian Institute of Sciences, Indonesia*
	A3_OS3_04	**The criterion for optimal rescheduling in mixed train traffic** B Davydov*[1], A. Mishra[2], *[1]Far Eastern State Transport University, Russian Federation, [2]Indian Railways, India*

	A3 – OS4: Rail Operations III Room: VMCC 03 Session Chair: John Preston	
16:30-18:10	A3_OS4_01	**Exploring the effect of occupancy information on passengers' behaviour change to relieve train crowding** J Kim*, J Preston*, K Revell*, *University of Southampton, United Kingdom*

	A3_OS4_02	**Analysis of delay causes in Mumbai suburban western railway network** Y Singh*, V Kalyanakrishnan*, V. Varekar, *Veermata Jijabai Technological Institute, India*
	A3_OS4_03	**Modelling of locomotive for semi –high speed operations with higher hauling capacity in indian railways** G Vaitheeswaran*, B. Shaji, R. Nagarajan, V. Chandar S, *Saveetha School of Engineering, India*
	A3_OS4_04	**Safety culture in High-Speed railways and importance of top-management decisions** N Bugalia*, Y. Maemura, K. Ozawa, *The University of Tokyo, Japan*
	A3_OS4_05	**Estimation of risk to pedestrians on rail tracks on Mumbai suburban** S Darbamulla*[1,2], G. Tiwari[1], S. Mukherjee[1], [1]*Indian Institute of Technology Delhi, New Delhi, India,* [2]*Indian Railways, India*

Wednesday, 29 May 2019

A3 – OS5: Rail Miscellany
Room: VMCC 03
Session Chair: John Preston

11:30-13:10	A3_OS5_01	**Time-series economic effect of developing MAGLEV among metropolitan areas in Japan considering urbanization economies** T Sato*, M. Shiraishi, *Chiba Institute of Technology, Japan*
	A3_OS5_02	**Assessing the evolution of railway wheelsets wear using a statistical modelling approach** J A P Braga*, A. R. Andrade, *Universidade de Lisboa, Portugal*
	A3_OS5_03	**Hyperloop – A system engineering analysis** I Hansen*, *Delft University of Technology, Netherlands*

A4: Road Transport

Monday, 27 May 2019

A4 – OS1: Cars and Taxis
Room: VMCC 04
Session Chair: Manoranjan Parida

14:30-16:10	A4_OS1_01	**Analysing the ride sharing behaviour in ICT based cab services: A case of Mumbai, India** P Shah*, V. Varghese, A. Jana, T. Mathew, *Indian Institute of Technology Bombay, India*
	A4_OS1_02	**Predicting lessee switch behavior using logit models** J Feilzer*[1,2], D. Stroosnier[1], E. Dugundji[2], [1]*Pricewaterhouse Coopers, Netherlands,* [2]*Vrije Universiteit Amsterdam, Netherlands*
	A4_OS1_03	**Consumers' perception towards hatchback and sedan cars in Indian megacities** R Bera*, B. Maitra, *Indian Institute of Technology Kharagpur, India*

Tuesday, 28 May 2019

A4 – OS2: User Behavior
Room: VMCC 04
Session Chair: Shashi Nambisan

11:30-13:10	A4_OS2_01	**In-vehicle visuo-spatial distraction and expertise in gaze behavior** P Sanjram*, S Najar*, *Indian Institute of Technology Indore, India*
	A4_OS2_02	**Determinants of bus seat belt usage behavior: A qualitative study** M. Ghaffari[1], S. Rakhshanderou[2], Y. Mehrabi[3], H. Soori[4], O. Simsekoglu[5,6], J Harooni*[7], [1]*Shahid Beheshti University of Medical Sciences, Iran, Islamic Republic of.* [2]*Nord University, Norway,* [3]*Norwegian University of Science and Technology, Norway*

	A4_OS2_03	**The effects of demography and personality on urban travel habits** J Roos*[1,2], F. Sprei[1], U. Holmberg[2], *[1]Chalmers University of Technlology, Sweden, [2]University of Gothenburg, Sweden*
	A4_OS2_04	**Analysis of active mode choice behaviour with latent attitudes** K Shakeel*, T. Rashidi, T. Waller, *University of New South Wales, Australia*
	A4_OS2_05	**Analysis of modal choices and behaviors of commuters on Ikorodu- Lagos island axis, Lagos, Nigeria** W. Alade[1], M Olaseni*[2], *[1]University of Lagos, Nigeria, [2]Yaba College of Technology, Nigeria*

	A4 – OS3: Public Transport Systems Room: VMCC 04 Session Chair: Mohammad Shafi Mir	
16:30-18:10	A4_OS3_01	**The study of influencing factors on the coopetition relationship between public bus and bike-sharing** C Zhang*, H. Zhou, *Beijing Jiaotong University, China*
	A4_OS3_02	**BRT (Bus Rapid Transit) system evaluation by global comparison in world cities** F. Soufian, H Haghshenas*, P. Hajian, *Isfahan University of Technology, Iran, Islamic Republic of*
	A4_OS3_03	**Spatial distribution of intercity passenger terminals in Lagos, Nigeria** M Olaseni*[1], W. Alade[2], K. Oyesiku[3], *[1]Yaba College of Technology, Nigeria, [2]University of Lagos, Nigeria, [3]Olabisi Onabanjo University, Nigeria*
	A4_OS3_04	**The cause effect relationship model of service quality in relation with overall satisfaction** B. R. Naveen*, A. Gurtoo, *Indian Institute of Science, India*

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	A4 – OS4: Spatial Models Room: VMCC 04 Session Chair: R. Jayakrishnan	
09:30-11:10	A4_OS4_01	**A comparative study of data-driven and model-based approaches for corridor-level travel-time estimation** R Sharmila*[1], N. Velaga[1], A. Kumar[2], *[1]IIT Bombay, India, [2]IIT Kharagpur, India*
	A4_OS4_02	**A weighted k-NN based approach for corridor level travel-time prediction** S Rb*, N. R Velaga, *IIT, India*
	A4_OS4_03	**Relationship between economic development and road traffic crashes and casualties: Empirical evidence from Nigeria** Y Akinyemi*, *University of Ibadan, Nigeria*
	A4_OS4_04	**Developing a risk-based decision-making vehicle route selection framework** I Sahnoon*, A. De Barros, L. Kattan, M. Dann, *University of Calgary, Canada*
	A4_OS4_05	**A vulnerability mathematical model for port transportation road network** W Wenyuan*, L. Hui, G. Zijian, P. Yun, *State Key Laboratory of Coastal and Offshore Engineering / Dalian University of Technology, China*

TOPIC B: FREIGHT TRANSPORT AND LOGISTICS		
B1: Logistics and Freight Transport Operations		
Monday, 27 May 2019		
B1 – OS1: Freight Transport Networks Room: VMCC 05 Session Chair: Gunnar Stefansson		
14:30-16:10	B1_OS1_01	**Strategical upturn of reverse Logistic in loop with Crowd shipping: Transportation explication for India** C Upadhyay*[1], G. Annamalai Vasantha[2], B Pandiya*[1], [1]*Indian Institute of Information Technology Allahabad, India, [2]University of Strathclyde, United Kingdom*
	B1_OS1_02	**Blockchain for and in logistics: What to adopt and where to start** M Dobrovnik*[1], D Herold*[2], E. Fuerst[1], S. Kummer[1], [1]*WU (Vienna University of Economics and Business), Austria, [2]Griffith University, Australia*
	B1_OS1_03	**Optimizing ambulance locations for coverage enhancement of accident sites in South Delhi** S Wajid*[1], N. N[1], A. Unnikrishnan[2], [1]*Indian Institute of Technology, Delhi, India, [2]Portland State University, USA*
	B1_OS1_04	**Experimental evaluation of mobile multipurpose solar hybrid refrigeration system** S Kumar*, R. Bharj, *Dr. B.R. Ambedkar National Institute of Technology, India*
	B1_OS1_05	**Is blockchain a solution for logistics and freight transportation problems?** E Irannezhad*, *University of Queensland, Australia*
Tuesday, 28 May 2019		
B1 – OS2: Innovations and Freight Transport Issues Room: VMCC 05 Session Chair: Jonas Floden/Johan Woxenius		
11:30-13:10	B1_OS2_01	**Role of Chittagong port authority to develop other national ports in Bangladesh to provide maritime logistics support in South Asia** R Saha*, *Bangladesh University of Professionals, Bangladesh*
	B1_OS2_02	**Port infrastructure and supply chain integration: Case of the apparel industry in South Asia** Y Park*[1], R. Dossani[2], [1]*Seoul National University, Korea, Republic of, [2]Rand Corporation, USA*
	B1_OS2_03	**A stakeholder analysis of actors and networks for land transport of dangerous goods** J Flodén*, J Woxenius*, *University of Gothenburg, Sweden*
	B1_OS2_04	**Performance assessment of alternative Mediterranean transport networks by combining KPIs and Factor-Cluster Analysis** P Serra*, P Fadda*, G Fancello*, *DICAAR - University of Cagliari, Italy*

B2: Humanitarian Logistics in Disasters		
Tuesday, 28 May 2019		
B2 – OS1: Humanitarian Logistics in Disasters Room: VMCC 05 Session Chair: Arnab Jana		
09:30-11:10	B2_OS1_01	**Critical success factors of sustainable supply chain management and organizational performance: An exploratory study** R Pradhan*[1], D. Prasad[1], K. Gaurav[1], A. K. Sabat[2], [1]*Indian Institute of Technology Kharagpur, India, [2]Steel Authority of India Limited, India*

	B2_OS1_02	**Effective handling of emergencies in resource constrained urban areas by considering dynamics: A performance analysis** V Kumar*, K. Ramamritham, A. Jana, *Indian Institute of Technology Bombay, India*
	B2_OS1_03	**Humanitarian relief sustainability: A framework of humanitarian logistics digital business ecosystem** B Baffoe*, W. Luo, *Shanghai Maritime University, China*

B3: Intermodal Freight Transport		
Wednesday, 29 May 2019		
B3 – OS1: Intermodal Road/Rail Freight Transport Room: VMCC 05 Session Chair: Ralf Elbert		
11:30-13:10	B3_OS1_01	**Towards a modal shift of freight from road to rail in Japan: Reviews of infrastructure investment and track access charges** J Mizutani*[1], S. Fukuda[2], [1]*Kobe University, Japan,* [2]*Seinan Gakuin University, Japan*
	B3_OS1_02	**Combined Transport in the Alpine region: reasons behind a difficult acceptance and possible solutions to overcome them** F Cavallaro*[1], G. Sommacal[1], S. Božičnik[2], M. Klemenčič[2], [1]*Eurac Research, Italy,* [2]*University of Maribor, Slovenia*
	B3_OS1_03	**Two levels modeling of container choosing and mode choice between road and rail for increasing the containerized rail modal share** S. Mohri, H Haghshens*, V. Salehi, *Isfahan University of Technology, Iran, Islamic Republic of*
	B3_OS1_04	**Network planning and design in multimodal transportation under consideration of uncertainty** R Elbert*, J Müller*, *Technische Universität Darmstadt, Germany*
	B3_OS1_05	**Exploring relevant information attributes to improve access management in intermodal freight transportation** S. Jacobsson[1], P Arnäs*[1], G. Stefansson[1,2], [1]*Chalmers University of Technology, Sweden,* [2]*University of Iceland, Iceland*
B3 – OS2: Maritime Transport Chains Room: VMCC 05 Session Chair: Bart Wiegmans		
14:30-16:10	B3_OS2_01	**Dry port integration into a supply chain: Outcome-driven supply chain perspective** A Khaslavskaya*, V. Roso, *Chalmers University of Technology, Sweden*
	B3_OS2_02	**Empty container management in depots before and after outsourcing of container inspection - A flow and cost related comparison** P Arnäs*[1], M. Naperotti[2], N. Zachrisson[1], S. Jacobsson[1,3], [1]*Chalmers University of Technology, Sweden,* [2]*Swedish Maritime Administration, Sweden,* [3]*Consenso Engineering, Sweden*
	B3_OS2_03	**A framework for evaluating the potential for using air-maritime integration in modern supply chains** A Karunathilake*, V. Adikariwattage, *University of Moratuwa, Sri Lanka*
	B3_OS2_04	**Dry and wet inland ports: defining more powerful roles vis-à-vis seaports** B Wiegmans*[1], P. Witte[2], V. Roso[3], [1]*TU Delft, Netherlands,* [2]*Utrecht University, Netherlands,* [3]*Chalmers University of Technology, Sweden*
	B3_OS2_05	**Dedicated freight corridor: Current challenges** G Raghuram*, A. Verma, *Indian Institute of Management Bangalore, India*

B4: Urban Goods Movement		
Tuesday, 28 May 2019		
B4 – OS1: Urban Rail, Tram and Case Studies Room: VMCC 04 Session Chair: Anne Goodchild		
09:30-11:10	**B4_OS1_01**	**Urban rail system for freight distribution in a mega city: Case study of Delhi, India** M Singh*, S. Gupta, *School of Planning and Architecture, India*
	B4_OS1_02	**Assessment of urban freight travel characteristics - A case study of Delhi** M Errampalli*[1], R. Kayitha[1], R. Chalumuri[1], L. Tavasszy[2], J. Borst[3], S. Chandra[1], [1]*Central Road Research Institute, India*, [2]*TU Delft, Netherlands*, [3]*TNO, Netherlands*
	B4_OS1_03	**Characteristics of urban freight traffic in a medium size Indian city – a case study of Udaipur, Rajasthan** S. Gupta*, K. Sinha*, *School of Planning and Architecture, India*
	B4_OS1_04	**How to make urban freight transport by tram successful?** K. De Langhe*, H. Meersman, C. Sys, E. Van de Voorde, T. Vanelslander, *University of Antwerp, Belgium*
Wednesday, 29 May 2019		
B4 – OS2: Consolidation, Cargo Cycles and Electric Vehicles Room: VMCC 04 Session Chair: Michael Browne		
11:30-13:10	**B4_OS2_01**	**Battery electric vehicles for urban freight transport: An evaluation** T Teoh*, *Delft University of Technology, Netherlands*
	B4_OS2_02	**Locational context for warehouse facilities in urban areas: a case study in Belo Horizonte (Brazil)** L De Oliveira*[1], G. Lopes[1], R. de Oliveira[2], L. Bracarense[3], [1]*Universidade Federal de Minas Gerais, Brazil*, [2]*Federal Center for Technological Education of Minas Gerais, Brazil*, [3]*Federal University of Tocantins, Brazil*
	B4_OS2_03	**Estimating emissions from urban freight trips** M Middela*, S. Mahesh, S. Sripada, S. Kancharla, G. Devi, G. Ramadurai, *Indian Institute of Technology, India*
	B4_OS2_04	**Urban consolidation and cargo bikes: a simulation study** R Elbert*, C Friedrich*, *Technische Universität Darmstadt, Germany*
B4 – OS3: Last Mile Challenges: Loading Activity and Delivery Routes Room: VMCC 04 Session Chair: Eiichi Taniguchi		
16:30-18:10	**B4_OS3_01**	**Characterization of freight trip from textile powerloom units – A case study of Surat, India** B Dhonde*[1,2], C Patel*[2], [1]*Uka Tarsadia University, India*, [2]*Sardar Vallabhbhai National Institute of Technology, India*
	B4_OS3_02	**Modeling a time-differentiated policy for management of loading bays in urban areas** M. Wilson, M Janjevic*, M. Winkenbach, *Massachusetts Institute of Technology, USA*
	B4_OS3_03	**Getting rid of fixed delivery areas: the implications of dynamic vehicle routing on a German parcel delivery company** F. Vallée, C Schulz*, J. Robert, *University of Applied Sciences Münster, Germany*
	B4_OS3_04	**Quantifying parking conflicts of (un)loading bays' usage in Santiago's CBD, Chile** A Buerklen*, *Technische Universität Berlin, Germany*

Thursday, 30 May 2019		
B4 – OS4: Case Studies, Simulation and Understanding Stakeholders Room: VMCC 04 Session Chair: Johan Woxeniu		
09:30-11:10	B4_OS4_01	**Modelling freight in SimMobility, a multi-scale agent-based urban simulation platform** T. Sakai[1], A. Alho[1], B Bhavathrathan*[2], G. Dalla Chiara[3], R. Gopalakrishnan[3], P. Jing[4], T. Hyodo[5], L. Cheah[3], M. Ben-Akiva[4], [1]*Singapore-MIT Alliance for Research and Technology, Singapore, [2]Indian Institute of Technology Palakkad, India, [3]Singapore University of Technology and Design, Singapore, [4]Massachusetts Institute of Technology, USA, [5]Tokyo University of Marine Science and Technology, Japan*
	B4_OS4_02	**Estimating direct and indirect impacts of off-hour deliveries: Propositions for a simulation framework** A Beziat*, *Transport Urban Planning Economics Laboratory, France*
	B4_OS4_03	**Sustainability in last-mile delivery – A mixed method approach investigating the value (co-) creating relationships between stakeholders** S. Knöchel[1], B Gammelgaard*[2], [1]*Albert-Ludwigs-Universität Freiburg, Germany, [2]Copenhagen Business School, Denmark*

B5: Freight Transport Modeling		
Monday, 27 May 2019		
B5 – OS1: Optimization Road Room: VMCC 11 Session Chair: Hanno Friedrich		
14:30-16:10	B5_OS1_01	**Order first split second algorithm for pickup and delivery problems with multiple full truckload demands** T Ghorpade*, N. Rangaraj, [1]*Indian Institute of Technology, India*
	B5_OS1_02	**Optimization of downstream fuel logistics based on road infrastructure conditions and exposure to accident events** V. Cuneo[1], R. Pizzuti[1], M. Nigro[1], S Carrese*[1], C. Ardito[2], G. Marseglia[3], [1]*Roma Tre University, Italy, [2]RAN Innovation Srl Viale della Piramide Cestia, Italy, [3]Università degli Studi, Italy*
	B5_OS1_03	**Assessment of sustainable initiatives in the Containerized freight railways of India using Fuzzy AHP framework** C. P. Garg*, V. Kashav*, *University of Petroleum & Energy Studies, India*
Tuesday, 28 May 2019		
B5 – OS2: Optimization Air, Rail and Maritime Room: VMCC 11 Session Chair: Lorant Tavasszy		
09:30-11:10	B5_OS2_01	**Redirecting freight trains: an exact optimization approach** K Anoop*, V Panicker*, *National Institute of Technology Calicut, India*
	B5_OS2_02	**Improving landside operations of an air cargo terminal** R. Romero-Silva[1,2], M Mujica Mota*[2], [1]*Universidad Panamericana, Mexico, [2]Amsterdam University of Applied Sciences, Netherlands*
	B5_OS2_03	**Design and optimization of an innovative two-hub-based ro-ro network in the Mediterranean area** P Fadda*[1], G Fancello*[1], S. Mancini[2], C. Pani[1], P Serra*[1], [1]*DICAAR - University of Cagliari, Italy, [2]University of Cagliari, Italy*

	B5_OS2_04	**Domain independent planning for air cargo movement** M Venkata Sai Rishita*[1], M. Appala Raju[2], T. Harris[3], [1]*RNS Institute Of Technology, India*, [2]*Christ (Deemed to be University), India*, [3]*IIT Bombay, India*

<table>
<tr><td colspan="3" style="text-align:center">B5 – OS3: Urban Transport
Room: VMCC 11
Session Chair: Hanno Friedrich</td></tr>
<tr><td rowspan="3">16:30-18:10</td><td>B5_OS3_01</td><td>Motorised and non-motorised urban freight trip attraction patterns in developing economies
N De Bakshi*[1], G. Tiwari[1], N. Bolia[1], J. Holguin-Veras[2], [1]<i>Indian Institute of Technology, Delhi, India</i>, [2]<i>Renesselaer Polytechnic Institute, USA</i></td></tr>
<tr><td>B5_OS3_02</td><td>The incremental development path of an empirical agent-based simulation system for urban goods transport (MASS-GT)
M De Bok*[1,2], L. Tavasszy[1], I. Bal[1], S. Thoen[1], [1]<i>Delft University of Technology, Netherlands</i>, [2]<i>Significance, Netherlands</i></td></tr>
<tr><td>B5_OS3_04</td><td>Development of urban freight travel demand model
M Errampalli*[1], R. Kayitha[1], R. Chalumuri[1], L. Tavasszy[2], J. Borst[3], S. Chandra[4], [1]<i>CSIR-Central Road Research Institute, India</i>, [2]<i>Delft University of Technolgy (TU-Delft), Netherlands</i>, [3]<i>TNO, Netherlands</i>, [4]<i>CSIR-Central Road Research Institute, India</i></td></tr>
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<table>
<tr><td colspan="3" style="text-align:center">B5 – OS4: National Transport
Room: VMCC 11
Session Chair: Gernot Liedtke</td></tr>
<tr><td rowspan="5">11:30-13:10</td><td>B5_OS4_01</td><td>Cost, transit time and speed elasticity calculations for the European continental freight transport
B Jourquin*, M. Beuthe, <i>UCLouvain, Belgium</i></td></tr>
<tr><td>B5_OS4_02</td><td>Macrologistics instrumentation: Integrated national freight flow and logistics cost measurement
J. Havenga[1], Z Simpson*[1], I. Witthöft[2], [1]<i>Stellenbosch University, South Africa</i>, [2]<i>Independent researcher, South Africa</i></td></tr>
<tr><td>B5_OS4_03</td><td>District level freight production of agricultural commodities in India
S Dhulipala*, G. Patil, <i>Indian Institute of Technology Bombay, India</i></td></tr>
<tr><td>B5_OS4_04</td><td>Modelling interactions between freight forwarders and recipients – An extension of the MATsim toolkit
T. Matteis[1], W. Wisetjindawat[2], G Liedtke*[1], [1]<i>Institute of Transport Research, Germany</i>, [2]<i>University of Bristol, United Kingdom</i></td></tr>
<tr><td>B5_OS4_05</td><td>Developing a disaggregated national freight flow model for India
B Aritua*[1], J. Havenga[2], Z Simpson*[2], I. Witthöft[3], [1]<i>The World Bank Group, USA</i>, [2]<i>Stellenbosch University, South Africa</i>, [3]<i>Independent Researcher, South Africa</i></td></tr>
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<table>
<tr><td colspan="3" style="text-align:center">B5 – OS5: Data Driven Approaches
Room: VMCC 11
Session Chair: Hanno Friedrich</td></tr>
<tr><td rowspan="2">14:30-16:10</td><td>B5_OS5_01</td><td>Modeling and prediction of freight delivery for blocked and unblocked conditions using machine learning techniques
P. Pandya, R Gujar*, V. Vakharia, <i>PDPU Gandhinagar, India</i></td></tr>
<tr><td>B5_OS5_02</td><td>Designing zoning systems for freight transportation planning: A GIS-based approach for automated zone design using public data sources
A Chandra*, A Pani*, P Sahu*, <i>Birla Institute of Technology and Science Pilani, India</i></td></tr>
</table>

	B5_OS5_03	Truck identification on freeways using Bluetooth data analysis A Nadi*[1], M. Snelder[1,2], L. Tavasszy[1], S. Sharma[1], H. Van Lint[1], [1]*Delft University of Technology, Netherlands,* [2]*TNO, Netherlands*
	B5_OS5_04	Combining macro- and microscopic approaches to model commercial transport demand in an urban area A. Reiffer, M. Heilig, E. Szimba, J. Klenner, M Kagerbauer*, P. Vortisch, *Karlsruhe Institute of Technology, Germany*
B5 – OS6: Freight Transport Demand Management Room: VMCC 11 Session Chair: Eduardo Marcucci
16:30-18:10	B5_OS6_01	Impact of decisions in freight transport demand management on rice logistics in the Mekong delta of Vietnam B Nguyen Thi*, *Foreign Trade University, Vietnam*
	B5_OS6_02	A comprehensive sector analysis for detailed impact assessment of freight transport management measures B Nguyen Thi*, *Foreign Trade University, Vietnam*
	B5_OS6_03	Assessing the economic and environmental impacts of a public transport-based crowdshipping system E Marcucci*[1,2], V Gatta*[2], M. Nigro[2], S. Patella[2], [1]*Molde University College, Norway,* [2]*Roma Tre University, Italy*

TOPIC C: TRAFFIC MANAGEMENT, OPERATIONS, AND SAFETY
C1: Traffic Theory and Modelling
Monday, 27 May 2019
C1 – OS1: Intersection Management and Modelling Room: LC001 Session Chair: M. Singh
14:30-16:10	C1_OS1_01	Modelling of seepage behaviour using available gaps at signalized intersection M Singh*, K. Rao, *Indian Institute of Technology Delhi, India*
	C1_OS1_02	Calibration of HCM equation to estimate the saturation flow at signalized junction under mixed traffic P. Patel*, A. Dhamaniya, *Sardar Vallabhbhai National Institute of Technology, India*
	C1_OS1_03	Analysis and estimation of saturation flow at signalized intersections in mixed traffic conditions R Sushmitha*, K. Ravi Shankar, *National Institute of Technology Warangal, India*
	C1_OS1_04	Effect of two-wheeler proportion on passenger car units at four legged roundabouts A. Khan[1], T. Ann Joseph[2], S Arkatkar*[2], A. Dhamania[2], [1]*Universal College of Engineering, India,* [2]*Sardar Vallabhbhai National Institute of Technology, India*

Tuesday, 28 May 2019		
C1 – OS2: Big Data Informed Traffic Models Room: LC001 Session Chair: George Yannis		
11:30-13:10	C1_OS2_01	**Investigation of driver route choice behaviour using bluetooth data** S Kottayil*, P Tsoleridis*, K Rossa*, R Connors*, C Fox*, *The Institute for Transport Studies, University of Leeds, United Kingdom*
	C1_OS2_02	**Driving speed model development using driving data obtained from smartphone sensors** D. Tselentis, C. Gonidi, G Yannis*, *National Technical University of Athens, Greece*
	C1_OS2_03	**Toward reliable estimations of urban traffic flows from machine learning and floating car data** J Li*, J. Boonaert, A. Doniec, G. Lozenguez, *IMT Lille Douai, France*
	C1_OS2_04	**Field data application of a non-lane based multi-class traffic flow model** R Moahn[*1], G. Ramadurai[2], [1]*Indian Institute of Science, India*, [2]*Indian Institute of Technology, India*
	C1_OS2_05	**Insight into driver behavior during overtaking maneuvers in disorderly traffic: An instrumented vehicle study** B Dutta[*1], V Vasudevan[*2], [1]*Indian Institute of Technology Kanpur, India*, [2]*University of Alaska Anchorage, USA*
Wednesday, 29 May 2019		
C1 – OS3: Highway Management Room: LC001 Session Chair: V Valencia Alaix		
09:30-11:10	C1_OS3_01	**Perceived travel time attribute analysis and estimation modelling of a metropolitan traffic corridor: A case study of Surat, India** K Saw*, B. Katti, G. Joshi, *Sardar Vallabhbhai National Institute of Technology, India*
	C1_OS3_02	**Simulation of hetrogeneous traffic flow on a co-ordinated corridor** M. John Finny, K. Prathibaa*, K. Gunasekaran, *College of Engineering Guindy, India*
	C1_OS3_03	**Operational evaluation of climbing lanes on steep grades and heavy trucks** V Valencia Alaix[*1], A. García García[2], [1]*Universidad Nacional de Colombia (Medellín), Colombia*, [2]*Universitat Politècnica de València, Spain*
C1 – OS4: Multimodal Traffic Models Room: LC001 Session Chair: Boris Davydov		
16:30-18:10	C1_OS4_01	**Arrial delay forming in the dence train flow** B Davydov[*1], V. Chebotarev[2], K. Kablukova[2], [1]*Far Eastern State Transport University, Russian Federation*, [2]*Far Eastern Branch of RAS, Russian Federation*
	C1_OS4_02	**Calibration of car-following model for Indian traffic conditions** M Errampalli[*1], S. Mallela[2], S. Chandra[1], [1]*CSIR-Central Road Research Institute, India*, [2]*Jawaharlal Nehru Technological University (JNTU), India*
	C1_OS4_03	**Integrated multimodal transit route network design with feeder systems** A. Sachan, T Mathew*, *Indian Institute of Technology Bombay, India*
	C1_OS4_04	**Practical guidance for using mesoscopic simulation tools** B. Sun[1], J. Appiah[2], B Park[*1], [1]*University of Virginia, USA*, [2]*Virginia Transportation Research Council, USA*

WCTR 2019

	C1_OS4_05	Comparative study of pedestrian crossing behaviour at uncontrolled intersection and midblock locations L Govinda*, D. Abhigna, P. Nair, K. Ravi Shankar, *National Institute of Technology, Warangal, India*

C2: Urban Transport Operations

Monday, 27 May 2019

C2 – OS1: Arterial Coordination Control and Corridor Management
Room: LC001
Session Chair: Zong Tian

16:30-18:10	C2_OS1_01	A model analysis of the saturation flow rate influenced by downstream conditions Z Hong*, N. Hideki, *Nagoya University, Japan*
	C2_OS1_02	Design of robust signal timings for two-dimensional traffic variations on arterial roads C Shirke*[1], N. Sabar[2], E. Chung[3], A. Bhaskar[1], [1]*Queensland University of Technology, Australia,* [2]*La Trobe University, Australia,* [3]*Hong Kong Polytechnic University, Hong Kong*
	C2_OS1_03	Analysis of travel speed on 4-lane signalized arterials E Akandwanaho*, H. Nakamura, *Nagoya University, Japan*
	C2_OS1_04	Corridor level mobility analysis using GPS data S Banik*[1], D. Bullock[2], L. Vanajakshi[1], [1]*Indian Institute of Technology Madras, India,* [2]*Purdue University, USA*

Wednesday, 29 May 2019

C2 – OS2: Traffic Operations and Quality of Service at Signalized Intersection and Roundabout
Room: LC001
Session Chair: Keshuang Tang

11:30-13:10	C2_OS2_01	Comparison of artificial intelligence based roundabout entry capacity models A Patnaik*, R. Patra, P Bhuyan*, *NIT Rourkela, India*
	C2_OS2_02	Design of passive transit signal priority control for bus rapid transit based on a simulation-based optimization model Y Ni*[1], H. Lo[2], H. Huang[3], Y. Hsu[1], T. Chang[4], [1]*National Taiwan University, Taiwan,* [2]*National Cheng Kung University, Taiwan,* [3]*Traffic Engineering Technician Affair, Taiwan,* [4]*Fujian University of Technology, China*
	C2_OS2_03	Weighted center of mass based optimal control scheme for pre-timed signalized junctions A Patel*, J. Venkateswaran, T. Mathew, *IIT Bombay, India*
	C2_OS2_04	Modelling service quality offered by signalized intersections from automobile users' perspective M Kar*[1], S. Jena[1], A. Chakraborty[2], P Bhuyan*[1], [1]*NIT Rourkela, India,* [2]*IIT Kharagpur, India*

C2 – OS3: Public Transport, Shared Mobility and Emergency Evacuation
Room: LC001
Session Chair: Nirajan Shiwakoti

14:30-16:10	C2_OS3_01	Study on the feasibility of downward evacuation in metro station when the station hall catch fire H Yu*[1], Y. Wang[1], P. Qiu[2], J. Chen[2], [1]*South China University of Technology, China,* [2]*Guangzhou Metro Group Co. Ltd, China*
	C2_OS3_02	In an emergency evacuation situation what would you do? N Shiwakoti*, R. Tay, P. Stasinopoulos, *RMIT University, Australia*
	C2_OS3_03	A review of service reliability measures for public transportation systems A Kathuria*[1], M. Parida[2], C. Sekhar[3], [1]*VNIT Nagpur, India,* [2]*IIT Roorkee, India,* [3]*CRRI-CSIR, India*

15th World Conference on Transport Research
26-31 May 2019, Mumbai, India

	C2_OS3_04	**A Protocol for simulation modeling of ridesourcing services in Perth metropolitan area: optimisation of fleet size in an urban environment** J Chakraborty*[1], D. Pandit[1], J. Xia[2], F. Chan[2], *[1]Indian Institute of Technology, Kharagpur, India, [2]Curtin University, Australia*
	C2_OS3_05	**Performances and influential factors of bike sharing: Case study of Adelaide, South Australia** A. Soltani*[1,2], H. Anh Nguyen*[3], A. Allan*[1] *[1]University of South Australia, Australia. [2]Shiraz University, Iran, Islamic Republic of. [3]University of Transport and Communications., Vietnam*

C3: Intelligent Transport Systems

Monday, 27 May 2019

C3 – OS1: Data & Analytics-1
Room: LC002
Session Chair: Lelitha Vanajakshi

14:30-16:10	C3_OS1_01	**Estimating OD matrices from observed trajectories and link counts** K Behara*[1], A. Bhaskar[1], E. Chung[2], *[1]Queensland University of Technology, Australia, [2]The Hong Kong Polytechnic University, Hong Kong*
	C3_OS1_02	**Hybrid data envelopment analysis for large-scale smartphone data modeling** D. Tselentis, E. Vlahogianni, G Yannis*, L. Kavouras, *National Technical University of Athens, Greece*
	C3_OS1_03	**Calibrating traffic microscopic simulation model parameters using an evolutionary approach** S Leal*[1,2], P Almeida*[1], R. Ribeiro[1], *[1]Federal Center of Technological Education of Minas Gerais – CefetMG, Brazil, [2]University Center of Belo Horizonte - UNIBH, Brazil*
	C3_OS1_04	**Application of clustering algorithms for Spatio-Temporal analysis of urban traffic data** D. Toshniwal, N Chaturvedi*, M. Parida, A. Garg, C. Choudhary, Y. Choudhary, *Indian Institute of Technology Roorkee, India*
	C3_OS1_05	**Performance evaluation of urban arterial network using Wi-Fi sensors under heterogeneous traffic conditions** C Advani*[1], S. Thakkar[1], S. Arkatkar[1], A. Bhaskar[2], *[1]SVNIT Surat, India, [2]QUT, Australia*

C3 – OS2: Data & Analytics-2
Room: LC002
Session Chair: Shriniwas Arkatkar

16:30-18:10	C3_OS2_01	**Systematic traffic peak period identification using Wavelet Transformation and Bottom-up Segmentation** P. Connors[1], S Respati*[1], A. Sharma[2], A. Bhaskar[1], *[1]Queensland University of Technology (QUT), Australia, [2]The University of Queensland, Australia*
	C3_OS2_02	**Examining the feasibility of using naturalistic driving study data for validating speed prediction models** S Geedipally*[1], M. Pratt[1], B. Dadashova[1], L. Wu[1], M. Shirazi[2], *[1]Texas A&M Transportation Institute, USA, [2]Texas A&M University, USA*
	C3_OS2_03	**Modeling the impact of sensor failure on full link flow observability in the traffic network** M Salari*[1], L. Kattan[1], W. H.K. Lam[2], M. Ansari Esfeh[1], *[1]University of Calgary, Canada, [2]The Hong Kong Polytechnic University, Hong Kong*
	C3_OS2_04	**Predicting traffic phases from car sensor data** E. Heyns, S Uniyal*, F. Tillema, C. Huijboom, *HAN University of Applied Sciences, Netherlands*

Tuesday, 28 May 2019		
C3 – OS3: ITS technologies and Applications Room: LC002 Session Chair: Edward Chung		
11:30-13:10	C3_OS3_01	**Integration of head & eye-tracking for driver monitoring in vehicular environment** A Sai Charan*[1], R Assfalg*[2], H Venkataraman*[1], [1]*Indian Institute of Information Technology Sri City, India,* [2]*DHBW Heidenheim, Germany*
	C3_OS3_02	**Analysis and use of Wi-Fi data for signal state identification** S Sharma*[1], H Maripini*[2], A Khadhir*[2], S Arkatkar*[1], L. Vanajakshi[2], [1]*Sardar Vallabhbhai National Institute of Technology, India,* [2]*Indian Institute of Technology Madras, India*
	C3_OS3_03	**A mobile GIS framework for improving the security of school vehicles** A Chakraborty*, A. Dasgupta, P. Prasad, S. Ghosh, B. Maitra, *Indian Institute of technology Kharagpur, India*
	C3_OS3_04	**Early empirical evidence for the effects of adaptive ramp metering on measures of travel time reliability** T. Low[1], A Pande*[1], R. Bertini[2], [1]*Cal Poly SLO, USA,* [2]*University of South Florida, USA*
C3 – OS4: Machine Learning Room: LC002 Session Chair: Anurag Pande		
16:30-18:10	C3_OS4_01	**Predicting traffic volume and occupancy at failed detectors** I Tarunesh*[1], E. Chung[2], [1]*Indian Institute of Technology, Bombay, India,* [2]*The Hong Kong Polytechnic University, Hong Kong*
	C3_OS4_02	**Controlling signalized intersections using machine learning** A. Eriksen*, H. Lahrmann, K. Larsen, J. Taankvist, *Aalborg University, Denmark*
	C3_OS4_03	**Impact of ITS on urban transport operations and management** S Jain*[1], S. S*[1], V. Gaurav[2], [1]*Indian Institute of Technology Roorkee, India,* [2]*Space Application Centre (SAC), India*
	C3_OS4_04	**A random forest incident detection algorithm that incorporates contexts** J Evans*[1], B. Waterson[1], A. Hamilton[2], [1]*University of Southampton, United Kingdom,* [2]*Siemens Mobility Limited, United Kingdom*
Wednesday, 29 May 2019		
C3 – OS5: Traveler Information Room: LC002 Session Chair: Ashish Bhaskar		
14:30-16:10	C3_OS5_01	**Short-Term travel speed prediction for urban expressways using convolutional neural network and tensor decomposition** T Han*[1], K. Tang[2], T. Oguchi[1], [1]*University of Tokyo, Japan,* [2]*Tongji University, China*
	C3_OS5_02	**Designing an integrated smart parking application** T Fabusuyi*[1,2], V. Hill[2], [1]*University of Michigan, USA,* [2]*Numeritics, USA*
	C3_OS5_03	**Influence of design elements in Graphical Route Information Panels on drivers' comprehension and response time** N. Reinolsmann[1], W Alhajyaseen*[2], T. Brijs[1], V. Ross[1], Q. Hussain[2], C. Timmermans[2], K. Brijs[1], [1]*Hasselt University, Belgium,* [2]*Qatar University, Qatar*
	C3_OS5_04	**Analysis and prediction of bus travel time under high variability condition** B. Dhivyabharathi, *, L. Vanajakshi, *Indian Institute of Technology Madras, India*

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C4: Traffic Safety Analysis and Policy

Monday, 27 May 2019

C4 – OS1: Pedestrian Safety
Room: LC101
Session Chair: Babak Mirbaha

14:30-16:10	C4_OS1_01	**Spatial assessment of pedestrian safety and accessibility around bus stops in Delhi** S. Lakhotia[1], S. Lassarre[2], K. Rao[1], G Tiwari*[1], [1]*Indian Institute of Technology Delhi, India,* [2]*IFSTTAR, France*
	C4_OS1_02	**Modeling the risk perception of pedestrians using a nested logit structure** B Mirbaha*, A. Asgari Toorzani, *Imam Khomeini International University, Iran, Islamic Republic of*
	C4_OS1_03	**Mapping pedestrian-vehicle behavior at urban undesignated mid-block crossings under mixed traffic environment – A trajectory-based approach** H. Golakiya, R. Chauhan, A Dhamaniya*, *Sardar Vallabhbhai National Institute of Technology, India*
	C4_OS1_04	**Identification of risk factors leading to pedestrian fatalities: An experience in Kolkata city** D Mukherjee*, S. Mitra, *Indian Institute of Technology Kharagpur, India*

C4 – OS2: Traffic Control & Safety Implications
Room: LC102
Session Chair: Anurag Pande

14:30-16:10	C4_OS2_01	**Analyzing Driver's Response to Yellow Indication Subjected to Dilemma Incursion: An Econometric Approach** R Majhi*, V. Senathipathi, *Central Road Research Institute, India*
	C4_OS2_02	**Network analysis for assessment of traffic safety and operation in rural travel time information system** S Cafiso*[1], C D Agostino*[2], M. Kiec[3], S. Pogodzinska[3], [1]*University of Catania, Italy,* [2]*Lund University, Sweden,* [3]*Cracow University of Technology, Poland*
	C4_OS2_03	**Comparing safety performance of roundabout and signalized intersection in heterogeneous traffic** B. K. Swain[1], N. Nezamuddin*[1], A Pande[2], [1]*Indian Institute of Technology Delhi, India,* [2]*Cal Poly State University, USA*
	C4_OS2_04	**Driver behaviour at the yellow onset: A Comparative study of distraction caused by phone conversation and a music player** P Choudhary*, N. Velaga, *IIT Bombay, India*
	C4_OS2_05	**Going to the nearest hospital vs. designated trauma centre for road traffic crashes- estimating the time difference in Delhi, India** R Ahuja*[1], G. Tiwari[1], K. Bhalla[2], [1]*Indian Institute of Technology, India,* [2]*The University of Chicago, USA*

C4 – OS3: Vulnerable Road Users Safety
Room: LC101
Session Chair: Ramchandra Rao

16:30-18:10	C4_OS3_01	**Interaction between motor vehicles and bicycles at two-lane roundabouts: A driving volatility based analysis** B. Bahmankhah, P. Fernandes, J. Teixeira, M Coelho*, *Universidade de Aveiro, Portugal*
	C4_OS3_02	**Development of bicycle safety index models for safety of bicycle flow at 3-legged junctions on urban roads under mixed traffic conditions** A Badveeti*, M Mir*, *National Institute of Technology (NIT), Srinagar, India*

	C4_OS3_03	**A proactive approach to assess safety level of urban bus stops** M. Cheranchery, K Bhattacharyya*, M. Salih, B. Maitra, *Indian Institute of Technology Kharagpur, India*
	C4_OS3_04	**Pedestrian safety at crosswalks and bus-stops: A global perspective** D Mukherjee*, K. Rao, G. Tiwari, *Indian Institute of Technology Delhi, India*

Tuesday, 28 May 2019

C4 – OS4: Crash Data Analysis (1)
Room: LC101
Session Chair: Marianne Vanderschuren

16:30-18:10	C4_OS4_01	**Identifying high crash risk highway segments using jerk-cluster analysis** S. Mousavi[1,2], Z. Zhang[3], S. Parr[4], A Pande*[5], B. Wolshon[6], *[1]Texas A&M University, USA, [2]Texas A&M Transportation Institute, USA, [3]Beihang University, China, [4]Embry Riddle Aeronautical University, USA, [5]Cal Poly State University, USA, [6]Louisiana State University, USA*
	C4_OS4_02	**How accurate are locations in Malaysian accident data? Development of a rectification procedure based on nested filtered search technique** A. Ahmed[1,2], A. Sadullah[2], A. Yahya[2], N Akhtar*[2], *[1]aNED University of Engineering and Technology, Pakistan, [2]Universiti Sains Malaysia, Malaysia*
	C4_OS4_03	**Combatting the road safety burden in the developing world: The case of south Africa** M Vanderschuren*[1], M. Arendse[2], T. Lane-Visser[1], A. Janmohammed[1], *[1]University of Cape Town, South Africa, [2]Western Cape Government, South Africa*
	C4_OS4_04	**Development of pedestrian crash prediction model for a developing country using Artificial Neural Network** A. Chakraborty, D. Mukherjee, S Mitra*, *Indian Institute of Technology Kharagpur, India*

C4 – OS5: Crash Prediction Methodologies (1)
Room: LC102
Session Chair: Mohamed Shawky

16:30-18:10	C4_OS5_01	**Multilevel hierarchical Bayesian for traffic accident prediction** S Susilawati*, M. The, *Monash University Malaysia, Malaysia*
	C4_OS5_02	**Safety performance functions for fatal crashes on national highways in India** H. Naqvi[1], G Tiwari*[2], *[1]National Highways Authority of India, India, [2]Indian Institute of Technology Delhi, India*
	C4_OS5_03	**A novel measure of speed variation for crash frequency prediction** R Jose*, S. Mitra, *Indian Institute of Technology Kharagpur, India*
	C4_OS5_04	**Calibrating predictive models in the highway safety manual for freeway segments using Kansas data** I. Matarage, S Dissanayake*, *Kansas State University, USA*
	C4_OS5_05	**Future accident prediction of individual driver** M Shawky*[1], A. El-Zaidi[2], *[1]Ain Shams University, Egypt, [2]Abu Dhabi Traffic Police, UAE*

Wednesday, 29 May 2019

C4 – OS6: Crash Data Analysis (2)
Room: LC101
Session Chair: Geetam Tiwari

09:30-11:10	C4_OS6_01	**Modeling fatal traffic crash occurrence in small Indian cities** K. Dhanoa[1], G Tiwari*[2], M. Malayath[2], *[1]Public Works Department, India, [2]Indian Institute of Technology, India*
	C4_OS6_02	**An evaluation of wrong-way crashes from highway ramps in Kansas, USA** E Fitzsimmons*, J. Cunningham, S. Dissanayake, J. Liang, *Kansas State University, USA*

	C4_OS6_03	**Data recording patterns and missing data in road crashes: Case study of five Indian cities** A Jha*[1], G. Tiwari[1], N. Chatterjee[2], [1]*TRIPP, IIT Delhi, India,* [2]*IIT Delhi, India*
	C4_OS6_04	**Analysis of risk factors associated with severe injury in child pedestrian-vehicle collision in Ghana** G Markin Yankah*, E. Aidoo, *Kwame Nkrumah University of Science and Technology, Ghana*
	C4_OS6_05	**Comparative analyses of vehicle safety ratings and real-world side impact crash outcomes** P Penmetsa*[1], A Lidbe*[1], T. Wang[2], S Nambisan*[1], [1]*University of Alabama, USA,* [2]*Texas A&M Transportation Institute, USA*
C4 – OS7: Surrogate Traffic Safety Measures (2) Room: LC102 Session Chair: Riccardo Rossi	
11:30-13:10	C4_OS7_01	**Effects of pre-detection and post-detection phases of a sudden event on accident risk** P Choudhary*, N. Velaga, *Indian Institute of Technology, Bombay, India*
	C4_OS7_02	**A simulation study on optimizing the pattern of speed reduction markings affecting speed choice before curve entry** H Yotsutsuji*[1], T Otazawa*[2], H. Kita[2], [1]*CERI, PWRI, Japan,* [2]*Kobe University, Japan*
	C4_OS7_03	**Computing odds of crashes and near-crashes using naturalistic driving study data** N. Bharadwaj, P Edara*, C. Sun, *University of Missouri, USA*
	C4_OS7_04	**Conflict severity estimation of uncontrolled intersections using surrogate safety measures** P Akinapalli*, D. Pawar, *Indian Institute of Technology Hyderabad, India*
C4 – OS8: Human Factors & Traffic Safety (1) Room: LC101 Session Chair: Wael Alhajyaseen	
14:30-16:10	C4_OS8_01	**Perceiving driving speed in real world: A study on an expressway and a local road** Q. Hussain[1], W Alhajyaseen*[1], K. Brijs[2], A. Pirdavani[2], N. Reinolsmann[2], T. Brijs[2], [1]*Qatar University, Qatar,* [2]*Hasselt University, Belgium*
	C4_OS8_02	**Study of right-turning driver's dilemma at un-signalized T-Intersections under mixed traffic conditions** N. Pawar, N. Gore, S Arkatkar*, *SVNIT, India*
	C4_OS8_04	**Analysis on characteristics of dangerous driving events via recorded data of drive-recorder** K Min*, K Min*, *Nikken Sekkei Research Institute, Japan*
C4 – OS9: Human Factors & Traffic Safety (2) Room: LC101 Session Chair: Nagendra R Velaga	
16:30-18:10	C4_OS9_01	**Effect of driver work-rest patterns, lifestyle and payment incentives on long-haul truck driver sleepiness** K. Mahajan[1], N. Velaga[1], A. Kumar[2], A. Choudhary[3], P Choudhary*[1], [1]*Indian Institute of Technology, Bombay, India,* [2]*Indian Institute of Technology (IIT) Kharagpur, India,* [3]*Loughborough University, Leicestershire, United Kingdom*
	C4_OS9_03	**A study of the psychological factors that influence the dangerous driving behaviour of drivers** M. Najeeb*, *Kerala Motor Vehicles Department, India*
	C4_OS9_04	**Rle of prospective memory in driving behaviour** N Sharma*, A. Khan, *Indian Institute of Technology Bombay, India*
	C4_OS9_05	**A study of the psychological factors that influence the dangerous driving behaviour of drivers** M Najeeb*, *Ministry of Transport, India*

C4 – OS10: Traffic Safety Policy Room: LC102 Session Chair: Velumurugan Senathipathi**		
16:30-18:10	C4_OS10_01	**Policy implications from traffic accident analysis with a case study from Vietnam** A Minh Ngoc*[1], T. Thi My Thanh[2], [1]*University of Transport and Communications, Vietnam,* [2]*University of Transport Technology, Vietnam*
	C4_OS10_02	**Towards the development of traffic safety strategies in developing countries: analysis of road users' perspective** A Minh Ngoc*[1], T. Thi My Thanh[2], [1]*University of Transport and Communications, Vietnam,* [2]*bUniversity of Transport Technology, Vietnam*
	C4_OS10_03	**Review of policies and incident duration associated with disabled and abandoned vehicles** D Chimba*, *Tennessee State University, USA*
	C4_OS10_04	**Development of low-volume rural road safety manual for Bangladesh** S Rabbi*[1], K. Newaz[1], A. Huq[1], M. Hoque[2], [1]*Accident Research Institute, Bangladesh,* [2]*Bangladesh University of Engineering and Technology, Bangladesh*

Thursday, 30 May 2019

C4 – OS11: Human Factors & Traffic Safety (3) Room: LC101 Session Chair: George Yannis**		
09:30-11:10	C4_OS11_01	**Role conflict and trust repair of flight attendant** N Okabe*, *Yokohama National University, Japan*
	C4_OS11_02	**Investigating the correlation between driver's characteristics and safety performance** D. Tselentis, K. Folla, V. Agathangelou, G Yannis*, *National Technical University of Athens, Greece*
	C4_OS11_03	**Modelling the effect of alcohol consumption on reaction time of young and mature drivers** A Yadav*, N. Velaga, *Indian Institute of Technology (IIT) Bombay, India*
	C4_OS11_04	**Bivariate probit analysis of the relationship between driver and passenger's seatbelt use** E Aidoo*[1], R. Amoh-Gyimah[2], W. Ackaah[2], [1]*Kwame Nkrumah University of Science and Technology, Ghana,* [2]*CSIR-Building and Road Research Institute, Ghana*
	C4_OS11_05	**Challenges with human factors in road traffic safety, and the need for reasonable degrees of automation** A Mofolasayo*, *Not Applicable, Canada*
C4 – OS12: Road Design & Traffic Safety Room: LC102 Session Chair: Akhilesh Maurya**		
09:30-11:10	C4_OS12_01	**Complete street concept, and ensuring safety of vulnerable road users** A. Mofolasayo*, *University of Alberta, Canada*
	C4_OS12_02	**Analysis of speed profiles at speed hump under various dimensions & simulating their LOS using VISSIM** K Ravi Kiran*, K. Molugaram, M. Sandeep, *Osmania University, India*
	C4_OS12_03	**Critical analysis of speed hump, speed bump and geometric design of curved speed hump** K Ravi Kiran*[1], K. Molugaram[1], B. Abhinay[2], [1]*Osmania University, India,* [2]*Telangana State Engineering Research Labs, India*
	C4_OS12_04	**Probabilistic geometric design of highways: A review** K Kalita*, A. Maurya, *Indian Institute of Technology Guwahati, India*

TOPIC D: DATA COLLECTION AND PROCESSING METHODS		
D1: Data Collection and Processing Methods		
Monday, 27 May 2019		
D1 – OS1: Public Transport Data Room: VMCC31 Session Chair: Catherine Morency		
14:30-16:10	D1_OS1_01	**Assessing longitudinal stability of public transport users with smart card data** M. Moradi[1,2], M Trepanier*[1,2], [1]*Polytechnique Montreal, Canada,* [2]*Interuniversitary Research Centre on Entreprise Networks, Logistics and Transportation (CIRRELT), Canada*
	D1_OS1_02	**Bus passenger volume and origin-destination based on field surveys using a wi-fi scanner** A Hidayat*[1,2], S. Terabe[1], H. Yaginuma[1], [1]*Tokyo University of Science, Japan,* [2]*Universitas Teknologi Sulawesi, Indonesia*
	D1_OS1_04	**Validating the Origin–Destination estimation algorithm for bus systems using smart card data** M Mosallanejad*[1], S. Somenahalli[1], A. Vij[1], D. Mills[2], [1]*University of South Australia, Australia,* [2]*Department of Planning Transportation and Infrastructure, Australia*
Wednesday, 29 May 2019		
D1 – OS2: Mobile Phone/GPS Data Room: VMCC31 Session Chair: Martin Trepanier		
09:30-11:10	D1_OS2_01	**Optimizing mobile device GPS data collection to capture long distance travel** B Kaufman*[1], G. Galford[2], M. Burke[1], [1]*Griffith University, Australia,* [2]*University of Vermont, USA*
	D1_OS2_02	**Examining difference between paper- and web-based self-reported departure/arrival time using smartphone-based survey** Y Sato*, T. Maruyama, *Kumamoto University, Japan*
	D1_OS2_03	**Updating of a travel demand model based on fuel consumption data** A Hakimelahi*[1,2], K Rao*[2], S Dhingra*[2], F Peiravian*[1], [1]*Shiraz University, Iran, Islamic Republic of,* [2]*Indian Institute of Technology Bombay, India*
	D1_OS2_04	**Cell phone signaling data and its implication for urban planning in Hangzhou, China** C Shi*, H. Pan, X. Niu, *Tongji University, China*
D1 – OS3: Mobile Phone/GPS Data Room: VMCC31 Session Chair: Martin Trepanier		
14:30-16:10	D1_OS3_01	**Emerging data for pedestrian and bicycle monitoring: Sources and applications** K Lee*, I Sener*, *Texas A&M Transportation Institute, USA*
	D1_OS3_02	**Classifying logistic vehicles in cities using Deep learning** S Benslimane*, S. Tamayo, A. De La Fortelle, *Mines ParisTech, France*
	D1_OS3_03	**E-mission: A platform for reproducible and extensible human travel data collection** S. Kalyanaraman[1], P. Yedavalli[1], T. Rashidi[2], I Banerjee*[3], [1]*University of California, USA,* [2]*University of New South Wales, Australia,* [3]*Indian Institute of Science, India*
	D1_OS3_04	**Households with every member out-of-home (HEMO): Comparison using the Kumamoto Person Trip surveys in 1984, 1997, and 2012** T Fukahori*, Y. Sato, T. Maruyama, *Kumamoto University, Japan*

D2: Travel Behaviour and Choice Modeling		
Monday, 27 May 2019		
D2 – OS1: New and Advanced Travel Demand Data Collection and Analysis Methods I Room: VMCC32 Session Chair: Muhammad Ahsanul Habib		
14:30-16:10	D2_OS1_01	**Understanding travel behavior from call detail records** N Jeewanthi*, A. Kumarage, *University of Moratuwa, Sri Lanka*
	D2_OS1_02	**Understanding variations in activity-based vehicle allocation decisions for solo and joint tours: A latent segmentation-based random parameter logit modeling approach** N Khan*, M. Habib, *Dalhousie University, Canada*
	D2_OS1_03	**Development of a hierarchical integrated choice and latent variable model for understanding travelers' acceptance of variable message signs** E. Diop, S. Zhao, T Duy*, *Dalian University of Technology, China*
	D2_OS1_05	**An integrated choice and latent variable framework to incorporate the influence of travel time variability in truck route choice** M Biswas[*1], A. Pinjari[1], S. Dubey[2], [1]*Indian Institute of Science, India,* [2]*Tiger Analytics, India*
D2 – OS2: New and Advanced Travel Demand Data Collection and Analysis Methods II Room: VMCC32 Session Chair: Abdul Pinjari		
16:30-18:10	D2_OS2_02	**The evaluation of bicycle transport policy by modal choice model with fuzzy logic** Y Yasuda*, A. Takamasa, *Graduate school of Kansai University, Japan*
	D2_OS2_03	**A comparative study of trip purpose inference using data mining techniques** D Hong*, D. Ka, Y. Jung, C. Lee, *Seoul National University, Korea, Republic of*
	D2_OS2_04	**Deriving attributes of walking behavior from a GPS-based travel survey in Rhone-Alpes (France)** M Nguyen[*1,2], C. Garcia[1], J Armoogum[*1], [1]*The French Institute of Science and Technology for Transport, Development and Networks (IFSTTAR), France,* [2]*University of Transport and Communications (UTC), Vietnam,*
	D2_OS2_05	**A Rank Ordered Logit Multivariate Count Data (ROLMCD) framework for analysing route choice portfolios** S Saxena[*1], A. Pinjari[1], R. Paleti[2], D. Tahlyan[3], [1]*Indian Institute of Science, India,* [2]*Pennsylvania State University, USA,* [3]*Northwestern University, USA*
Wednesday, 29 May 2019		
D2 – OS3: Socio-Psychological, Demographic, and Built Environment Impacts on Travel Behavior Room: VMCC32 Session Chair: Geetam Tiwari		
09:30-11:10	D2_OS3_01	**Socio-psychological, Instrumental and Demographic determinants of travel behavior** S Gandhi*, G. Tiwari, *Indian Institute of Technology Delhi, India*
	D2_OS3_02	**Travel behavior of the urban poor: A comparative study between Maputo and Nairobi** A. Tembe, F. Nakamura, S Tanaka*, R. Arioshi, S. Miura, *Yokohama National University, Japan*
	D2_OS3_03	**The impact of the built environment on travel behavior: The Swiss experience based on two national travel surveys** T. Thi Vu, T Ohnmacht*, *University of Applied Science and Arts - Business, Switzerland*
	D2_OS3_04	**Effect of travel attitude and travel activities on residential self-selection: A case study of Agartala City** A. Acharjee*, P. Sarkar, *NIT Agartala, India*

	D2_OS3_05	**Analyzing potential age cohort effects in car ownership and residential location in the metropolitan region of Amsterdam** J Van Kampen*[1,2], E. Pauwels[1], R. van der Mei[1,2], E. Dugundji[1,2], [1]*Centrum Wiskunde & Informatica, Netherlands, [2]Vrije Universiteit Amsterdam, Netherlands*
D2 – OS4: On Carsharing, Ridesharing, and Vehicle Automation Room: VMCC32 Session Chair: Ishant Sharma	
11:30-13:10	D2_OS4_01	**Characterising annual behaviour of carsharing users in Montreal** H. Baradaran Kashani[1,2], M Trepanier*[1,2], [1]*Polytechnique Montreal, Canada, [2]Interuniversiary Research Centre on Entreprise Networks, Logistics and Transportation (CIRRELT), Canada*
	D2_OS4_02	**Predicting car sharing station-based trip generation using a growth model** M. Ménoire[1], G. Wielinski[1,2], C Morency*[1,2], M. Trépanier[1,2], [1]*Polytechnique Montreal, Canada, [2]CIRRELT (Interuniversiary Research Centre on Entreprise Networks, Logistics and Transportation), Canada*
	D2_OS4_03	**Modelling of car sharing: A stated choice experiment** A Papu Carrone*, V. Hoening, A. Fjendbo Jensen, S. Eriksen Mabit, J. Rich, *Technical University of Denmark, Denmark*
	D2_OS4_04	**User preferences regarding ridesourcing and informal Intermediate Public Transport** A. Danesh[1,2], N. R. Velaga[2], D Das*[2], [1]*Tongji University, China, [2]IIT Bombay, India*
	D2_OS4_05	**A quantum cognition model for bridging stated and revealed preference** J. Yu[1,2], R Jayakrishnan*[1], [1]*University of California, USA, [2]Cabmridge Systematics, USA*
D2 – OS5: Well, It's All About Time and Travel Mode! Room: VMCC32 Session Chair: M.V.L.R. Anjaneyulu	
16:30-18:10	D2_OS5_01	**Factors affecting the departure train station choice of cyclists in the western region of the Netherlands** M Jayaraj*[1], J. van Kampen[2], T. Koch[2], E. Pauwels[2], R. van der Mei[2], E R Dugundjia*[1], [1]*VU, Netherlands, [2]CWI, Netherlands*
	D2_OS5_02	**Value of time spent commuting** Z Adam*[1], L. Walasek[1], C. Meyer[1,2], [1]*University of Warwick, United Kingdom, [2]University Hospitals Coventry and Warwickshire NHS Trust, United Kingdom*
	D2_OS5_03	**Time-of-day choice behaviour of commuters in Kochi City, India** K M G*[1], S. George T.[1], V. Anjaneyulu[2], [1]*Mar Athanasius College of Engineering, India, [2]National Institute of Technology, India*
	D2_OS5_04	**A tour-based mode choice models for commuters in Indonesia** F. Bastarianto*[1,2], I. Muhammad Zudhy[1], C. Choudhury[2], D. Palma[2], M. Imam[1], [1]*Universitas Gadjah Mada, Indonesia, [2]University of Leeds, United Kingdom*
	D2_OS5_05	**Multi-modal transportation choice modelling of metropolitan region of Amsterdam** V Janardhan*[1,2], E R Dugundji*[1,2], [1]*Vrije Universiteit, Netherlands, [2]Centrum Wiskunde & Informatica, Netherlands*

D3: Applications of Travel Behaviour Analysis and Demand Modeling Approaches

Monday, 27 May 2019

D3 – OS1: Demand Estimation and Modelling
Room: VMCC33
Session Chair: Thierry Blayac

14:30-16:10	D3_OS1_01	**A life Expectancy-Period-Cohort model to project private car fleet and traffic applied to France** J Madre*[1], Y Bussière*[2], R Grimal*[3], *[1]IFSTTAR, France, [2]BUAP, Mexico, [3]CEREMA, France*
	D3_OS1_02	**Passengers' OD flow estimation model for the flat fare bus system** H Shimamoto*, I. Hirai, *University of Miyazaki, Japan*
	D3_OS1_03	**Is there a limit to traffic growth? Potential demand and convergence paths towards saturation** R Grimal*, *CEREMA, France*
	D3_OS1_04	**Does selection of link influence the O-D matrix estimation from link counts? An experience in Bhubaneswar City** S Annam*, D. Basu, B. Maitra, *Indian Institute of Technology Kharagpur, India*
	D3_OS1_05	**Practical population synthesis enhancements to support advanced and activity-based travel demand models** R Balakrishna*, S. Sundaram, *Caliper Corporation, USA*

D3 – OS2: Shared Mobility and Services
Room: VMCC33
Session Chair: Alexis Fillone

16:30-18:10	D3_OS2_01	**The future of public transport in rural areas – A German case study on ridesharing with autonomous vehicles** M. von Mörner[1,2], R Linke*[1], M. Boltze[1], *[1]Institute for Transport Planning and Traffic Engineering (IVV) Technische Universität Darmstadt, Germany, Germany, [2]Planungsbüro von Mörner, Germany*
	D3_OS2_02	**Perception of parents towards willingness-to-pay for improved service of shared modes for school transportation in Urban India** P Prasad*, B. Maitra, *Indian Institute of Technology Kharagpur, India*
	D3_OS2_03	**A user-based relocation strategy for free-floating bike sharing system: A case study of Beijing, China** S. Chang, Z Liu*, *National Taiwan University, Taiwan*
	D3_OS2_04	**Fully automated vehicles: A cost-based analysis of the share of ownership and mobility services** Z Wadud*[1], G. Mattioli[2], *[1]University of Leeds, United Kingdom, [2]Technical University of Dortmund, Germany*

Tuesday, 28 May 2019

D3 – OS3: Travel Behaviour and Public Transport
Room: VMCC33
Session Chair: Manfred Boltze

11:30-13:10	D3_OS3_01	**Familiar strangers in our midst: An exploratory study of Beijing metro encounters** J Zhou*, *The University of Hong Kong, Hong Kong*
	D3_OS3_02	**Investigating route selection by operators for optimizing earning- an Agent Based Modelling approach** R Sawarkar*, A. Patil, *Visvesvaraya National Institute of Technology, India*

	D3_OS3_03	**Mode choice in home-to-work travel in mid-size towns: The competitiveness of public transport when bicycling and walking are viable options** J Holmgren*[1], P. Ivehammar[2], *[1]Specialized University in Logistics, Norway, [2]Linköping University, Sweden*
	D3_OS3_04	**Are rail punctuality indicators useful? Some evidence from user's perceptions** T Blayac*[1], A. Mbairadjim Moussa[2], M. Stéphan[3], *[1]CEE-M - University of Montpellier, France, [2]Fairway AI, France, [3]CREM - University of Rennes 1, France*
	D3_OS3_05	**Profiling commuters' travel behavior in the pacific states of the continental U. S** T Fabusuyi*[1], R. Hampshire[1], Z. Qian[2], *[1]University of Michigan, USA, [2]Carnegie Mellon University, USA*

Wednesday, 29 May 2019

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<tr><td colspan="3" style="background:green">

D3 – OS4: Travel Behaviour Analysis and Application-I
Room: VMCC33
Session Chair: Shyue-Koong Chang
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<tr><td>09:30-11:10</td><td>D3_OS4_01</td><td>

Basics on categorizing travel-time-based degrees of satisfaction using triangular fuzzy-membership functions
A. Anand*[1], V. George[1], R. Kanthi[2], T. Moduga[3], M. Padmashree[1], *[1]National Institute of Technology Karnataka, India, [2]ARCADIS Design and Consultancy, India, [3]Systra MVA Consulting (India) Private Limited, India*
</td></tr>
<tr><td></td><td>D3_OS4_02</td><td>

Analysis of travel characteristics based on smart card data using non-negative tensor factorization
M. Hosoe*, M. Kuwano, K. Tanimoto, *Tottori University, Japan*
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<tr><td></td><td>D3_OS4_03</td><td>

Understanding household vehicle ownership in Singapore through a comparison of econometric and machine learning models
R Basu*[1,2], J. Ferreira[1,2], *[1]MIT, USA, [2]SMART, Singapore*
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<tr><td></td><td>D3_OS4_04</td><td>

Vulnerability analysis based on Reliability Based User Equilibrium (RUE) with day to day demand variations
S Susilawati*, S. Hew, *Monash University Malaysia, Malaysia*
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<tr><td></td><td>D3_OS4_05</td><td>

Investigation of motorcycle rider's Ergonomic Discomfort and Musculoskeletal Disorders in right wrist due to throttling while driving a motorcycle
V. Deepan*, M. Subramanian, *BSA. Crescent Institute of science and Technology, India*
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D3 – OS5: Travel Behaviour Analysis and Application-II
Room: VMCC33
Session Chair: Johan Holmgren
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<tr><td>14:30-16:10</td><td>D3_OS5_01</td><td>

Prioritizing attributes for pedestrian facility improvement in a historically significant tier-ii Indian city
Y. Charaipotra, P. Prasad, M Francis*, B. Maitra, *IIT, India*
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<tr><td></td><td>D3_OS5_02</td><td>

Changes in travel behavior during flood events in relation to transport modes: the case of Metro Manila, Philippines
R Abad*, A. Fillone, *De La Salle University, Philippines*
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<tr><td></td><td>D3_OS5_04</td><td>

Evaluation of senior pedestrian's travel experience at temple sites- A case of Ekamara Kshetra Bhubaneswar
R. Mohanty*, P. S. Chani, *IIT Roorkee, India*
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<tr><td></td><td>D3_OS5_05</td><td>

Development of an integrated model system of transport and residential energy consumption
S Sharda*, T. Kim, S. Khoeini, I. Batur, D. Capasso Da Silva, R. Pendyala, *Arizona State University, USA*
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D4: Applications of Travel Behaviour Analysis and Demand Modeling Approaches

Monday, 27 May 2019

D4 – OS1: ICT, Activities and Travel Behavior
Room: VMCC31
Session Chair: Juan Antonio Carrasco

16:30-18:10	D4_OS1_01	**Understanding the impact of information and communication technology on travel behaviour** S Sharma*, *University of Glasgow, India*
	D4_OS1_02	**Is ICT improving access to activities? A case study of Mumbai, India** V Varghese*, A. Jana, *Indian Institute of Technology Bombay, India*
	D4_OS1_03	**Travel information and mobility behavior changes –some lessons from a survey in a French metropolis** T Blayac*[1], M. Stéphan[2], [1]*CEE-M - University of Montpellier, France,* [2]*CREM - University of Rennes 1, France*
	D4_OS1_04	**The challenge of inducing large-scale modal change in cities: Leveraging technology to automate Voluntary Travel Behavior Change programs** M Lagadic*, A Rocci*, N Louvet*, *6t - Bureau de Recherche, France*

Tuesday, 28 May 2019

D4 – OS2: ICT and Travel Time Use
Room: VMCC31
Session Chair: Giovanni Circella

11:30-13:10	D4_OS2_01	**The impact of free WiFi on rail passengers time use** J Jain*, W. Clayton, C. Bartle, D. Toher, K. Chatterjee, *University of the West of England, United Kingdom*
	D4_OS2_02	**Beyond traditional value of time: passenger behaviour regarding multimodal door-to-door travels in the age of information technologies** N Lenoir*, I. Laplace, *ENAC (French Civil Aviation University), France*
	D4_OS2_03	**Rethinking the value of time for an era of new mobility options** A. Najmi[1], M. Nurul Hassan[2], T H Rashidi*[1], R. Krueger[1], J. Auld[3], M. Javanmardi[3], P. Leiby[4], [1]*The University of New South Wales, Australia,* [2]*he University of New South Wales, Australia,* [3]*Argonne National Laboratory, USA,* [4]*Oak Ridge National Laboratory, USA*
	D4_OS2_04	**Lost time or won time?** M. Siska, V Oszter*, *KTI Institute for Transport Sciences, Saint-Barthélemy*
	D4_OS2_05	**Use and usefulness of travel time in fully automated vehicles, and their relationship with intention to use** Z Wadud*[1], F. Huda[2], [1]*University of Leeds, United Kingdom,* [2]*East West University, Bangladesh*

		TOPIC E: TRANSPORT SYSTEM ANALYSIS AND ECONOMIC EVALUATION		
		E1: Transport System Analysis and Economic Evaluation
		Monday, 27 May 2019
		E1 – OS1: Value of Time Room: VMCC23 Session Chair: Eckhard Szimba
14:30-16:10	E1_OS1_01	**Granting of a concession to an integrated public passenger transport operator in a competitive procedure** B Korže*, *University of Ljubljana, Slovenia*
	E1_OS1_02	**Assessing travel time savings and user benefits of automated driving – A case study for a commuting relation** E Szimba*[1], M. Hartmann[2], [1]*Karlsruhe Institute of Technology (KIT), Institute of Economics (ECON), Network Economics, Germany,* [2]*Karlsruhe Institute of Technology (KIT), Institute for Transport Studies, Germany*
	E1_OS1_03	**Input-Output analysis on industry development and container throughput** D. Yang[1], Y Zhao*[2], [1]*The University of Tokyo, Japan,* [2]*Shanghai Jiao Tong University, China*
	E1_OS1_04	**Spatial variation of travel time uncertainty in container shipping** H Jia*[1], J. Lam[2], N. Tran[3], [1]*Center for Applied Research, Norway,* [2]*Maritime Energy & Sustainable Development Centre of Excellence, Singapore,* [3]*Nanyang Technological University, Singapore*
		E1 – OS2: Performance Measurement Room: VMCC23 Session Chair: Fusun Ulengin
16:30-18:10	E1_OS2_01	**A two-way interaction between competitiveness and logistics performance of countries** S. Onsel Ekici[1], F Ülengin*[2], O. Kabak[3], [1]*Dogus University, Turkey,* [2]*Sabanci University, Turkey,* [3]*Istanbul Technical University, Turkey*
	E1_OS2_02	**Performance appraisal of new sustainable modes of high-speed freight transport: The case of hyperloop in Canada** M. Lachaize[1,2], A Kinra*[1], W Rothengatter*[3], [1]*Copenhagen Business School, Denmark,* [2]*Transpod Inc., Canada,* [3]*Karlsruhe Institute of Technology (KIT), Germany*
	E1_OS2_03	**Economic evaluation of traffic congestion at intersection: Case study from an Indian City** C Muneera*, K. Karuppanagounder, *National Institute of Technology Calicut, India*
	E1_OS2_04	**Possibilities of using Incoterms clauses in a country logistics performance assessment and benchmarking** Đ Stojanović*, J. Ivetić, *University of Novi Sad, Serbia*
	E1_OS2_05	**Factors affecting performance of urban bus transport systems in India: A Data Envelopment Analysis (DEA) based approach** R Gadepalli*[1], S. Rayaprolu[2], [1]*Indian Institute of Technology Delhi, India,* [2]*Independent Researcher, India*
		Tuesday, 28 May 2019
		E1 – OS3: Urban Transport Room: VMCC23 Session Chair: Assadollah Saighani
09:30-11:10	E1_OS3_01	**Economical comparison of urban transport systems** A Saighani*, C. Sommer, *University of Kassel, Germany*

	E1_OS3_02	TRIMIS: Modular development of an integrated policy-support tool for forward-oriented transport research and innovation analysis T. Anastasios*, K. Gkoumas, F. Pekar, M. Grosso, G. Haq, M. van Balen, *European Commission, Italy*
	E1_OS3_03	Freight rail project evaluation- a cost-benefit analysis framework S. Sankarakumaraswamy[1], S Vadali*[2], A. Goodchild[1], K. Kuhn[3], *[1]University of Washington, USA, [2]Economic Insights and Research, USA, [3]Uber, USA*
	E1_OS3_04	The technical dimensions behind scale economies induced by transit lines structures design A Fielbaum*, S. Jara-Diaz, A. Gschwender, *Universidad de Chile, Chile*
	Wednesday, 29 May 2019	
	E1 – OS4: Air Transport Room: VMCC23 Session Chair: Chantal Roucolle	
09:30-11:10	E1_OS4_01	Expansion of international airline networks: An application to US carriers C Roucolle*[1], T. Seregina[1,2], M. Urdanoz[2], *[1]ENAC, France, [2]TBS, France*
	E1_OS4_02	Regional economic effects of transport infrastructure development featuring trade gateway region-asymmetric spatial CGE model approach T Ishikura*, *Tokyo Metropolitan University, Japan*
	E1_OS4_03	Breakeven passenger traffic for regional Indian airports K. Iyer, S Jain*, *Indian Institute of Technology Delhi, India*
	E1 – OS5: Innovation Room: VMCC23 Session Chair: Rudra P Pradhan	
16:30-18:10	E1_OS5_01	The long relationships between ICT infrastructure, urbanization, transportation and economic growth R Pradhan*, *Indian Institute of Technology Kharagpur, India*
	E1_OS5_02	Simulation techniques for projecting traffic growth rate S Tabassum*, K Molugaram*, *Osmania University, India*
	E1_OS5_03	Connected and automated transport: research and innovation capacity in Europe K. Gkoumas, M. van Balen, A Tsakalidis*, F. Pekar, *European Commission, Joint Research Centre, Italy*
	E1_OS5_04	Understanding structural barriers of innovations towards sustainable transportation S Müller*, *German Aerospace Center (DLR), Germany*

E2: Transport Pricing and Economic Regulation		
Wednesday, 29 May 2019		
E2 – OS1: Transport Pricing and Economic Regulation - I Room: VMCC22 Session Chair: Charles Raux		
09:30-11:10	E2_OS1_01	Effects of ticket inspection levels: A Quasi-Experimental Approach S Keuchel*, C. Swertz, *Westphalian University of Applied Sciences, Germany*
	E2_OS1_02	The determination of distance based toll for urban expressway with deep learning approach H. Inokuchi[1], C Quan Kui*[2], T. Akiyama[1], *[1]Kansai University, Japan, [2]Graduate school of Kansai University, Japan*
	E2_OS1_04	Aggrandize non-fare box revenues for MRTS projects: Mumbai monorail a case study G Sasane*, M Kulkarni*, *Mumbai Metropolitan Region Development Authority (MMRDA), India*

		E2 – OS2: Transport Pricing and Economic Regulation - II Room: VMCC22 Session Chair: Paolo Beria
11:30-13:10	E2_OS2_01	**Inter-regional migration, commuting, and transportation tariffs** A Dementiev*[1], I. Tretiakova[2], *[1]Higher School of Economics, Russian Federation, [2]London Business School, United Kingdom*
	E2_OS2_02	**Analysis of revenues, costs and average costs of highway concessions in Chile** C. Vergara-Novoa, J Sepúlveda Rojas*, M. Alfaro, P. Soto, *University of Santiago de Chile, Chile*
	E2_OS2_03	**The relations among financial and economic aspects in the evaluation of infrastructures** M Ponti*, F Ramella*, *Bridges Research, Italy*
	E2_OS2_04	**Funding for roads in South Africa: Understanding the principles of fair and efficient road user charges** J Van Rensburg*, S. Krygsman, *Stellenbosch University, South Africa*
	E2_OS2_05	**Success factors for financial sustainability of toll road projects: Empirical evidence from China** T Thi My Thanh*[1], C. Charoenngam[2], *[1]University of Transport Technology, Vietnam, [2]Asian Institute of Technology, Thailand*
		E2 – OS3: Transport Pricing and Economic Regulation – III Room: VMCC22 Session Chair: Katsuhiro Yamaguchi
14:30-16:10	E2_OS3_01	**Effects of the reduction of train path charges on the competition between bus and train - a simulation model** C. Burgdorf[1], A. Eisenkopf[2], A Knorr*[3], *[1]KCW GmbH, Germany, [2]Zeppelin University, Germany, [3]German University of Administrative Sciences Speyer, Germany*
	E2_OS3_02	**Mergers after deregulation: What about price effects in the long–distance bus industry in France?** T Blayac*[1,2], P. Bougette[3], *[1]CEE-M and University of Montpellier, France, [2]University of Montpellier, France, [3]GREDEG and University of Nice, France*
	E2_OS3_03	**How do slot restrictions affect airfares? New evidence from the US airline industry** H Fukui*, *Ehime University, Japan*
	E2_OS3_04	**Dual price premium in the domestic air transport market of Japan** K Yamaguchi*, *The University of Tokyo, Japan*
	E2_OS3_05	**Taxi devastation fallacy, technology, and other issues: the case of Bogotá, Colombia** A Rodriguez Valencia*, J. Cala, D. Paris, J. Pinzon, *Universidad de los Andes, Colombia*

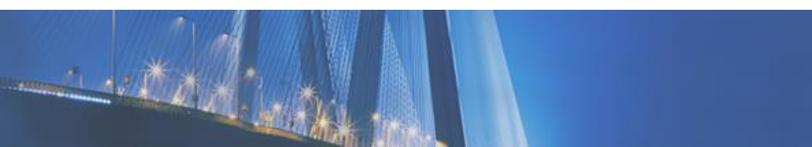|		
		TOPIC F: TRANSPORT, LAND USE, AND SUSTAINABILITY
		F1: Transport and Spatial Development
		Monday, 27 May 2019
		F1 – OS1: Network Analysis and Land Use Room: CE208 Session Chair: John Douglas Hunt
14:30-16:10	F1_OS1_01	**Network measures of polycentricity** S Sarkar*, H. Wu, D. Levinson, *The University of Sydney, Australia*

	F1_OS1_02	**The physical and ecological space consumed by transport modes in Rajkot City, India** M. Will[1], Y. Cornet[2], T Munshi*[3], [1]*Technical University of Denmark, Denmark,* [2]*University of Zilina, Slovakia,* [3]*UNEP DTU, Denmark*
	F1_OS1_03	**Socio-economic and travel characteristics of transit users at Transit-oriented Development (TOD) Stations** M Jaafar Sidek*, F. Bakri, A. Kadar Hamsa, N. Nik Othman, N. Mohd Noor, M. Ibrahim, *International Islamic University Malaysia, Malaysia*

F1 – OS2: Impact of Urban Design on Travel Behavior & Impact of Transportation on Urban Development **Room: CE208** **Session Chair: Martin Kagerbauer**		
16:30-18:10	**F1_OS2_01**	**Social cost of TOD: Evaluation on housing affordability along MRT corridor in Dhaka applying H+T index** A Haque*[1,2], F. Sharna*[1], A Khan*[1], [1]*Jahangirnagar University, Bangladesh,* [2]*The University of Hong Kong, Hong Kong*
	F1_OS2_02	**Urban spatial structure and motorization in China** B Sun*[1], T. Zhang[1], Z. He[1], R. Wang[2], [1]*East China Normal University, China,* [2]*University of California, USA*
	F1_OS2_04	**TOD in high-density urban environment: Vehicle ownership and mode choice in Shanghai city center** H. Pan[1], T Chen*[1], Y. Ge[2], [1]*Tongji University, China,* [2]*University of Washington, USA*
	F1_OS2_05	**Estimation of trip generation rates for different land uses** P. N. Salini*, A. S Krishna, *National Transportation Planning and Research Centre (NATPAC), India*

Tuesday, 28 May 2019		
F1 – OS3: New Developments in Integrated Land Use/Transport Modeling **Room: CE208** **Session Chair: Masanobu Kii**		
16:30-18:10	**F1_OS3_01**	**Estimating space use pattern for integrated urban models using a spatial linear programming and a genetic algorithm approach** M Zhong*[1,2,3], W. Wang[1,3,2], B. Yu[2,3,1], J. Hunt[2,4], [1]*National Engineering Research Center for Water Transport Safety, China,* [2]*Wuhan University of Technology, China,* [3]*Ministry of Education, China,* [4]*University of Calgary, Canada*
	F1_OS3_02	**Benefits of integrating microscopic land use and travel demand models: Location choice, time use & stability of travel behavior** R Moeckel*[1], M. Heilig[2], T. Hilgert[2], M. Kagerbauer[2], [1]*Technical University of Munich, Germany,* [2]*Karlsruhe Institute of Technology, Germany*
	F1_OS3_03	**Residential demand and supply in the Alberta PECAS model** J Hunt*[1], J. Abraham[2], A. Silva[2], G. Fuenmayor[2], G. Hill[2], S. Kaul[2], [1]*University of Calgary, Canada,* [2]*HBA Specto Incorporated, Canada*
	F1_OS3_04	**The spatial effects of transport investments in Bangladesh** M Lebrand*, M. Herrera-Dappe, *The World Bank, USA*

Wednesday, 29 May 2019		
F1 – OS4: Proof by Numbers: Analysis of Built Environment and Travel Behavior **Room: CE208** **Session Chair: Somwrita Sarkar**		
16:30-18:10	**F1_OS4_01**	**Does the built environment shape commuting? The case of Lyon (France)** A. Lamatkhanova, C Raux*, L. Grassot, *LAET, University of Lyon, France*

	F1_OS4_02	**Effects of congestion charge on relocation decisions under non-capital functions relieving strategy in Beijing, China** K Geng*, Y. Wang, H. Zhou, *Beijing Jiaotong University, China*
	F1_OS4_03	**Application of fractal analysis in evaluation of urban road networks in small sized city of India: Case city of Karimnagar** S Dasari*, S. Gupta, *School of planning & Architecture, India*
	F1_OS4_04	**Car dependency in Flanders (Belgium): you tell me who you are, I'll tell you if you drive** E Van Eenoo*, K. Fransen, K. Boussauw, *Vrije Universiteit Brussel, Belgium*
	F1_OS4_05	**Modelling residential mobility decision and its impact on car ownership and travel mode transition** M. B. Haque*[1,2], C. Choudhury[1], S. Hess[1], R. C. dit Sourd[1] [1]*University of Leeds, United Kingdom.* [2]*Shahjalal University of Science and Technology, Bangladesh*

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Thursday, 30 May 2019

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F1 – OS5: Transit Stations to Promote Sustainable Urban Design
Room: CE208
Session Chair: Roberta Prosini Cadena

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<tr><td rowspan="3">09:30-11:10</td><td>F1_OS5_01</td><td>

Population Analysis in areas along newly developed Urban Rails in the North East area of Tokyo Metropolitan Region
K. Ochiai[1], Y. Makimura[2], N. Ito[1], J. Suehara[1], H Asami*[1], [1]*JRTT, Japan,* [2]*CRP, Japan*

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<tr><td>F1_OS5_02</td><td>

A decision model for railway project and development density using a multi-objective optimization method
I Ryu*, S Ryu*, Y Yi*, K Choi*, *Ajou University, Korea, Republic of*

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<tr><td>F1_OS5_03</td><td>

A study of Mumbai and Hyderabad's intermodal transportation hubs and their potential in future railway-led urban development in India
M. Ahmed[1], N. Srivastava[2], G. Tipnis[1], S. Matsumura*[2], [1]*Edifice Consultants Private Limited, India,* [2]*Nikken Sekkei Research Institute, Japan*

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F2: Transport, Climate Change and Clean Air

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Monday, 27 May 2019

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F2 – OS1: Environmental Effects from Busses
Room: CE111
Session Chair: Antonio Musso

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<tr><td rowspan="3">14:30-16:10</td><td>F2_OS1_01</td><td>

Testing innovations for increased energy efficiency of electric buses: Evidence from the EBSF_2 project
M. Tozzi[1], M Corazza*[2], U. Guida[1], A Musso*[2], [1]*UITP, Belgium,* [2]*Sapienza University of Rome, Italy*

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<tr><td>F2_OS1_02</td><td>

Design methodology for the electrification of urban bus lines with battery electric buses
M Tesar*, K. Berthold, J. Gruhler, P. Gratzfeld, *Karlsruhe Institute of Technology, Germany*

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<tr><td>F2_OS1_03</td><td>

The need for economic, social and environmental solutions for more efficient and cleaner heavy-duty vehicles
M. Berecibar*[1], A. Serra[2], I. Munoz[3], T. Coosemans[1], J. Van Mierlo[1], M. Messagie[1]
[1]*Vrije Universiteit Brussel, Belgium.* [2]*Bax & Company, Spain.* [3]*Applus IDIADA, Spain*

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	F2 – OS2: Aviation & Environment Room: CE111 Session Chair: Janina Scheelhaase	
16:30-18:10	F2_OS2_01	**Cost and competitive impacts of addressing aviation's full climate impact by the European Emissions Trading Scheme** J Scheelhaase*, *German Aerospace Centre (DLR), Germany*
	F2_OS2_02	**Mitigating the climate change impacts of aviation through behavioural change** S Baumeister*, *University of Jyväskylä, School of Business and Economics, Corporate Environmental Management Research Group, Finland*
	F2_OS2_03	**Evaluation CO_2 emissions of flight delay at taxiing phase in Bandaranaike International Airport (BIA)** M Dissanayaka*, V. Adikariwattage, H. Pasindu, *University of Moratuwa, Sri Lanka*
	F2_OS2_04	**An investigation on potential measures for reducing air transport emissions in Europe** A. Lopez-Lazaro[1], G Alonso*[1], A. Benito[1], D. Perez-Campuzano[2], [1]*ETSIAE/UPM, Spain,* [2]*FCEE/UAM, Spain*

Tuesday, 28 May 2019

	F2 – OS3: Environmental Effects from Electric Vehicles Room: CE111 Session Chair: Patrick Jochem	
09:30-11:10	F2_OS3_01	**The impact of e-Mobility on the Italian electricity system the impact of e-mobility on the Italian electricity system** S Abd Alla*, V. Bianco, F. Scarpa, L. Tagliafico, *University of Genoa, Italy*
	F2_OS3_02	**Solar hybrid E-cargo rickshaw for urban transportation demand in India** S Kumar*, R. Bharj, *NIT Jalandhar, India*
	F2_OS3_03	**An empirical investigation of electric vehicle user charging behaviors in an urban setting** M. Klotz, H Friedrich*, B. Dahmen, *Kühne Logistics University, Germany*
	F2_OS3_04	**Hybrid, plug-in hybrid and battery electric vehicles – environmental insights and opportunities – a decision maker's perspective** M. Messagie*[1], T. Coosemans[1], J. Van Mierlo[1,2], [1]*Vrije Universiteit Brussel, Belgium.* [2]*Flandersmake, Belgium*
	F2 – OS4: Methods in Environmental Transport Research Room: CE111 Session Chair: Marie Louis	
16:30-18:10	F2_OS4_02	**Developing driving cycles using k-means clustering and determining their optimal duration** R. Desineedi, S Mahesh*, G. Ramadurai, *IIT Madras, India*
	F2_OS4_03	**Greenhouse gas emissions associated with road transport: Current status, benchmarking, and assessment tools** F Albuquerque*[1], M. Maraqa[1], R. Chowdhury[2], T. Mauga[1], M. Alzard[1], [1]*United Arab Emirates University, UAE,* [2]*University of Southern Queensland, Australia*
	F2_OS4_04	**Optimizing the modal split to reduce carbon dioxide emission for resource-constrained societies** M. Maheshwari, A Jana*, S. Bandopadhyay, *Indian Institute of Technology Bombay, India*
	F2_OS4_05	**Holistic evaluation of the impacts of additive manufacturing on sustainability, distribution costs, and time in global supply chains** M Dircksen*, C. Feldmann, *Fachhochschule Muenster, Germany*

Wednesday, 29 May 2019		
F2 – OS5: Environmental Issues in Urban Areas I Room: CE111 Session Chair: Mahak Agrawal		
16:30-18:10	F2_OS5_01	**Characteristics of exhaust and non-exhaust emissions from urban roads – a case study in Delhi city** D Alshetty*[1], S. Kuppili[1], S. S.M.[1], G. Ramadurai[1], V. Sethi[1], R. Kumar[2], N. Sharma[3], A. Namdeo[4], M. Bell[4], P. Goodman[4], *[1]Indian Institute of Technology - Madras, India, [2]CSIR-NEERI, India, [3]CSIR-Central Road Research Institute (CRRI), India, [4]Newcastle University, United Kingdom*
	F2_OS5_02	**Impact of rainfall on travel time and fuel usage for Greater Mumbai city** A. Soni, M Chandel*, *Indian Institute of Technology Bombay, India*
	F2_OS5_03	**The perception of air pollution exposure from commuting in Ho Chi Minh City, Vietnam** A Leung*[1], T. Le[2], *[1]Griffith University, Australia, [2]Vietnam Aviation Academy, Vietnam*
Thursday, 30 May 2019		
F2 – OS5: Environmental Issues in Urban Areas II Room: CE111 Session Chair: Maarten Messagie		
09:30-11:10	F2_OS6_01	**Food open-air markets in Paris: transportation environmental issues** R. Benoit, C. Gunot, S. Tamayo*, A. Gaudron, F. Fontane, *Mines ParisTech - PSL, France*
	F2_OS6_02	**The environmental benefits of carsharing: the case study of Palermo.** M. Migliore[1], G D Orso*[1], D. Caminiti[2], *[1]University of Palermo, Italy, [2]AMAT Palermo, Italy*
	F2_OS6_03	**Sustainable Urban Transportation Approaches: Life-Cycle Assessment Perspective of Passenger Transport Modes in Qatar** F. Al-Thawadi, Y. Weldu, S Al Ghamdi*, *Hamad Bin Khalifa University, Qatar*

F3: Smart Transport, Smart City, and Quality of Life		
Tuesday, 28 May 2019		
F3 – OS1: Smart Mobility Room: CE209 Session Chair: Yoshitsugu Hayashi		
09:30-11:10	F3_OS1_01	**Defining on-demand mobility system variables through qualitative research** C Assmann*[1,2,3], C. Tully[4], G. Wulfhorst[1], T. Haas[2], *[1]Technical University of Munich, Germany, [2]BMW Group, Germany, [3]mobil.LAB - Doctoral Research Group, Germany, [4]Free University of Bozen-Bolzano, Italy,*
	F3_OS1_02	**Assessing the impact of population mobility on public expenditures while shopping** A. Galkin[1], C Kumar*[2], M. Kadnychanskyi[1], I. Balandina[1], A. Ryabev[1], I. Litomin[1], *[1]O. M. Beketov National University of Urban Economy in Kharkiv, Ukraine, [2]Jindal Global University, India*
	F3_OS1_03	**Sharing cars: A legal and economic analysis of B2C car sharing models** F Vanrykel*[1], B. De Borger[2], M. Bourgeois[1], *[1]ULiège, Belgium, [2]UAntwerp, Belgium*
	F3_OS1_04	**Taxi vs. demand responsive shared transport systems: an agent-based simulation approach** G. Inturri[1], N Giuffrida*[1], M. Ignaccolo[1], M. Le Pira[1], A. Pluchino[1,2], A. Rapisarda[1,2], R. D'Angelo[3], *[1]University of Catania, Italy, [2]INFN, Italy, [3]MVMANT, Italy*
	F3_OS1_05	**Electric vehicle tour planning with multiple types of recharging stations** Y Wang*, C Lu*, H Kang*, *National Penghu University of Science and Technology, Taiwan*

	F3 – OS2: Smart City and Quality of Life Room: CE209 Session Chair: Ye Li	
11:30-13:10	F3_OS2_01	**Innovative planning model for the smart city mission of India** V. Gusain, S Dhingra*, *IIT, India*
	F3_OS2_02	**Comparative performance evaluation of public transport services from city perspective** J. Gurjar[1,2], Jain[2], P Agarwal*[3], *[1]Government Engineering College Rewa, India, [2]MANIT, India, [3]MANIT, India*
	F3_OS2_03	**A QOL evaluation method for SDGs and GNH in urban transport planning with an application to Japanese and German cities** Y. Khoo[1], Y Hayashi*[2], F. Gu[3], N. Kachi[4], S. Nakamura[5], *[1]Toyo Business Engineering Corporation, Japan, [2]Chubu University, Japan, [3]Nanjing University, China, [4]Toyo University, Japan, [5]Nagoya University, Japan*
	F3_OS2_04	**Assessment of urban development from urban quality of life score for Indian cities** G Sharma*, G. Patil, *Indian Institute of Technology - Bombay, India*
	Wednesday, 29 May 2019	
	F3 – OS3: Smart and Sustainable Transport Room: CE209 Session Chair: Xiao Luo	
11:30-13:10	F3_OS3_01	**Provisioning a demand-orientated bus system for public transportation** E Neidhardt*, A. Sauerländer-Biebl, *German Aerospace Center (DLR), Institute of Transportation Systems, Germany*
	F3_OS3_02	**Hosting mega event - Drive towards sustainable planning for public transport - Case Study: Metro Line Route 2020** B. Taha, A. Allan*, *University of South Australia, Australia*
	F3_OS3_03	**Is the driverless future sustainable? - Strategic uncertainties and system impacts** A Engholm*[1], I. Kristoffersson[2], A. Pernestål Brenden[1], *[1]Integrated Transport Research Lab - KTH Royal Institute of Technology, Sweden, [2]VTI Swedish National Road and Transport Research Institute, Sweden*
	F3_OS3_04	**WITHDRAWN**
	F3_OS3_05	**Assessing the effects of mobility on air quality: The Liverpool smart pedestrian project** N. Verstaevel, J Barthélemy*, H. Forehead, P. Perez, *University of Wollongong, Australia*

	F4: Livability and Non-Motorized Transport	
	Monday, 27 May 2019	
	F4 – OS1: Pedestrian Level of Service and Walkability Room: CE209 Session Chair: Matthew Burke	
14:30-16:10	F4_OS1_01	**Investigating relationship between the importance of the factors affecting PLOS and level of satisfaction on footpath** N Raad*, M Burke*, *Griffith University, Australia*
	F4_OS1_02	**Spatio-temporal distribution of crossing pedestrians in urban cities of developing countries** V. Wickramasinghe[1], S Dissanayake*[2], *[1]University of Peradeniya, Sri Lanka, [2]Kansas State University, USA*

	F4_OS1_03	**Developing a relationship between user satisfaction, physical environment, and behaviour – A case of pedestrian infrastructure** P. Kumar[1], D. Nag[1], E. Bhaduri[2], A Goswami*[1], *[1]IIT, India, [2]IIT, India*
	F4_OS1_04	**Modelling pedestrian perspectives in evaluating satisfaction levels of urban roadway walking facilities** R Sahani*[1], P Bhuyan*[2], *[1]ITER, SOA University, India, [2]NIT Rourkela, India*

Wednesday, 29 May 2019

	F4 – OS2: Public Transport Integration with Active Travel Room: CE209 Session Chair: Gaurang Joshi	
11:30-13:10	F4_OS2_01	**Evaluation of walking environment around urban railway station in Bangkok metropolitan area and proposal for its improvement** H Ozawa*[1], A Fukuda*[1], S. Malaitham[2], H. Numa[1], V. Vichiensan[3], *[1]Nihon University, Japan, [2]PSK Consultant co., ltd., Thailand, [3]Kasetsart University, Thailand*
	F4_OS2_02	**How accessible are bus stops for pedestrians in Delhi?** S. Lakhotia, K. Rao, G Tiwari*, *Indian Institute of Technology Delhi, India*
	F4_OS2_03	**Study on the characteristics of Japanese transit oriented development as seen from long-term land-use changes** K Takayama*[1], Y. Watanabe[2], H. Chang[1], A. Morimoto[1], *[1]Waseda University, Japan, [2]Tokyu Corporation, Japan*
	F4_OS2_04	**Application of system dynamic model for transport mode behaviour analysis of Urban Transport system: A case-study of Indian metro cities** R. Zope, V. N., S Arkatkar*, G. Joshi, *Sardar Vallabhbhai National Institute of Technology, India*
	F4 – OS3: Innovations in Bicycle Research: Level of Service, Bike Share, Rickshaws and Safety Room: CE209 Session Chair: Prasanta Kumar Bhuyan	
14:30-16:10	F4_OS3_01	**Service quality analysis of signalized intersections from the perspective of bicycling** S Beura*, K. Vinod Kumar, S. Suman, M. Panda, P Bhuyan*, *NIT Rourkela, India*
	F4_OS3_02	**Bicycle Comfort Level Rating (BCLR) model for urban street segments in developing countries** S Beura*, H. Chellapilla, P. Bhuyan, *NIT Rourkela, India*
	F4_OS3_03	**Planning of Public Bicycle (bike) Sharing System (PBSS): A case study of Surat city** S Patel*, C Patel*, G Joshi*, *Sardar Vallabhbhai National Institute of Technology, India*
	F4_OS3_04	**Trip generation and trip rate analysis for cycle rickshaws in Delhi: A step towards sustainable transportation** G Saiyad*[1], M*[2], R Kumar*[2], *[1]FTE-The M.S. University of Baroda, India, [2]CSIR- Central Road Research Institute, India*

Thursday, 30 May 2019

	F4 – OS4: Willingness to Use Sustainable Travel and Reduce Car Use Room: CE209 Session Chair: Sunanda Dissanayake	
16:30-18:10	F4_OS4_01	**Study on willingness to use non-motorized modes in a tier 3 city: A case study in India** D Tiwari*, A. Bamney, *Rewa Engineering College, India*
	F4_OS4_02	**Integrated transportation and land use activities for mass housing to increase non-motorized trips - A review paper** S Ghoslya*, M. Advani, R. Kumar, *CSIR - Central Road Research Institute, India*

	F4_OS4_03	**Personal attitudes towards positive incentives to reduce the use of conventionally fuelled vehicles: A comparative study in Curitiba, Brazil.** R Dos Reis*, S. Grant-Muller, F. Hodgson, *University of Leeds, United Kingdom*
	F4_OS4_04	**The study on the dilemma of non-motorized transport in private car priority china cities--taking Dalian as a case** H Yunyue*, W. Ying, *Shanghai Tongji Urban Planning & Design Institute, China*
	F4_OS4_05	**Toward a deeper understanding of elderly walking mode choice behavior: An analysis across genders in a case study of Iran** Y Hatamzadeh*, A. Hoseinzadeh, *Amirkabir University of Technology, Iran, Islamic Republic of*
F4 – OS5: Pedestrian Crossing Behaviour Room: CE209 Session Chair: Justin S. Chang	
16:30-18:10	F4_OS5_01	**Examining pedestrian critical gap analysis at un-signalised midblock crosswalk sections in India** V. S. Vinayaraj*[1], A. Chepuri[2], G. Joshi[2], M. Parida[3], *[1]SVNIT, India, [2]SVNIT, India, [3]IIT, India*
	F4_OS5_02	**Choice crossing behaviour model for safety margin of pedestrian at mid-blocks in India** A. Chaudari[1], N. Gore*[1], S. Arkatkar[1], G. Joshi[1], M. Parida[2], *[1]SVNIT, India, [2]IIT Roorkee, India*
	F4_OS5_03	**Does gender affect the parameters influencing pedestrian level of service of sidewalks? An analysis using structural equation modelling approach** G Bivina*, M. Parida, *Indian Institute of Technology Roorkee, India*
	F4_OS5_04	**Identifying priority crosswalk locations in urban road networks** S Han*[1], J Chang*[2], *[1]Korea Transport Institute, Korea, Republic of, [2]Seoul National University, Korea, Republic of*

TOPIC G: TRANSPORT PLANNING AND POLICY
G1: Governance and Decision-Making Processes
Monday, 27 May 2019

G1 – OS1: Public Transport Governance Room: VMCC12 Session Chair: Louise Reardon	
14:30-16:10	G1_OS1_01	**How to create efficient public transport systems? A literature review of critical problems and approaches for addressing the problems** R Hrelja*[1,2], F. Pettersson[3,2], J Khan*[3,2], *[1](VTI) Swedish National Road and Transport Research Institute, Sweden, [2]K2 (The Swedish Knowledge Center for Public Transport), Sweden, [3]Lund University, Sweden*
	G1_OS1_02	**A Study of a meta-governance framework for sustainable cities considering customers' potential mobility preferences** N Hiroyuki*, *Transport Researcher, Japan*
	G1_OS1_03	**Public private partnerships in city bus services- imperatives for a sustainable ecosystem in context of Indian cities** L Parashar*[1], S. Gupta[2], *[1]Urban Transportation Planner, India, [2]School of planning and architecture, India*

	G1_OS1_04	**Coordination mechanisms to reduce misalignment among unbundled business units: A case study of vertically integrated Japanese railways** E Nakamura*[1], H. Sakai[1], D. van de Velde[2,3], *[1]Kobe University, Japan, [2]Delft University of Technology, Netherlands, [3]inno-V Consultancy, Netherlands*
		Tuesday, 28 May 2019

G1 – OS2: Decision-Support Room: VMCC12 Session Chair: Greg Marsden

09:30-11:10	G1_OS2_01	**Highway infrastructure protection against sea level rise: Policy recommendations for cooperative and competitive decision-makers** I Papakonstantinou*[1,2], J. Lee[3], S. Madanat[2], *[1]New York University, USA, [2]New York University Abu Dhabi, UAE, [3]The Hong Kong Polytechnic University, Hong Kong*
	G1_OS2_02	**Developing context sensitive planning criteria for Transit Oriented Development (TOD): A fuzzy-group decision approach** P. P. Kumar*[1], M. Parida[1], R. S. Chalumuri[2], *[1]Indian Institute of Technology Roorkee, India, [2]CSIR-Central Road Research Institute, India*
	G1_OS2_03	**Scaling functions for aligning evaluation criteria in transportation appraisal and decision making – A synthesis and case study** S. Labi[1], A. Shirole[2], A. Amekudzi-Kennedy[3], Z. Li[4], P Chakraborty*[5], Q. Bai[6], *[1]Purdue University, USA, [2]S&A Shirole, USA, [3]Georgia Institute of Technology, USA, [4]Illinois Institute of Technology, USA, [5]Iowa State University, USA, [6]Chang An University, China*
	G1_OS2_04	**Administrators roles in policy adaptation of transport directives – how knowledge is created and reproduced** L Hansson*, *Molde University College - Specialized University in Logistics, Norway*
	G1_OS2_05	**Performance evaluation of transport and logistics graduates of selected institutions in southwestern Nigeria** A Somuyiwa*[1], A. Oduwole[2], O. Babatunde[1], *[1]Ladoke Akintola University of Technology, Nigeria, [2]FORSTECH, Nigeria*

G1 – OS3: Implementation Room: VMCC12 Session Chair: Louise Reardon

11:30-13:10	G1_OS3_01	**Streamlining the implementation process in urban mobility: Lessons from the eccentric project in Madrid** A. Aparicio*, *Technical University Madrid (UPM), Spain*
	G1_OS3_02	**Understanding project cancellation risks in U.S. P3 surface transportation infrastructure** L. McCarthy, L. Bolaños, J Gifford*, J. Kweun, *George Mason University Center for Transportation Public Private Partnership Policy, USA*
	G1_OS3_03	**A revenue risk sharing approach for Public Private Partnership model used for construction of Sion-Panvel highway, Mumbai** K Sawant*, V. Varekar, *Veermata Jijabai Technological Institute, India*

Wednesday, 29 May 2019

G1 – OS4: Smart Mobility Governance Room: VMCC12 Session Chair: Greg Marsden

11:30-13:10	G1_OS4_01	**Mode-agnostic mobility contracts: Identifying broker/aggregator models for delivering mobility as a service (MaaS)** Y Wong*, D. Hensher, C. Mulley, *University of Sydney, Australia*

	G1_OS4_02	**Cities and the smart mobility transition: a preliminary assessment of two cities' efforts to steer innovation** I Moscholidou*, *University of Leeds, United Kingdom*
	G1_OS4_03	**Competence, interest and power in participatory transport planning: framing stakeholders in the "participation cube"** M Le Pira*, G Inturri*, M Ignaccolo*, *University of Catania, Italy*
	G1_OS4_04	**Untangling the Gordian Knot: Low-carbon electric mobility in India** A Bose Styczynski*, *O.P. Jindal Global University, India*
G1 – OS5: Emerging Economy Governance Room: VMCC12 Session Chair: Louise Reardon	
14:30-16:10	G1_OS5_01	**The cultures of decision-making: A qualitative study of urban transport projects in Alexandria, Egypt** S Hassan[1], C. Wong[2], [1]*University of Birmingham, United Kingdom,* [2]*University of Manchester, United Kingdom*
	G1_OS5_02	**Urban transport governance practice and challenges in an emerging economy – case study of India** V. Gijre, S Gupta*, *School of Planning and Architecture, India*
	G1_OS5_03	**Do transport planners care about equity? Results from a web-based survey in Brazil** T Guimarães*, K. Lucas, *University of Leeds, United Kingdom*
	G1_OS5_04	**The political dimension of Brazilian port development: A content analysis of the 2013 new port law** C Galvao[1], L. Robles[2], [1]*Texas A&M University, USA,* [2]*UFMA, Brazil*

G2: National and Regional Transport Planning and Policy		
Monday, 27 May 2019		
G2 – OS1: Policy Session 1 Room: VMCC15 Session Chair: G. Emberger		
14:30-16:10	G2_OS1_1	**Validation and usability of floating car data for transportation policy research** H. van der Loop[1], M. Kouwenhoven[2], P. van Bekkum[3], N. Kijk in de Vegte[4], H Meurs[1], [1]*KiM Netherlands Institute for Transport Policy Analysis, Netherlands,* [2]*Significance, Netherlands,* [3]*MuConsult, Netherlands,* [4]*Transpute, Netherlands*
	G2_OS1_2	**Empirical estimation of effects of flexible working on mobility and congestion in the Netherlands 2000-2016** H. van der Loop[1], J. Willigers[2], R. Haaijer[3], H Meurs[1], [1]*KiM Netherlands Institute for Transport Policy Analysis, Netherlands,* [2]*Significance, Netherlands,* [3]*MuConsult, Netherlands*
	G2_OS1_3	**Analysis of toll discounts on nationwide expressway in Japan** T. Kutsukake[1], Y. Mohri[2], H Oka[2], S. Kaneko[3], [1]*Metropolitan Expressway Company Limited, Japan,* [2]*The Institute of Behavioral Sciences, Japan,* [3]*Creative Research and Planning Corporation Limited, Japan*
	G2_OS1_4	**Does the level of transportation service affect the disparity of activity opportunities between localities?** H Kita[1], H. Yotsutsuji[2], S. Komoda[3], K. Yasunaga[4], [1]*Kobe University, Japan,* [2]*CERI, PWRI, Japan,* [3]*Hanshin Electric Railway Co.Ltd,, Japan,* [4]*Osaka City Office, Japan*

	G2 – OS2: Policy Session 2 Room: VMCC15 Session Chair: H. Kita	
16:30-18:10	G2_OS2_1	**Analysis of transport and logistics education regulations and economic development in Nigeria** O Oyesiku*[1], A. Somuyiwa[1], A. Oduwole[2], [1]*Olabisi Onabanjo University, Nigeria, [2]FORSTECH, Nigeria*
	G2_OS2_2	**Investigating causality between transport infrastructure and urbanization: A state-level study of India (1991-2011)** T Maparu*[1], T. Mazumder[2], [1]*National Institute of Technology Rourkela, India, [2]Indian Institute of Technology Kharagpur, India*
	G2_OS2_3	**Development of residential parking regulations for Navi Mumbai** G. Patil[1], H Shah*[1], P. Paithankar[1], A. Mondal[2,1], R. Gurav[3], M. Hussain[3], [1]*Indian Institute of Technology Bombay, India, [2]The University of Texas at Austin, USA, [3]Navi Mumbai Municipal Corporation, India*

Tuesday, 28 May 2019

	G2 – OS3: Road Transport Room: VMCC15 Session Chair: T. Maparu	
09:30-11:10	G2_OS3_1	**Trust and public acceptability of congestion charge in the Chinese context** Q Liu*[1], K. Lucas[1], G Marsden*[1], Y. Liu[2], [1]*University of Leeds, United Kingdom, [2]Southeast University, China*
	G2_OS3_2	**Road learnings: Evolution of public-private partnerships in the indian highway sector** S Garg*, M. Dayal, *Indian Institute of Management Indore, India*
	G2_OS3_3	**Assessing the black spots focused policies for Indian highways** L Bisht*, G. Tiwari, *Indian Institute of Technology Delhi, India*
	G2_OS3_4	**Methodology for determining the break-even traffic volume for converting the roadway surface of low volume roads: Gravel Vs. Paved** S Dissanayake*, H. Patel, E. Fitzsimmons, *Kansas State University, USA*
	G2_OS3_5	**Stakeholder involvement in decision-making process:a test assessment towards transition to autonomous vehicles** T Shibayama*[1], G. Pungillo[2], H. Lemmerer[1], S. Nocera[2], [1]*Vienna University of Technology, Austria, [2]IUAV University of Venice, Italy*
	G2 – OS4: New Mobility Services Room: VMCC15 Session Chair: T. Shibayama	
16:30-18:10	G2_OS4_1	**Emerging types of mobility services and vehicle technologies, employed ICTs and implication for transport planning and policy** T Shibayama*, G. Emberger, *Vienna University of Technology, Austria*
	G2_OS4_2	**Spatial modeling of motor vehicle ownership status in the United States: Implications for car-sharing using the 2017 national household travel** J. Liu, S Nambisan*, *University of Alabama, USA*
	G2_OS4_3	**Exploring the dynamics of electric vehicle sales on monthly basis** C Yang*, H. Titheridge, *University College London, United Kingdom*

Wednesday, 29 May 2019		
G2 – OS5: Methods and Models Room: VMCC15 Session Chair: C.Yang		
14:30-16:10	G2_OS5_1	**Under-evaluation of projects and traffic models** C. Abraham[1], A Bonnafous*[2], J. Ray[3], *[1]Emeritus General Engineer of the Ministry of Transport, France, [2]LAET, University of Lyon, France, [3]Manager Movi'cité, France*
	G2_OS5_2	**Evolving term "Accessibility" in spatial systems: Contextual evaluation** R Ahuja*, G. Tiwari, *Indian Institute of Technology, Delhi, India*
	G2_OS5_3	**Estimating spatial economic impacts of transport infrastructure: Progress and practical availability of SCGE model analysis** T Ukon*[1], A. Koike[2], K. Sato[3], S. Katayama[4], *[1]Mitsubichi UFJ Research and Consulting Co., Ltd., Japan, [2]Kobe University, Japan, [3]Fukken Co., Ltd., Japan, [4]Institute of System Science Research, Japan*
G2 – OS6: Rail Transport Room: VMCC15 Session Chair: R. Ahuja		
16:30-18:10	G2_OS6_1	**Demand risk management of Private High-Speed Rail operators: A review of experiences in Japan and Taiwan** N Bugalia*, Y. Maemura, K. Ozawa, *The University of Tokyo, Japan*
	G2_OS6_2	**Rail bonus: An empirical study onto relative valuation of railway** K Utsunomiya*[1], T. Shibayama[2], *[1]Kansai University, Japan, [2]Vienna University of Technology, Austria*
	G2_OS6_3	**Optimum point of intersection selection in horizontal alignment design for highways and railways: Comparative study using path planner and ant-algorithm** M.B. Sushma*, S Roy*, A. Maji, *Indian Institute of Technology Bombay, India*
	G2_OS6_4	**Reduction of domestic air traffic at Istanbul airports via high-speed rail** B Unsal*, *Embry Riddle Aeronautical University, USA*
Thursday, 30 May 2019		
G2 – OS7: Freight and Long Distance Room: VMCC15 Session Chair: G. Emberger		
09:30-11:10	G2_OS7_1	**Evaluating post-megadisaster strategies against region-wide gasoline shortages in the aftermath of the Great East Japan Earthquake** T Nagae*[1], H. Yamaguchi[2], M. Osawa[1], T. Akamatsu[1], *[1]Tohoku University, Japan, [2]Kanazawa University, Japan*
	G2_OS7_2	**How to evaluate and plan the freight-passengers first-last mile** S Nocera*, G. Pungillo, *Università IUAV di Venezia, Italy*
	G2_OS7_3	**Cross-border public transport as a driver for tourism in the Alps** F Cavallaro*, A. Dianin, *Eurac Research, Italy*
	G2_OS7_4	**Evolving long-distance passenger services. From planned monopolies to deregulated competition** P Beria*, A. Bertolin, *Politecnico di Milano, Italy*

G3: Urban Transport Planning and Policy
Monday, 27 May 2019
G3 – OS1: Sharing Transport (2) Room: VMCC14 Session Chair: Maria Attard
14:30-16:10	G3_OS1_1	**Impact of the introduction of single-trip fare product on bikeshare usage and revenue: the Capital Bikeshare experience** M Venigalla*[1], S Kaviti*[1], T. Brennan[2], [1]*George Mason University, USA,* [2]*The College of New Jersey, USA*
	G3_OS1_2	**Modeling bikeshare user sensitivity and elasticity to pricing using monadic design and ordered logit** S Kaviti*, M Venigalla*, *George Mason University, USA*
	G3_OS1_3	**How much parking space can carsharing save?** C Tchervenkov*, M. Balac, S. Hörl, H. Becker, K. Axhausen, *ETH Zurich, Switzerland*
	G3_OS1_4	**The gendered dimension of multi-modality: exploring the bike sharing scheme of Oslo** T Priya Uteng*[1], H. Espegren[2], T. S. Throndsen[3], L. Böcker[3], [1]*Institute of Transport Economics (TOI), Norway,* [2]*Urban Infrastructure Partner AS (UIP), Norway,* [3]*University of Oslo, Norway*
G3 – OS2: Public Transport in Urban Areas (1) Room: VMCC13 Session Chair: Mohamed-Jama Mohamed
16:30-18:10	G3_OS2_1	**Travel time reliability to airport: Review and assessment** A Jose*, S. Ram, *School of Planning and Architecture, India*
	G3_OS2_2	**Why do cities invest in bus priority measures? Policy, polity, and politics in three Scandinavian cities** F. Pettersson[1,2], C Sørensen*[3,2], [1]*Lund University, Sweden,* [2]*The Swedish Knowledge Centre for Public Transport (K2), Sweden,* [3]*The Swedish National Road and Transport Research Institute, Sweden*
	G3_OS2_3	**Demand-based model for line planning in public transport** A Cyril*, R. Mulangi, V. George, *National Institute of Technology Karnataka Surathkal, India*
	G3_OS2_4	**Critical appraisal of current BRT systems performance evaluation methods** S Gandhi*, G. Tiwari, *Indian Institute of Technology Delhi, India*
	G3_OS2_5	**UberPOOL Services – Approaches from transport operators and policy makers in London** M Mohamed*, T. Rye, A. Fonzone, *Edinburgh Napier University, United Kingdom*
G3 – OS3: Traffic in Urban Areas Room: VMCC14 Session Chair: Roman Klementschitz
16:30-18:10	G3_OS3_1	**Reducing traffic congestion in Beirut: An empirical analysis of selected policy options** A. Anas[1], S. De Sarkar[1], G Timilsina*[2], M. Abou Zeid[3], Z. Nakat[4], [1]*State University of New York at Buffalo, USA,* [2]*World Bank, USA,* [3]*American University, Beirut, Lebanon,* [4]*World Bank, Lebanon*
	G3_OS3_2	**Estimating cost of traffic congestion for a developing city** M Janwari*[1], G. tiwari[1], M. Mir[2], [1]*IIT Delhi, India,* [2]*NIT Srinagar, India*
	G3_OS3_3	**Microsimulation modelling in VISSIM on short-term and long-term improvements for the Mangalore city road network** M Bandi*, V. George, *National Institute of Technology Karnataka, India*
	G3_OS3_4	**Suppressed traffic: A review of road capacity reduction policies and impacts** A Broaddus*, *Mineta Transportation Institute, USA*

	G3_OS3_5	**From traffic management towards mobility management, the case of the city of Vienna** R Klementschitz*, O. Roider, *University Bodenkultur, Austria*
	G3_OS3_6	**Complete campus: Vanderbilt's integrated transportation demand management and enhanced mobility program** M Abkowitz*, E. Kopstain, C. Philip, L. Shoup, W. Barbour, A. George, E. Hafkenschiel, A. Majewski, *Vanderbilt University, USA*

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	G3 – OS4: Public Transport in Urban Areas (2) Room: VMCC13 Session Chair: Anna Fraszczyk	
09:30-11:10	G3_OS4_1	**Assessment of transit transfer experience: Case of Bangalore** C Cheriyan*[1], S Sinha*[2], [1]*Urban Mass Transit Company Ltd, India*, [2]*CEPT University, India*
	G3_OS4_2	**Investigating the correlation between activity similarity and trip similarity of public transit passengers using smart card data** H Faroqi*[1], M. Mesbah[1,2], J. Kim[1], [1]*The University of Queensland, Australia*, [2]*Amirkabir University, Iran, Islamic Republic of*
	G3_OS4_3	**The role of paratransit to support sustainable transportation: Case study of Khon Kaen City, Thailand** P Wongwiriya*[1], F. Nakamura[2], S. Tanaka[2], R. Ariyoshi[2], S. Miura[2], [1]*Khon Kaen University, Thailand*, [2]*Yokohama National University, Japan*
	G3_OS4_4	**Analysis of the perception of public transport quality: Goiânia's case study** L Coelho Filho*[1], M Araújo Guimarães*[1], W. Luciano Carvalho[1], R. Marcelo Aliaga Medrano[2], [1]*Universidade Federal de Goiás, Brazil*, [2]*Universidade Federal de Goiás, Netherlands*
	G3_OS4_5	**Metro station naming strategies in selected megacities and lessons for new metro systems** A Fraszczyk*, W. Weerawat, P. Kirawanich, *Mahidol University, Thailand*
	G3 – OS5: Public Transport in Urban Areas (3) Room: VMCC13 Session Chair: Daniela Lessa	
11:30-13:10	G3_OS5_1	**Impacts of large urban regeneration projects: The case of the New Athens intercity bus terminal** F. Orfanou, E. Vlahogianni, G Yannis*, C. Moraitis, *National Technical University of Athens, Greece*
	G3_OS5_2	**Why does my bus suddenly become so crowded? The spillover effect of the elimination of three-in-one policy in Jakarta** J Paundra*[1], J. van Dalen[1], L. Rook[2], W. Ketter[3,1], [1]*Erasmus University, Netherlands*, [2]*Delft University of Technology, Netherlands*, [3]*University of Cologne, Germany*
	G3_OS5_3	**Heterogeneity in perception of service quality attributes of bus transit across various user categories- A case of Kolkata** T Bose*, D. Pandit, *Indian Institute of Technology, India*
	G3_OS5_4	**Factor influencing demand by public transport in Colombia. An econometric analysis** D. Toro-Gonzalez[1], V Cantillo*[2], [1]*Universidad Tecnológica de Bolívar, Colombia*, [2]*Universidad del Norte, Colombia*
	G3_OS5_5	**Accessibility of the metropolitan bus transportation system in Belo Horizonte** D Lessa*, C. Lobo, G. Miranda, G. Pinto, L. Cardoso, *Universidade Federal de Minas Gerais (UFMG), Brazil*

G3 – OS6: Land Use and Transport Planning Room: VMCC14 Session Chair: Benjamin Buettner		
11:30-13:10	G3_OS6_1	**Effects of the transport support scheme on employment and commuting patterns among public rental housing residents in Hong Kong** F Sha*, Y. Law, P. Yip, *The University of Hong Kong, Hong Kong*
	G3_OS6_2	**Accessibility to postal services: a potential spatial accessibility analysis** A Mercier*[1], S. Souche- Le Corvec[1], N. Ovtracht[2], C. Borsenberger[3], O. Vialaneix[3], [1]*University of Lyon, LAET, France,* [2]*University of Lyon, CNRS, LAET, France,* [3]*Groupe La Poste, Direction des Relations Institutionnelles et de la Régulation, France*
	G3_OS6_3	**Understanding travel behavior through changes in urban form, preference, and life events: A longitudinal study** B Adhikari*, A. Hong, L. Frank, *University of British Columbia, Canada*
	G3_OS6_4	**Calibration of a simulation model of land-use dynamics and its transport implications. Case study: Bogotá and the region** L Guzmán*, J. Peña, R. Cardona, *Universidad de los Andes, Colombia*
	G3_OS6_5	**Incorporating CO_2 emissions into accessibility analysis: development of an instrument for low carbon land use and transport planning** J Kinigadner*, B Büttner*, G. Wulfhorst, *Technical University of Munich, Germany*

Wednesday, 29 May 2019

G3 – OS7: Urban Transport Planning Room: VMCC14 Session Chair: Hana Bruhova Foltynova		
11:30-13:10	G3_OS7_1	**Strategic transport planning in cities: Roles and attitudes of key stakeholders and barriers to sustainable mobility** H Brůhová Foltýnová*, E. Vejchodská, K. Rybová, *UJEP, Czech Republic*
	G3_OS7_2	**Economic and environmental analysis of measures from a Sustainability Urban Mobility Plan in a small sized city** C. Sampaio, E. Macedo, M Coelho*, J. Bandeira, *University of Aveiro, Portugal*
	G3_OS7_3	**Planning induction based wireless charging locations in a road network for battery electric vehicles** A Kumar*[1], H. Ngo[2], S Mishra*[2], [1]*University of Texas at San Antonio, USA,* [2]*University of Memphis, USA*
	G3_OS7_4	**Identification of major latent variables influencing mode choice behaviour of non-work trips in medium sized cities** S. Shaheem*, S. Sreelekshmi, *National Transportation Planning and Research Centre, India*
	G3_OS7_5	**Examining social returns from urban transport infrastructure:Long-term consequences and varied interests at multiple scales** J Lee*, J. Arts, F. Vanclay, *University of Groningen, Netherlands*
G3 – OS8: Urban Transport Policy Room: VMCC14 Session Chair: Anthony May		
14:30-16:10	G3_OS8_1	**Big data and urban mobility: A policy making perspective** P Pucci*, G. Vecchio, G. Concilio, *Politecnico di Milano, Italy*
	G3_OS8_2	**Impact of car restrictive policies: A case study of Srinagar city in J&K state India** A Pasha*[1,2], R. Rastogi[2], M. Mir[3], [1]*National Highways Authority of India, India,* [2]*IIT Roorkee, India,* [3]*National Institute of Technology Srinagar, India*

	G3_OS8_3	**The San Francisco transportation demand management ordinance: A tool for promoting sustainable travel options** C Rivasplata*, *San Jose State University, USA, San Francisco Municipal Transportation Agency, USA*
	G3_OS8_5	**The role of new mobility services in sustainable urban transport strategies** A May*, G. Marsden, *University of Leeds, United Kingdom*

<table>
<tr><td colspan="3" align="center">G3 – OS9: Sharing Transport (1)
Room: VMCC13
Session Chair: Maria Attard</td></tr>
<tr><td>16:30-18:10</td><td>G3_OS9_1</td><td>A review of regulations and media discourse on technology-enabled shared mobility in Canada
A. Ashraf, M Habib*, <i>Dalhousie University, Canada</i></td></tr>
<tr><td></td><td>G3_OS9_2</td><td>Knowledge concepts for analytical purchase on mobility as a service and future research
A. De Waal, M Vanderschuren*, <i>University of Cape Town, South Africa</i></td></tr>
<tr><td></td><td>G3_OS9_3</td><td>Bike sharing: Regulatory possibilities addressing problematic issues – Case study Vienna
B Laa, G. Emberger*, <i>Vienna University of Technology, Austria</i></td></tr>
<tr><td></td><td>G3_OS9_4</td><td>The ride-sourcing industry: Status-quo and Outlook
M Goletz*[1], F. Bahamonde-Birke[1,2],
<i>[1]DLR Institute of Transport Research, Germany, [2]TU Berlin, Germany</i></td></tr>
<tr><td></td><td>G3_OS9_5</td><td>The technology behind a shared demand responsive transport system for a university campus
M Attard*, M. Camilleri, A. Muscat, <i>University of Malta, Malta</i></td></tr>
<tr><td colspan="3" align="center">G3 – OS10: Sustainable Transport Futures
Room: VMCC14
Session Chair: Anthony May</td></tr>
<tr><td>16:30-18:10</td><td>G3_OS10_1</td><td>How sustainable is the growth of mass transit system in developing countries – an Indian perspective
E Bhaduri*[1], A. Goswami[1], R. Moeckel[2], <i>[1]IIT Kharagpur, India, [2]TU, Germany</i></td></tr>
<tr><td></td><td>G3_OS10_2</td><td>Promoting electric mobility through environmental zoning to reduce GHG emissions: a case for the city of Hamburg?
H Flämig*[1], S. Lunkeit[1], K Rosenberger*[1], J. Wolff[2], <i>[1]Hamburg University of Technology, Germany, [2]Free and Hanseatic City of Hamburg, Germany</i></td></tr>
<tr><td></td><td>G3_OS10_3</td><td>When and where there should be dedicated lanes under mixed traffic of automated and human-driven vehicles for system-level benefits
A Kumar*[1], S Guhathakurta*[2], S. Venkatachalam[2], <i>[1]University of Texas at San Antonio, USA, [2]Georgia Institute of Technology, USA</i></td></tr>
<tr><td></td><td>G3_OS10_4</td><td>Assessing impacts on the utility of both winter cycling and fair-weather cycling in Calgary
J Hunt*, F. Sadeghpour, <i>University of Calgary, Canada</i></td></tr>
<tr><td></td><td>G3_OS10_5</td><td>The potential impacts of automated cars on urban transport: an exploratory analysis
A May*[1], S. Shepherd[1], P. Pfaffenbichler[2], G. Emberger[3],
<i>[1]University of Leeds, United Kingdom, [2]University of Natural Resources and Life Sciences, Austria, [3]Technical University of Vienna, Austria</i></td></tr>
<tr><td></td><td>G3_OS10_6</td><td>Evaluation of workplace mobility plans
D Esztergár Kiss*, A. Aba,
<i>Budapest University of Technology and Economics, Hungary</i></td></tr>
</table>

Thursday, 30 May 2019		
G3 – OS11: Public Transport in Urban Areas (4) Room: VMCC13 Session Chair: Xianghao Shen		
09:30-11:10	G3_OS11_1	**A stochastic optimization model for timetable design to reduce bus bunching** S. Shafraz I.[1], M Manohar M*[2], G. Ramadurai[2], *[1]Indian Institute of Management Kozhikode, India, [2]Indian Institute of Technology Madras, India*
	G3_OS11_2	**Will the current public transport network in Birmingham support passengers disembarking HS2?** S. Kaewunruen, P Rungskunroch*, U. Silva, *University of Birmingham, United Kingdom*
	G3_OS11_3	**Some strategies for improving performance of service quality of bus transport system in state capital Bhopal** P Agarwal*, V Solanki*, P Dhakad*, V Malav*, *Maulana Azad National Institute of Technology, India*
	G3_OS11_4	**Revisiting waiting time modeling in transit studies – A critical review and suggested comprehensive approach** M Ansari Esfeh*, S. Wirasinghe, S. Saidi, L. Kattan, *University of Calgary, Canada*
	G3_OS11_5	**How public transport subsidy policies in China affect the average passenger load factor of a bus line** X Shen*, S. Feng, *Harbin Institute of Technology., China*

G4: Cultural and Social Issues in Transport		
Monday, 27 May 2019		
G4 – OS1: Travel & Activity Preferences Room: VMCC21 Session Chair: Xianghao Shen		
14:30-16:10	G4_OS1_1	**WITHDRAWN**
	G4_OS1_2	**The effect of local foods competition to the number of visitors** K Arita*, S. Terabe, H. Yaginuma, N. Kang, K. Tanaka, *Tokyo University of Science, Japan*
	G4_OS1_3	**Influence of psychological factors in mode choice decision making: A structural equation modeling approach** R. Devika, M Harikrishna*, M. Anjaneyulu, *National Institute of Technology Calicut, India*
	G4_OS1_4	**Long-distance travel patterns of rail users in Hungary - Findings of the new countrywide Origin-Destination (O-D) Survey** V Oszter*, *KTI Institute for Transport Sciences, Hungary*
	G4_OS1_5	**The factors underlying decision-making of urban travel mode choices: an analysis based on 91 cities** A Dingil*[1], Z. Stasiskiene[1], K. Aalipour[2], *[1]Kaunas University of Technology, Lithuania, [2]Bologna University, Italy*

Tuesday, 28 May 2019

G4 – OS2: Gender Perspectives and Differences
Room: VMCC21
Session Chair: Geetam Tiwari

09:30-11:10	G4_OS2_1	**Identifying paratransit service quality based on low-income working women's perception: A case study in Dhaka city** F. Rahman, M Islam*, *University of Asia Pacific, Bangladesh*
	G4_OS2_2	**Usage patterns of public transport as a starting point for thinking through gendered conceptualizations of Delhi** M Campbell*[1], T. Jain[2], *[1]University of Leeds, United Kingdom, [2]Monash University, Austria*
	G4_OS2_3	**Assessing and modelling perceived safety and comfort of women during ridesharing** A. Meshram, P. Choudhary, N Velaga*, *IIT Bombay, India*
	G4_OS2_4	**Gender differences in work trip generation: Evidences from Bangalore** T Rahul*[1], T. Megha[2], M. Sreekumar[2], M. Kamath[2], A. Verma[3], *[1]Indian Institute of Technology Ropar, India, [2]Amrita School of Engineering, India, [3]Indian Institute of Science (IISc), Bangalore, India*
	G4_OS2_5	**A gendered perspective of the phenomenon of 'no travel to work' in Indian cities: A case study of Jaipur city** A Ghate*, G. Tiwari, *Indian Institute of Technology (IIT), India*

G4 – OS3: Inequality & Inclusion
Room: VMCC21
Session Chair: Juan Antonio Carrasco

11:30-13:10	G4_OS3_1	**Mobility as capability: Understanding the livelihoods of tea plantation workers using the Capabilities Approach** L Nunes*, B. Mella Lira, *The Bartlett School of Planning, UCL, United Kingdom*
	G4_OS3_2	**Does income inequality matter for household transport expenditure? A look into different income distribution measures in rich countries.** N Valenzuela Levi*, *University of Cambridge, United Kingdom*
	G4_OS3_3	**Social exclusion, transport & austerity measures: When policy meets reality** J Bridgman*, L. Fassam, M. Hills, *University of Northampton, United Kingdom*
	G4_OS3_4	**Gender and income based variability in travel choices in Vishakhapatnam, India** D Jain*[1], G. Tiwari[2], *[1]TERI School of Advanced Studies, India, [2]IIT Delhi, India*

G4 – OS4: Accessibility & Mobility Cultures
Room: VMCC21
Session Chair: Daniel Oviedo Hernandez

16:30-18:10	G4_OS4_1	**Does industry type matter in measures of job accessibility? Explaining employment outcomes in the UK** J Bastiaanssen*, D. Johnson, K. Lucas, *University of Leeds, United Kingdom*
	G4_OS4_2	**Future trends in transport workforce based on demographic, behavioural, cultural and socioeconomic factors** M. Pomoni[1], A. Laiou[1], C. Plati[1], G Yannis*[1], M. Loukea[2], E. Bekiaris[2], *[1]National Technical University of Athens, Greece, [2]Hellenic Institute of Transport, Greece*
	G4_OS4_3	**The potential for personalized public transport solutions to enhance job seekers' access to employment sites** T. Calvert, F. Crawford, G Parkhurst*, J. Parkin, *University of the West of England, United Kingdom*

	G4_OS4_4	Trip generation study of a shuttle service system in a relocation site: A case in the Philippines M. Paringit, R. Catolos, A. Custodio, J. Layug, J. Uy, J. Galupino, P Lucero*, *De La Salle University, Philippines*
	G4_OS4_5	Making the connections between human needs theories and the social exclusion approach to transport: A conceptual framework T Guimarães*, K. Lucas, P. Timms, *University of Leeds, United Kingdom*

G5: Disaster Resilience in Transport

Monday, 27 May 2019

G5 – OS1: Disaster Resilience in Transport
Room: VMCC21
Session Chair: Huapu Lu & Ashish Verma

16:30-18:10	G5_OS1_2	Tsunami evacuation simulation considering road congestion and difference in evacuation means depending on household composition N Sugiki*, S. Kobayashi, K. Matsuo, *Toyohashi University of Technology, Japan*
	G5_OS1_3	Comparing agent-based crowd simulation and numerical calculations in evacuation process (Valiasr Metro Station, Iran) S Gharavi*, K. Taghizadeh, *University of Tehran, Iran, Islamic Republic of*
	G5_OS1_4	Integration of image processing and crowd simulation for understanding crowd dynamics in Kumbh Mela P. S. Karthika*[1], A. Verma*[1], S. Pal[2], *[1]Indian Institute of Science (IISc), India, [2]Indian Institute of Technology, India*

G6: Transport and Health

Monday, 27 May 2019

G6 – OS1: The Health Impacts of Transport: Access, Safety and Data Issues
Room: VMCC22
Session Chair: Geetam Tiwari

14:30-16:10	G6_OS1_1	Understanding how low-income communities gain access to healthcare services: A qualitative study in São Paulo T Guimarães*, K. Lucas, P. Timms, *University of Leeds, United Kingdom*
	G6_OS1_2	The 20mph speed limit policy in Bristol: Analysis of speed and collisions variations A Bornioli*, I. Bray, P. Pilkington, E. Bird, *University of the West of England, United Kingdom*
	G6_OS1_3	Assessment of national information repository and database(s) for modelling health impacts of urban transport in India D. Jain[1], A Sharma*[2], N. Singh[2], G. Tiwari[2], M. Malayath[2], *[1]Teri School of Advanced Studies, India, [2]Indian Institute of Technology Delhi, India*
	G6_OS1_4	Active and passive transport choice behaviour for school students and their exposure to different transportation modes S Chaudhry*, S. Elumalai, *Indian Institute of Technology (Indian School of Mines), India*

TOPIC H: TRANSPORT IN DEVELOPING AND EMERGING COUNTRIES

H1: Transport Policy, Planning and Financing in Developing Countries

Monday, 27 May 2019

H1 – OS1: Transport Policy in Developing Countries
Room: CE228
Session Chair: Justin S. Chang

14:30-16:10	H1_OS1_1	**The impact of transportation on the economic development of Nigeria: The journey so far and the way forward** P Onokala*[1], C. Olajide[2], [1]*University of Nigeria, Nigeria, [2]University of Nigeria, Nsukka, Nigeria*
	H1_OS1_2	**Alternative approach to costing on Indian railways: Lnking outputs and expenses to activity centres** R Manchala*[1], S Sahu*[2], [1]*CRIS, India, [2]NA, India*
	H1_OS1_3	**Lessons learned from the experience of Indian policies towards sustainable transport systems** A Tufail*, J. S.Chang, *Seoul National University, Korea, Republic of*
	H1_OS1_4	**Strategic planning for sustainable transportation in developing countries: The role of vehicles** S Abu Eisheh*[1], W. Kuckshinrichs[2], A. Dwaikat[1], [1]*An-Najah National University, Palestine, [2]Forschungszentrum Juelich, Germany*

H1 – OS2: Data and Travel Behavior in Developing Countries
Room: CE228
Session Chair: Akimasa Fujiwara

16:30-18:10	H1_OS2_1	**Investigating response, data sending, and completion rates of a smartphone-based travel survey conducted in Kabul, Afghanistan** Q Zwak*[1], A. Khalid[2], Y. Sato[1], T. Maruyama[1], [1]*Kumamoto University, Japan, [2]Ministry of Rural Rehabilitation and Development, Afghanistan*
	H1_OS2_2	**Does individual capability influence travel time expenditure? Mediation and moderation modeling approach** T Ishikawa*, M. Chikaraishi, A. Fujiwara, H. T.A. Nguyen, *Hiroshima University, Japan*
	H1_OS2_3	**Improvement of data sending rate and survey completion rate of smartphone-based travel surveys in two Afghanistan cities** Q Zwak*, T. Maruyama, *Kumamoto University, Japan*
	H1_OS2_4	**Interrelationships between mode choice and trip-chain choice decisions in the context of developing countries** S. S. V. Subbarao*, S. N. V. Swaroop, R.S. Shekhar, *Mahindra Ecole Centrale, India*
	H1_OS2_5	**Modelling pedestrian choice behaviour of crossing facility** M Patra*, V. Perumal, K. Rao, *IIT Bombay, India*

Tuesday, 28 May 2019

H1 – OS3: Transport Financing in Developing Countries
Room: CE228
Session Chair: Imran Muhammad

09:30-11:10	H1_OS3_1	**Does financial penetration cause transportation and economic growth do financial penetration cause transportation and economic growth** R Pradhan*[1], R. Maradana[2], [1]*Indian Institute of Technology Kharagpur, India, [2]Thiagarajar School of Management, Madurai, India*

	H1_OS3_2	Can value capture fund public transport infrastructure in China? X Wang*[1], I Muhammad*[1], K Tsui*[1], S Sturup*[2], [1]*Massey University, New Zealand*, [2]*Department of Urban Planning and Design, Xi'an Jiaotong-Liverpool University, China*
	H1_OS3_3	Feasibility of flexible term concession based real options in public private partnerships in Indian highway sector M Poulose*, A. Mahalingam, *Indian Institute of Technology Madras, India*
	H1_OS3_4	Understanding of traffic signs by drivers in the city of Manila, Philippines J. Fernandez[1], J. Salvador[2], M. Paringit[1], J. Galupino[2], P Lucero*[2], [1]*De La Salle University, Philippines,* [2]*De La Salle University, Philippines*
		H1 – OS4: Traffic and Safety in Developing Countries Room: CE228 Session Chair: Maria Cecilia R. Paringit
11:30-13:10	H1_OS4_1	Modeling phone-use prevalence and risk assessment among long-haul truck drivers P Choudhary*[1], K. Mahajan[1], N. Velaga[1], A. Choudhary[2], R. Shankar[3], [1]*Indian Institute of Technology, Bombay, India,* [2]*Loughborough University, United Kingdom,* [3]*Indian Institute of Technology, Delhi, India*
	H1_OS4_2	Investigating the relation between level of service and volume-to-capacity ratio at signalized intersections under heterogeneous traffic condition D Othayoth*, K. Rao, *Indian Institute of Technology Bombay, India*
	H1_OS4_3	Integrating auto-rickshaws with a BRT system: The role of safety perception L. Márquez[1], V Cantillo*[2], L. Macea[3], [1]*Universidad Pedagógica y Tecnológica de Colombia, Colombia,* [2]*Universidad del Norte, Colombia,* [3]*Pontificia Universidad Javeriana de Cali, Colombia*

Wednesday, 29 May 2019

		H1 – OS5: Public Transport in Developing Countries Room: CE228 Session Chair: Hans-Martin Niemeier
14:30-16:10	H1_OS5_1	Demand and driver supply implications of regular public transportation system for policy makers: A case study of Kandahar city, Afghanistan M Rahmat*[1,2], S. Mizokami[2], [1]*Kandahar University, Afghanistan,* [2]*Kumamoto University, Japan*
	H1_OS5_2	Internal benchmarking of inter-city public bus operators in India A Bhatt*[1], V. Vasudevan[2], S. Misra[1], [1]*Indian Institute of Technology Kanpur, India,* [2]*University of Alaska Anchorage, USA*
	H1_OS5_3	Identifying priority attributes for improving Ulaanbaatar bus services using the analytic hierarchy process B Enkhbayar*, J. S.Chang, *Seoul National University, Korea, Republic of*
	H1_OS5_4	The impacts of ownership, competition and regulation on the performance of the central ports of India S Kumar*, H. Niemeier, *Hochschule Bremen City University of Applied Sciences, Germany*

Thursday, 30 May 2019

		H1 – OS6: Social Issues of Transport in Developing Countries Room: CE228 Session Chair: Carlos Alberto Moncada
09:30-11:10	H1_OS6_1	How priorities of men and women for choosing railway transportation differ? A case study M. Khadem Sameni, A Barzegar Tilenoie*, *Iran University of Science and Technology, Iran, Islamic Republic of*

| | H1_OS6_2 | **Local level travel and travail narratives: A review of the King Sabatha Dalindyebo (KSD) integrated rapid transport plan household surveys**
 J Chakwizira*[1], M. Mashiri[2], B. Mpondo[3], *[1]University of Venda, South Africa, [2]Gwarajena TRD, South Africa, [3]SAFIRI (PVT) LTD, South Africa* |
| | H1_OS6_3 | **Social exclusion related to mobility in Villavicencio from a gender perspective**
 J Díaz Correa*, C. Moncada, D. Escobar, *Universidad Nacional de Colombia, Colombia* |

H2: Infrastructure Operation and Traffic Management in Developing Countries

Monday, 27 May 2019

H2 – OS1: Infrastructure Operation and Traffic Management in Developing Countries - 1
Room: CE233
Session Chair: Aseem Kinra

14:30-16:10	H2_OS1_1	**Framework for logistics performance index construction using DEA: an application for soybean haulage in Brazil** I Costa Melo*, T. Péra, P. Alves Junior, D. Rebelatto, J. Caixeta-Filho, *University of São Paulo, Brazil*
	H2_OS1_2	**Identifying infrastructure risk factors in Africa** A. Theofilatos, K. Folla, A. Laiou, S. Mavromatis, G Yannis*, *National Technical University of Athens, Greece*
	H2_OS1_3	**Policy dilemma: Road pricing or road space rationing – Evidence from Santiago, Chile** D Chakraborty*, *University of California, Davis, USA*
	H2_OS1_4	**The city-airport connection, implications for urban transport planning in motorcycle-dominated cities** T. Thi My Thanh*[1], A. Minh Ngoc[2], *[1]University of Transport Technology, Vietnam, [2]University of Transport and Communication, Vietnam*

H2 – OS2: Infrastructure Operation and Traffic Management in Developing Countries - 2
Room: CE233
Session Chair: Keping Li

16:30-18:10	H2_OS2_1	**A descriptive study of vehicle-type-specific headways under mixed traffic** R Roy*, P Saha*, *Indian Institute of Engineering Science and Technology, India*
	H2_OS2_2	**Analysis of level of service at manually operated toll plaza using fuzzy logic approach** Y Navandar*[1], D. Othayoth[2], A. Dhamaniya[1], D. Patel[1], *[1]SVNIT, India, [2]IIT Bombay, India*
	H2_OS2_3	**A quick method for estimation of level of service at manually operated tollbooths under mixed traffic conditions** Y. Navandar, A Dhamaniya*, D. Patel, *SVNIT, India*
	H2_OS2_4	**Capacity analysis of escalators installed at metro rail stations in India** D Kahali*, R. Rastogi, *Indian Institute of Technology Roorkee, India*
	H2_OS2_5	**Comparative analysis of saturation flow using various PCU estimation methods** S. Mondal[1], V. Arya[1], A Gupta*[1], S. Gunarta[2], *[1]IIT (BHU) Varanasi, India, [2]Institute of Road Engineering, Indonesia*

Tuesday, 28 May 2019

H2 – OS3: Infrastructure Operation and Traffic Management in Developing Countries - 3
Room: CE233
Session Chair: Ashish Verma

09:30-11:10	H2_OS3_1	**Assessing the user perception & quality of bus service in Navi Mumbai- Application of SEM technique** A. Chepuri[1], L. Melville[1], S Arkatkar*[2], G. Joshi[2], S. Pulugurtha[3], *[1]SVNIT, India, [2]SVNIT, India, [3]UNCC, USA*
	H2_OS3_2	**Modeling helmet usage behavior of motorized two-wheeler riders in developing countries** S. Marisamynathan[1], V Perumal*[2], S. Gupta[3], *[1]National Institute of Technology, India, [2]Indian Institute of Technology Bombay, India, [3]Johns Hopkins International Injury Research Unit, USA*
	H2_OS3_3	**Identifying user satisfaction level of road services: A focus on Rajshahi city bypass road, Bangladesh** M Hasan*, A. Alam, A. Mim, A Das*, *Rajshahi University of Engineering and Technology, Bangladesh*
	H2_OS3_4	**Fuzzy logic based user perceived level of service of signalized intersection under heterogeneous traffic condition** D Othayoth*, K. Krishna Rao, *IIT BOMBAY, India*
	H2_OS3_5	**Identifying critical mid-block locations for incidents in an urban road network** K Ghosh*, B Maitra*, *Indian Institute of Technology Kharagpur, India*

H2 – OS4: Infrastructure Operation and Traffic Management in Developing Countries - 4
Room: CE233
Session Chair: Velmurugan S

11:30-13:10	H2_OS4_1	**Traffic impact assessment for sustainable development in urban areas** P. Seetharaman*[1], S. Velmurugan*[1], N. Kalsi*[2], R. Kayitha*[1], M. Erramapalli*[1], S. Kannan*[1], *[1]CSIR Central Road Research Institute, India, [2]Delhi Metro Rail Corporation, India*
	H2_OS4_2	**Crowd dynamics of a rural group in a mass religious gathering: A case study of kumbha mela – 2016, India** A Rai*[1], A. Verma[1], P. Chakroborty[2], *[1]Indian Institute of Science, India, [2]Indian Institute of Technology, India*
	H2_OS4_3	**Development of adjustment factors for Robertson's platoon dispersion model** P. P S[1], A Rajamma*[2], *[1]College of Engineering Trivandrum, India, [2]Government College of Engineering, India*

Wednesday, 29 May 2019

H2 – OS5: Infrastructure Operation and Traffic Management in Developing Countries - 5
Room: CE233
Session Chair: Dimantha De Silva

14:30-16:10	H2_OS5_1	**Average queue length estimation using crowdsourced travel time data under heterogenous traffic conditions** S. Kumarage, D De Silva*, S. Bandara, *University of Moratuwa, Sri Lanka*
	H2_OS5_2	**Implementation of camera based speed management in India** M Khan*, B Maitra*, *Indian Institute of Technology Kharagpur, India*
	H2_OS5_4	**Characteristics of vehicular lateral shifts in non-lane-disciplined traffic stream** D Pal*[1], S. Venthuruthiyil[2], M. Chunchu[3], *[1]NERIST, India, [2]IIT, India, [3]IIT, India*

H5: Urban Transport in Developing Countries

Monday, 27 May 2019

H5 – OS1: ITS
Room: CE233
Session Chair: Ali Huzayyin

14:30-16:10	H5_OS1_1	**Public transport occupancy estimation using WLAN probing and mathematical modeling** T. Vieira[1], P Almeida*[1], M. Meireles[2], R. Ribeiro[1], *[1]CEFET-MG, Brazil, [2]Institute of Mathematical Sciences and Informatics, PUC-Minas, Brazil*
	H5_OS1_2	**Analysis of bus travel time variability using automatic vehicle location data** M Harsha*[1], R. H Mulangi[1], H. Dinesh Kumar[2], *[1]National Institute of Technology Karnataka, India, [2]Intelligent Transport System, Mysore, India*
	H5_OS1_3	**A Fuzzy logic approach to analyze the effect of metro corridor on middle income housing in Mumbai** A Jana*[1], R. Bardhan[1,2], N. Velaga[1], A. Jain[1], S. Sangoi[1], *[1]Indian Institute of Technology Bombay, India, [2]Stanford University, USA*
	H5_OS1_4	**Is India ready for the autonomous vehicles?** S Swamy*[1,2], S Sharma*[1], *[1]CEPT University, India, [2]Centre of Excellence, Urban Transport, India*

H5 – OS2: Urban Development
Room: CE238
Session Chair: Varameth Vichiensan

14:30-16:10	H5_OS2_1	**Need for sustainable transport and mixed land use: Findings from the 2008 and 2018 travel surveys** C Hanni*, N. Kalyanpad, K. V. Krishna Rao, *Indian Institute of Technology Bombay, India*
	H5_OS2_2	**Measuring the impact of objective and subjective built environment factors on access mode choice to metro stations** A Gupta*, G Bivina*, M. Parida, *Indian Institute of Technology, Roorkee, India*
	H5_OS2_3	**Parking behavior and the possible impacts on travel alternatives in motorcycle-dominated cities** T Thi My Thanh*[1], A. Minh Ngoc[2], *[1]University of Transport Technology, Vietnam, [2]University of Transport and Communication, Vietnam*
	H5_OS2_4	**A comparative study of pedestrian movement behavior over foot over bridges under similar land use type** A Banerjee*, A. Maurya, *Indian Institute of Technology Guwahati, India*
	H5_OS2_5	**Motorists' preferences toward parking space management in the capital city of Ulaanbaatar** A. Mares[1], O. Demberel[2], F Heinitz*[1], *[1]FH Erfurt University of Applied Sciences, Germany, [2]Ulaanbaatar Municipial Traffic Control Center, Mongolia*

H5 – OS3: Urban Accessibility
Room: CE212
Session Chair: Yaser Hatamzadeh

14:30-16:10	H5_OS3_2	**Mode choice analysis using web-based revealed preference questionnaire, stated preference experiment and google maps API** N Kalyanpad*, C Hanni*, K. V. Krishna Rao, *Indian Institute of Technology Bombay, India*
	H5_OS3_3	**Analysis of the effects of the Transport Network Companies (TNCs): Travel behavior and accessibility in Bogotá, Colombia** D Oviedo*[1], O. Sabogal[1], D. Perez[2], I. Granada[2], *[1]University College London, United Kingdom, [2]Inter-American Development Bank, USA*

	H5_OS3_4	**Beyond travel to work: Non-work accessibility, capabilities and transport equity in Bogotá** D Oviedo*[1], L. Guzman[2], *[1]University College London, United Kingdom, [2]Universidad de los Andes, Colombia*
	H5_OS3_5	**Push versus pull factors for household car ownership in developing countries: A case study of Accra** S Adjei Appiah*, G. Marsden, J. Anable, *University of Leeds, United Kingdom*

<table>
<tr><td colspan="3" align="center">H5 – OS4: Urban Mobility
Room: CE238
Session Chair: M. Shafiq-Ur Rahman</td></tr>
<tr><td>16:30-18:10</td><td>H5_OS4_1</td><td>Travel pattern and mobility constraints of disabled people: A case study on Dhaka city, Bangladesh
M Shafiq Ur Rahman*, <i>Jahangirnagar University, Bangladesh</i></td></tr>
<tr><td></td><td>H5_OS4_2</td><td>Drivers and barriers to sustainable mobility: Lessons learnt from GEF projects in Russia, Central Asia and Caucasus
A Aparicio*, <i>Technical University Madrid (UPM), Spain</i></td></tr>
<tr><td></td><td>H5_OS4_3</td><td>Evolution of self-organisation mechanisms of a new informal mode of transportation: case study of two municipalities in West Bengal, India
S Chaudhuri*, <i>Indian Institute of Science and Technology, India</i></td></tr>
<tr><td></td><td>H5_OS4_4</td><td>Improving urban mobility-towards seamless & integrated multimodal transit stations
P Kansal*, <i>RITES, India</i></td></tr>
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<tr><td colspan="3" align="center">H5 – OS5: Transit Service
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Session Chair: Rose Luke</td></tr>
<tr><td>16:30-18:10</td><td>H5_OS5_1</td><td>Strategies for improving satisfaction level of public transport users
P Agarwal*[1], V Solanki*[2], S Bhatia*[3], T Jain*[3],
<i>[1]MANIT, India, [2]MANIT, India, [3]Rajasthan Technical University, India</i></td></tr>
<tr><td></td><td>H5_OS5_2</td><td>User perceptions of public transport service quality
S Sinha*[1], H. Swamy[1], K. Modi[2], <i>[1]CEPT University, India, [2]ATKINS, India</i></td></tr>
<tr><td></td><td>H5_OS5_3</td><td>Public transport users' WOM: an integration model of the theory of planned behavior, customer satisfaction theory, and personal norm theory
I Bakti*, S. Sumaedi, T. Rakhmawati, M. Yarmen, T. Widianti, N. Astrini,
<i>Indonesian Institute of Sciences, Indonesia</i></td></tr>
<tr><td></td><td>H5_OS5_4</td><td>An analysis of the quality of public transport in Johannesburg, South Africa using an adapted SERVQUAL model
R Luke*, G. Heyns, <i>University of Johannesburg, South Africa</i></td></tr>
<tr><td></td><td>H5_OS5_5</td><td>Determination of service quality attributes based on user perception for paratransit services in developing country like India
D. Sharma, D. Pandit, T Bose*, <i>Indian Institute of Technology, India</i></td></tr>
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Session Chair: Suvin P. Venthuruthiyil</td></tr>
<tr><td>09:30-11:10</td><td>H5_OS6_1</td><td>Empirical investigation of the existence of class-wise fundamental diagram for a heterogeneous traffic stream
S P Venthuruthiyil*[1], S. Tiwari[1], P. J. Choudhury[2], J. Zaman[2], M. Chunchu[1], <i>[1]Indian Institute of Technology Guwahati, India, [2]Assam College of Engineering, Guwahati, India</i></td></tr>
</table>

	H5_OS6_2	**Criteria for temporal aggregation of the traffic data from a heterogeneous traffic stream** S P Venthuruthiyil*[1], A. R. Karmakar[2], S. Y. Islam[2], M. Chunchu[1], *[1]Indian Institute of Technology Guwahati, India, [2]Assam College of Engineering, Guwahati, India*
	H5_OS6_3	**Capacity estimation: A study of empirical data under heterogeneous traffic conditions** N Jayaratne*, H. Pasidu, *University of Moratuwa, Sri Lanka*
	H5_OS6_4	**The effects of odd-even traffic restriction policy during Asian games 2018 in Jakarta** H Prakoso*[1], M. Wicaksono[1], D. Setiawan[2], *[1]Greater Jakarta Transport Authority, Indonesia, [2]Indonesian National Police Traffic Corps, Indonesia*

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<tr><td colspan="3" align="center">H5 – OS7: Safety & Security
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Session Chair: Sik Sumaedi</td></tr>
<tr><td>16:30-18:10</td><td>H5_OS7_1</td><td>Driver behaviour at signalised intersections: Consequences of eating and drinking during driving
P Choudhary*, N. Velaga, <i>IIT Bombay, India</i></td></tr>
<tr><td></td><td>H5_OS7_2</td><td>Identification of contributing factors in vehicle pedestrian crashes in Chennai using multiple correspondence analysis
P Natarajan*, S. Sivasankaran, V. Balasubramanian,
<i>Indian Institute of Technology, Madras, India</i></td></tr>
<tr><td></td><td>H5_OS7_3</td><td>Identifying patterns of pedestrian crashes in urban metropolitan roads in India using association rule mining
S Sivasankaran*, P. Natarajan, V Balasubramanian*,
<i>Indian Institute of Technology, Madras, India</i></td></tr>
<tr><td></td><td>H5_OS7_4</td><td>Intention to use helmet with quality standard label: An integration model of hierarchy of effect theory and information signaling theory
T. Rakhmawati, S Sumaedi*, I. Bakti, T. Widianti, S. Damayanti, <i>Research Center for Quality System and Testing Technology Indonesian Institute of Sciences, Indonesia</i></td></tr>
<tr><td></td><td>H5_OS7_5</td><td>Personal security and daily travel in sub-Saharan Africa: The case of Dakar
L. Diaz Olvera, D. Plat, P Pochet*, <i>LAET - Université de Lyon, France</i></td></tr>
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<tr><td>14:30-16:10</td><td>H5_OS8_2</td><td>Impact of aerial cable car in low-income area in Medellín, Colombia
M Matsuyuki*[1], S. Okami[2], F. Nakamura[1], I. Sarmiento-Ordosgoitia[3], <i>[1]Yokohama National University, Japan, [2]Yachiyo Engineering Co., Ltd, Japan, [3]Universidad Nacional de Colombia, Colombia</i></td></tr>
<tr><td></td><td>H5_OS8_3</td><td>Analysis of user perception towards a key set of attributes related to Bicycle-Metro integration: A case study of Hyderabad,India
J. Panchal[1], B Majumdar*[1], V. Ram[1], D Basu*[2],
<i>[1]BITS Pilani Hyderabad Campus, India, [2]IIT Bhubaneswar, India</i></td></tr>
<tr><td></td><td>H5_OS8_4</td><td>A scenario based analysis of car sharing alternatives for Mumbai
D Das*, P. Kalbar, N. Velaga, <i>Indian Institute of Technology Bombay, India</i></td></tr>
<tr><td></td><td>H5_OS8_5</td><td>Strategies for improving impacts of alternate public transport system on Indian cities
P Agarwal*[1], V Solanki*[1], T Jain*[2], S Bhatia*[2],
<i>[1]MANIT, India, [2]Rajasthan Technical University, India</i></td></tr>
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H5 – OS9: Transport Policy Room: CE212 Session Chair: Ashish Verma		
14:30-16:10	H5_OS9_1	**Sustainable urban transport policies to improve public transportation system: A case study of Bengaluru, India** H Vajjarapu*[1], O Karmarkar*[1,2], A Verma*[1], [1]*Indian Institute of Science Bangalore, India,* [2]*Indian Institute of Technology Bombay, India*
	H5_OS9_2	**A walking mode choice analysis of school trips across morning and afternoon period students in Rasht, Iran: Does it matter?** Y Hatamzadeh*, *Amirkabir University of Technology, Iran, Islamic Republic of*
	H5_OS9_3	**Mass transit = mass benefits?** D Oviedo*[1], A. Ojeda[2], J. Arellana[2], J. Davila[1], V. Cantillo[2], [1]*University College London, United Kingdom,* [2]*Universidad del Norte, Colombia*
	H5_OS9_4	**Political economy of high-speed rails in India** A. Aleem*, *Shiv Nadar University, India, Indian Institute of Technology, India*
H5 – OS10: Transit Quality and Performance Room: CE238 Session Chair: Iderlina Mateo-Babiano		
16:30-18:10	H5_OS10_1	**Exploring the affect of mixed traffic zones on BRTS: A case study on Ahmedabad BRTS** A Kakarla*, *Nihon university, Japan, IIT Hyderabad, India*
	H5_OS10_2	**Is there a gender dimension in transport? Examining female student's decision making in the context of climate-aggravated disruptions** A Fillone*[1], I. Mateo-Babiano[2], [1]*De La Salle University, Philippines,* [2]*University of Melbourne, Australia*
	H5_OS10_3	**Young women's perception of safety in public buses: A study of two indian cities (Ahmedabad and Bangalore)** M. Verma[1], N. Rodeja[2], M. Malayath[3], A Verma*[4], [1]*MS Ramaiah Institute of Management, India,* [2], *CEPT University, Ahmedabad, India,* [3]*Indian Institute of Technology, Delhi, India,* [4]*Indian Institute of Science, Bangalore, India*
	H5_OS10_4	**A comprehensive methodology for comparative performance evaluation of public transport systems in urban areas** J. Gurjar[1,2], P Agarwal*[1], P. Jain[1], [1]*MANIT Bhopal, India,* [2]*Government Engineering College Rewa, India*
H5 – OS11: Transport Policy and Analysis Room: CE212 Session Chair: M. Shafiq-Ur Rahman		
16:30-18:10	H5_OS11_1	**A rational approach for improving travel impacts of public transport system in Indian cities** P Agarwal*[1], V. Solanki[2], V. Malav[1], [1]*MANIT, India,* [2]*MANIT, India*
	H5_OS11_2	**Projection of private vehicle stock in India up to 2050** N Singh*, T. Mishra, R. Banerjee, *Indian Institute of Technology Bombay, India*
	H5_OS11_3	**International assessment of private motorization dynamics at the metropolitan scale** M Trouve*, G. Lesteven, F. Leurent, *Université Paris-Est, LVMT, Ecole des Ponts ParisTech, France*
	H5_OS11_4	**Alternative transport in México city** S Barrera Berrón*, E. Segura Perez, A. Wellens Purnal, *Universidad Nacional Autonoma de México, Mexico*

	H5_OS11_5	Modelling induced travel demand in a developing country: Evidence from Dhaka, Bangladesh M. Rahman[1], D. Baker[2], M Rahman*[1], *[1]Jahangirnagar University, Bangladesh, [2]Queensland University of Technology, Australia*

TOPIC I: INFRASTRUCTURE DESIGN AND MAINTENANCE		
I1: Highway Design and Materials		
Monday, 27 May 2019		
I1 – OS1: Performance Characterization of Bituminous Mixes - 1 Room: LC201 Session Chair: J. Murali Krishnan		
14:30-16:10	I1_OS1_1	**Using polymer and rubber modified asphalt mixtures on airfield pavements. Case study: International Airport Ernesto Cortissoz, Barranquilla, Colombia.** L Fuentes*, *Universidad del Norte, Colombia*
	I1_OS1_2	**Investigation of durability of open graded friction courses** D Bamunuarachchi*, W. Mampearachchi, *University of Moratuwa, Sri Lanka*
	I1_OS1_3	**Use of recycled material in WMA- future of greener road construction** A Sharma*, P. Kumar, A. Walia, *IIT, India*
	I1_OS1_4	**Influence of climate and traffic on the HMA rut-depth for India** D Savio*, M. Nivitha, J. Krishnan, *Indian Institute of Technology Madras, India*
Tuesday, 28 May 2019		
I1 – OS2: Performance Characterization of Bituminous Mixes - 2 Room: LC201 Session Chair: Umesh Chandra Sahoo		
09:30-11:10	I1_OS2_1	**Laboratory characterization of a cement grouted bituminous macadam made with Portland slag cement** D. Mukherjee, U Sahoo*, *Indian Institute of Technology Bhubaneswar, India*
	I1_OS2_2	**A case study on the evaluation of rubberised asphalt containing reclaimed asphalt pavement and setting up of possible guidelines** M. Ananthan, R Rughooputh*, *University of Mauritius, Mauritius*
	I1_OS2_3	**Utilization of Zycotherm as an admixture for bituminous road construction** U Sharma*, A. Mor, A. Khatri, *Punjab Engineering College (Deemed to be University), India*
	I1_OS2_4	**Influence of rest period on the fatigue response of bituminous mixture at low temperature** P. Ayyar[1], L. S[2], P. Ajithkumar[3], J Krishnan*[1], *[1]Indian Institution of Technology Madras, India, [2]Anna University, India, [3]SRM Institute of Science and Technology, India*
I1 – OS3: Industrial Waste for Pavement Construction - 1 Room: LC201 Session Chair: J. Murali Krishnan		
11:30-13:10	I1_OS3_1	**Influence of Acrylonitrile Butadiene Styrene (ABS) on the physical, rheological and mechanical properties of bitumen binder** P. K. Singh*, S. K. Suman*, M. Kumar, *National Institute of Technology Patna, India*
	I1_OS3_2	**Rheological and mechanical properties of bauxite residue as hot mix asphalt filler** R. Choudhary, A Kumar*, G. Rahman, *Indian Institute of Technology Guwahati, India*

	I1_OS3_3	**Assessment of strength characteristics of bituminous concrete modified using HDPE** A Khan*, S. Jain, *Indian Institute of Technology, Roorkee, India*
	I1_OS3_4	**Performance evaluation of asphalt concrete mixes having copper industry waste as filler** J. Choudhary, B. Kumar, A Gupta*, *Indian Institute of Technology (Banaras Hindu University), Varanasi, India*
	I1_OS3_5	**Eco-friendly paving materials using waste PET and reclaimed asphalt pavement** A Sreeram*[1], Z. Leng[1], R. Padhan[1], X. Qu[2], *[1]Hong Kong Polytechnic University, Hong Kong, [2]RWTH Aachen University, Germany*

		I1 – OS4: Industrial Waste for Pavement Construction - 2 Room: LC201 Session Chair: Umesh Chandra Sahoo
16:30-18:10	I1_OS4_1	**Performance evaluation of forage ash stabilized shale soil for effective use in flexible pavement** O Fadamoro*[1,2], I. Oyediran[3], *[1]Academy of Scientific and Innovative Research (AcSIR), India,* *[2]CSIR-Central Road Research Institute, India, [3]University of Ibadan, Nigeria*
	I1_OS4_2	**Strength characteristics of concrete produced with aluminium dross as partial replacement for portland pozzolana cement** Panditharadhya, B. J.*, R. H Mulangi, R. A U, *National Institute of Technology Karnataka, India*
	I1_OS4_3	**A study on initial setting time and the mechanical properties of AASC using the PS ball as fine aggregate** A Talkeri*, A. Shankar, *NITK Surathkal, India*
	I1_OS4_4	**Feasibility assessment of the use of basic oxygen furnace slag in open graded asphalt courses** S Pathak*, R. Choudhary, A. Kumar, D. Damena, *Indian Institute of Technology Guwahati, India*
	I1_OS4_5	**Utilization of plastic waste in bitumen mixes for flexible pavement** R Damgir*[1], S. Hake[2], P Awasarmal*[1], *[1]Government College of Engineering Aurangabad, India, [2]Dr V V P COE, India*

Wednesday, 29 May 2019

		I1 – OS5: Design and Quality Evaluation Using Advance Tools Room: LC201 Session Chair: Nazimuddin Wasiuddin
09:30-11:10	I1_OS5_1	**Horizontal road markings for human and machine vision** T Burghardt*[1], H. Mosböck[2], A. Pashkevich[3], M. Fiolić[4], *[1]M. Swarovski GmbH, Austria, [2]Swarco AG, Austria, [3]Politechnika Krakowska, Poland, [4]University of Zagreb, Croatia*
	I1_OS5_2	**Microstructural characteristics of bituminous mix using X-ray CT** S Jena, B. Pathi, M. Panda*, *NIT Rourkela, India*
	I1_OS5_3	**Continuous and detailed measurements of road bearing capacity at 80 km/h** K Jensen*, *Greenwood Engineering A/S, Denmark*
	I1_OS5_4	**Overlay design of low volume roads using Dynamic Cone Penetrometer - a review in Indian scenario** W K C*, S Baby*, T. John, *National Transportation Planning and Research Center, India*

		I1 – OS6: Characterization of Subgrade for Highways Room: LC201 Session Chair: Manik Barman
16:30-18:10	I1_OS6_1	**Investigation on strength characteristics of subgrade of pavement using waste material** D Deshmukh*, K. Singh, *NIT Silchar, India*
	I1_OS6_2	**Behavior of box culvert with geofoam as a backfill material in highway** A Kumar*, S. Ahirwar, J Mandal*, *Indian Institute of Technology Bombay, India*

	I1_OS6_3	**Evaluation of cement treated reclaimed asphalt pavement and recycled concrete pavement bases** C Sarella*, A Boyina*, A Singh*, S. Shankar, *National Institute of Technology Warangal, India*

Thursday, 30 May 2019

I1 – OS7: Asphalt Binder Characterization
Room: LC201
Session Chair: Nazimuddin Wasiuddin

09:30-11:10	I1_OS7_1	**Rheological characterization of Nanocomposite modified asphalt binder** I. Mahali, U Sahoo*, *Indian Institute of Technology Bhubaneswar, India*
	I1_OS7_2	**Life cycle assessment of modified asphalt and recommendations for policy guidelines- A case study of a small island developing state** A. Veeramah, R Rughooputh*, *University of Mauritius, Mauritius*
	I1_OS7_3	**A novel method for polymer content determination in asphalt binders and emulsions** R. Hossain, N Wasiuddin*, *Louisiana Tech University, USA*
	I1_OS7_4	**Understanding the short-term aging of warm mix asphalt using rolling thin film oven** S. Arafat, N Wasiuddin*, *Louisiana Tech University, USA*
	I1_OS7_5	**Estimation of binder quantity in a binary blend of asphalt binders using FTIR** B Bora*, A. Das, *Indian Institute of Technology Kanpur, India*

I2: Infrastructure management

Monday, 27 May 2019

I2 – OS1: Policy and Design
Room: LC202
Session Chair: Shriniwas Arkatkar

14:30-16:10	I2_OS1_1	**An assessment towards identifying improvement needs of urban bus stop infrastructure: Knowledge gained from Bhubaneswar** D Basu*[1], S Roy*[1], S. Roy Maitra[2], B. Bandhu Majumdar[3], *[1]India Institute of Technology Bhubaneswar, India, [2]India Institute of Technology Kharagpur, India, [3]Birla Institute of Technology and Science, Pilani Hyderabad Campus, India*
	I2_OS1_2	**Fast charging stations with stationary batteries- An economic comparison of fast charging at highways and in cities** S. Funke[1], P Jochem*[2], S. Ried[2], T. Gnann[1], *[1]Fraunhofer Institute for Systems and Innovation Research (ISI), Germany, [2]Karlsruhe Institute of Technology (KIT), Germany*
	I2_OS1_3	**Exploratory study on approaches for traffic count prediction; using toll-way traffic count** S. VB[1], S Arkatkar*[1], L. Vanajakshi[2], *[1]SVNIT, India, [2]IIT, India*
	I2_OS1_4	**Analysis of driver behavior at intersection to develop guidelines for roadway geometric design** B Nath*[1], P Sahu*[1], A Maji*[2], H Roh*[3], *[1]Birla Institute of Technology and Science Pilani, India, [2]Indian Institute of Technology Bombay, India, [3]City of Regina, Canada*

Tuesday, 28 May 2019

I2 – OS2: Infrastructure Analysis and Evaluation
Room: LC202
Session Chair: Debasis Basu

09:30-11:10	I2_OS2_1	**Pavement maintenance considering traffic accident costs** R. Justo-Silva, A Ferreira*, *University of Coimbra, Portugal*

	I2_OS2_2	**An evaluation of in-service infrastructural facilities of walk-access feeder paths to urban local bus stops** S Roy*, D Basu*, *Indian Institute of Technology Bhubaneswar, India*
	I2_OS2_3	**Passenger satisfaction towards metro infrastructures, facilities and services** Y.Q. Saw[1], D Dissanayake*[1], F. Ali[2], T. Bennett[1], [1]*Newcastle University, United Kingdom,* [2]*National Defence University, Malaysia*
	I2_OS2_4	**Critical Analysis of "Smart Cities Mission" in India: The Issues and challenges in its implementation** S. Dixit[1]*, S. Singh[2], K. Sharma[1] [1]*Amity University - Noida, India.* [2]*K R Mangalam University Gurgaon, India*
	I2_OS2_5	**The delay factor of road maintenance against vehicle operating cost** D Iskandar*, S. P. Hadiwardoyo, R. J. Sumabrata, *Universitas Indonesia, Indonesia*
	I2 – OS3: Pavement Analysis and Management Room: LC202 Session Chair: Hadunneththi Pasindu	
11:30-13:10	I2_OS3_1	**Analytical evaluation of impact of groove deterioration on runway frictional performance** H Pasindu*, *University of Moratuwa, Sri Lanka*
	I2_OS3_2	**Debonding detection in asphalt pavements using infrared thermography** V Vyas*, V. Patil, A. Singh, A. Srivastava, *BITS Pilani, India*
	I2_OS3_3	**Analysis of the flexible pavement using falling weight deflectometer for Indian national highway road network** A Singh*, A. Sharma, A. SIngh, T Chopra*, *Thapar Institute of Engineering and Technology, India*
	I2 – OS4: Project Planning Room: LC202 Session Chair: Swapnil Garg	
16:30-18:10	I2_OS4_1	**Few ways to succeed, many ways to fail: Asymmetrical performance of Indian highway PPP projects** S Garg*, *Indian Institute of Management Indore, India*
	I2_OS4_2	**Sustainability in PPPs: Bid selection model for highways using ANP** T Dolla*, B. Laishram, *Indian Institute of Technology Guwahati, India*
	I2_OS4_3	**Developing some fuzzy modules for finding risk probabilities in Indian PPP projects** P Baruah*[1], M. Kakati[2], [1]*IIIT Guwahati, India,* [2]*Gauhati University, India*
	I2_OS4_4	**Transportation infrastructure protection planning against sea level rise: Analysis using operational landscape units** J Suh*, A Tcheukam*, S Madanat*, *New York University Abu Dhabi, UAE*
	I2_OS4_5	**The potential and use of past performance in Swedish public procurement of transport infrastructure** J Nyström*, A. Vigren, *Swedish National Road and Transport Research Institute (VTI), Sweden*