



11th International Travel Demand Management Symposium (TDM 2023)

THEME: "Global Challenges and TDM: Opportunities for future development"

Hybrid Conference

Venue: Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana



Amonoo Neizer IDL Conference Centre, KNUST

Date: Monday, September 18, 2023 - Wednesday, September 20, 2023

DAY 1: MONDAY 18TH SEPTEMBER 2023

08:00	09:00	Arrival and Registration		
09:00	10:30	Opening Ceremony		
Chair: Prof. Mrs. Rita Akosua Dickson, Vice Chancellor, KNUST				
		KNUST	Welcome to the TDM Conference in KNUST	Prof. Kwabena Biritwum Nyarko, Provost, College of Engineering, KNUST
		Edinburgh Napier University	Introduction to TDM symposium	Prof. Wafaa Saleh, Chair of TDM Symposium
		Special Guest	Official welcome to the TDM Conference and KNUST	Prof. Mrs. Rita Akosua Dickson, Vice Chancellor, Kwame Nkrumah University of Science and Technology (KNUST)
		Guest Speaker	Fraternal Greetings from GhIE President	Ing. Kwabena Bempong, President, Ghana Institution of Engineering (GhIE)
		Guest of Honour	Speech of the Guest of Honour	Hon. Kwasi Amoako-Attah, Minister, Ministry of Roads and Highways, Ghana
		Guest of Honour	Speech of the Guest of Honour	Hon. Kwaku Ofori Asiamah, Minister, Ministry of Transport, Ghana
10:30	11:00	Cocoa Break / Photograph		
Plenary Session				
11:00	11:25	Keynote		
Chair: Dr. Thomas Kolawole Ojo, University of Cape Coast (UCC), Ghana				
11:00	11:25	Keynote Speaker	TDM: Why it is even more critical in an age of new mobility options	Chandra Bhat, Joe J. King Endowed Chair Professor in Engineering, The University of Texas at Austin, USA
Parallel Session (I.A & I.B)				
11:30	13:45	Session I.A - TDM in the Age of New Mobility Options		
Chairs: Prof. Chandra Bhat, The University of Texas at Austin, USA / Dr Thomas Ojo, UCC, Ghana				
11:30	11:45	TDM in the Age of New Mobility Options	Causes of day-to-day travel time variability of paratransit trips: case of two paratransit routes in Kumasi.	George Ukam, Regional Transport Research and Education Centre Kumasi, KNUST
11:45	12:00		Crowd estimation and prediction using wi-fi sensor data: an on-campus experiment.	Stellah Namulindwa, Kyoto University, Japan
12:00	12:15		Challenges of public road transport systems in Ghanaian cities: a comprehensive analysis of governance, regulation, and service delivery	Randolf Wilson, Regional Transport Research and Education Centre Kumasi, KNUST
12:15	12:30		Investigating mode choice for work trips in Osogbo, Nigeria	Emmanuel Bamiloye Oluwadamilola, Regional Transport Research and Education Centre Kumasi, KNUST
12:30	12:45		Informal and shared mobility: current practices in Lagos Nigeria	Musa Bala, Nigerian Building and Road Research Institute (NBRI), Nigeria
12:45	13:00		Comparative study of urban transport and accessibility patterns: a case study of three african port cities	Ismael A. Guirreh & Moktar I. Omar, African Centre of Excellence in Logistics and Transportation (CEALT), University of Djibouti, Djibouti
13:00	13:15		Estimation of PCE factors for traffic at signalized intersections for capacity analysis in Monrovia	Miller Garmi, Regional Transport Research and Education Centre Kumasi, KNUST
13:15	13:45		Q&A	
11:30	14:00	Session I.B - TDM and Traffic Safety Strategies		
Chairs: Prof. Mohammed Salifu, Ghana Tertiary Education Commission / Prof. Grigorios Fountas, Edinburgh Napier University, UK				
11:30	11:45	TDM and Traffic Safety Strategies	Evaluation of the effectiveness of speed calming measures on some urban roads in Kumasi: an adoption of HSM crash modification functions.	Fatima Abdallah, Regional Transport Research and Education Centre Kumasi, KNUST
11:45	12:00		Women's perception of safety in public space: the STEP UP project	Lamia Abdelfattah, Fondazione Transform Transport ETS, Italy
12:00	12:15		Evaluation of commercial motorcycle operations and safety in Liberia: a case study of rural Lofa County, Liberia	Daniel Kpehe Bolay, Regional Transport Research and Education Centre Kumasi, KNUST
12:15	12:30		Effective trigger speeds for vehicle activated signs in the Scottish borders area	Adebola Olowosegun, Edinburgh Napier University
12:30	12:45		Road accident blackspot evaluation study on highways in the Eastern region of Ghana	Elizabeth Arjarquah, Regional Transport Research and Education Centre Kumasi, KNUST
12:45	13:00		National road safety strategies in developing countries: post-implementation evaluation of the evolving Ghanaian national road safety strategy	Ilyas Hasan-Pisaglia, Regional Transport Research and Education Centre Kumasi, KNUST
13:00	13:15		An investigation into the causes of road traffic crashes in Montserrat County, Liberia	Leroy Leeleh, Regional Transport Research and Education Centre Kumasi, KNUST
13:15	13:30		Temporal and causal factors of bus crashes in Ghana	Marcos Aboagye, Regional Transport Research and Education Centre Kumasi, KNUST
13:30	14:00	Q&A		
14:00	15:00	Lunch Break		

Plenary Session				
15:00	16:05	Session II - Climate Change and TDM		
Chair: Ing. IMagnus Lincoln Quarshie, Delin Consult, Accra, Ghana				
15:00	15:25	Keynote Speaker	What do we mean by climate action? Your role in making a change	Glenn Lyons, Professor of Future Mobility, University of the West of England, UK
15:25	15:50	Keynote Speaker	TDM and climate protection measures	Gerd Sammer, Emeritus Professor, University of Bodenkultur, Austria
15:50	16:05	Q & A		

16:05	17:45	Session III - TDM and Clean Transport: Lessons for the Next Generations			
Chairs: Ing. IMagnus Lincoln Quarshie, <i>Dellin Consult, Accra, Ghana</i> / Prof. Glenn Lyons, <i>University of the West of England, UK</i>					
16:05	16:20	TDM and Clean Transport: Lessons for the Next Generations	Sustainable urban mass transit in a green economy	Sunday Agu, <i>Nigerian Institute of Transport Technology, Zaria</i>	
16:20	16:35		Sustainable urban transport: barriers to active transport for work trips in the port city of Tema, Ghana	Emmanuel Dzisi, <i>Regional Transport Research and Education Centre Kumasi, KNUST</i>	
16:35	16:50		Spatial distribution of traffic air pollutant and risk of health burden for roadside dwellers exposure near trafficked intersection	Samuel Ajayi, <i>Regional Transport Research and Education Centre Kumasi, KNUST</i>	
16:50	17:05		Promoting sustainable urban mobility: cycling trends and challenges in developing cities - a comparative study of Tema, Lome, and Djibouti	Kodjo Djossou, <i>Regional Centre of Excellence for Sustainable Cities in Africa (CERVIDA), University of Lome, Togo</i>	
17:05	17:20		Comparative assessment of congestion on major urban arterial road corridors in selected African cities using Google Map API. (Dar es Salaam, Lagos, Accra, Kumasi).	Abdul-Rahman Mohammed, <i>Regional Transport Research and Education Centre Kumasi, KNUST Kumasi.</i>	
17:20	17:45			Q & A	

17:45	18:00	Closing Remarks for Day 1		
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DAY 2: TUESDAY 19TH SEPTEMBER 2023

08:00	08:30	Registration		
Plenary Session				
08:30	08:55	Keynote		
Chair: Prof. Kwame Osei Boateng, Kwame Nkrumah University of Science and Technology, Kumasi				
08:30	08:55	Keynote Speaker	Public transport in a digital era	John Nelson, Chair in Public Transport, Institute of Transport and Logistics Studies, University of Sydney, Australia

Plenary Session				
08:55	10:00	Session IV - Public Transportation in a Digital Era: Has Technology Changed Our Transportation System?		
Chairs: Prof. Kwame Osei Boateng, KNUST, Ghana / Prof. John Nelson, University of Sydney, Australia				
08:55	09:10	Public Transportation in a Digital Era: Has Technology Changed our Transportation System?	Long-term evaluation of Warsaw (Poland) bus lanes - ridership and attitude	Wojciech Szymalski, Institute for Sustainable Development Foundation, Poland
09:10	09:25		Public transport terminals and routes and their impact on equitable access to socioeconomic opportunities in Ghana	Gift Dumedah, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana
09:25	09:40		Modeling travel mode shift to light-rail on the Abuja-Kaduna corridor, Nigeria	Bayero Farah, Nigerian Institute of Transport Technology (NITT), Zaria
09:40	10:00		Q & A	

10:00	10:15	Cocoa Break		
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10:15	10:40	Keynote		
Chair: Prof. Abena Obiri-Yeboah, Kumasi Technical University, Ghana				
10:15	10:40	Keynote Speaker	Women travel behaviour and TDM strategies: much fruitful outcomes?	Wafaa Saleh, Professor of Transport Engineering, Edinburgh Napier University, UK

Plenary Session				
10:40	12:20	Session V - TDM and Women's Emerging Travel Patterns		
Chair: Prof. Abena Obiri-Yeboah, Kumasi Technical University, Ghana				
10:40	10:55	TDM and Women's Emerging Travel Patterns	Investigating urban mobility challenges of women in freetown, Sierra Leone	Mary Kargbo, Fourah Bay College University of Sierra Leone, Freetown, Sierra Leone
10:55	11:10		Conceptualisation of safe-access for women on public transport	Ajeni Ari, Technological University Dublin , Ireland
11:10	11:25		Exploration of travel demand management strategies for developing countries - assessing best practices for adoption in a case study of Accra, Ghana	William Amanor, TRECK, KNUST & Cape Coast Technical University, Cape Coast, Ghana
11:25	11:40		Analysis of women accessibility and utilization to public transport services in Gusau LGA, Zamfara State, Nigeia	Badiru Abdulhakeem, Participant - Professional, Nigeria
11:40	11:55		Women's perception of public transport in Ghana: challenges and opportunities for a women-friendly system	Augustus Ababio-Donkor, Regional Transport Research and Education Centre Kumasi, KNUST
11:55	12:20		Q & A	

12:20	13:20	Lunch Break	
13:20	14:10	Keynotes	
Chairs: Dr. Abdul Muntaka, Kwame Nkrumah University of Science and Technology, Kumasi			
13:20	13:45	Keynote Speaker	On-demand meal delivery: The ghost kitchen location problem Michael Bell, Professor of Ports and Maritime Logistics, Institute of Transport and Logistics Studies, University of Sydney, Australia
13:45	14:10	Keynote Speaker	Researching transport poverty with informal settlers in the African context Karen Lucas, Professor of Human Geography and Director of Research, Manchester Urban Institute, University of Manchester, UK
Parallel Session (VI.A & VI.B)			
14:15	15:20	Session VI.A - TDM: Beyond the Conventional Transportation Problems	
Chairs: Dr. Abdul Muntaka, KNUST, Ghana /Prof. Michael Bell, University of Sydney, Australia			
14:15	14:30	TDM: Beyond the Conventional transportation problems	COVID-19 as a habit-breaking stressor: a review of the impact of COVID-19 movement restrictions on travel patterns Eric Adjei, Accra Technical University
14:30	14:45		The Covid-19 pandemic and people’s travel behaviour in Kumasi, Ghana Augustus Ababio-Donkor, Regional Transport Research and Education Centre Kumasi, KNUST
14:45	15:00		Prospects of Ghana’s inland water transport development: an informal transport services delivery perspective Emmanuel K. Dzisi, Regional Transport Research and Education Centre Kumasi, KNUST
15:00	15:20		Q & A
14:15	15:55	Session VI.B- Transport Poverty	
Chairs: Prof. Michael Poku-Boansi, KNUST, Ghana / Dr. Chiara Leva Maria, Technological University of Dublin, Ireland			
14:15	14:30	Transport Poverty	A white paper on fairness and inclusivity in mobility. Evaluating services against user needs: moving towards a maturity model for transport operators Chiara Leva Maria, Technological University Dublin, Ireland
14:30	14:45		Eradicating transport poverty from the ground up Karel Martens (Invited Speaker), Professor of Transport Planning, Faculty of Architecture and Town Planning, Technion - Israel Institute of Technology
14:45	15:00		Transport poverty scoreboard for the European Union Cornelia-Madalina Suta, Cambridge Econometrics, Belgium
15:00	15:15		Public and private transport accessibility analyses with a socioeconomic perspective Juan Nicolás Ibáñez, European Commission, Joint Research Centre (JRC)
15:15	15:30		Transport related inequalities in the sustainable transition debate Giulio Mattioli, Research Fellow, Urban Development Research Group, Department of Spatial Planning, TU Dortmund University (Germany)
15:30	15:55		Q & A
15:55	16:10	Cocoa Break	
16:10	17:20	Workshop for Graduate Students	
16:10	17:20	Workshop	Advancing research in transport in Africa, Ghana Transport Research Forum/Transport Research Board
17:20	17:35	Closing Remarks and Closure for Second Day	
18:30	21:00	Akwaaba to Asanteman Dinner	

DAY 3: WEDNESDAY 20TH SEPTEMBER 2023					
08:00		08:30			
Registration					
Plenary Session					
08:30		08:55			
Keynote					
Chair: Dr. Asenso Gyambibi, CSIR Building and Road Research Institute (BRRI), Kumasi					
08:30		08:55		Keynote Speaker	
			The importance of habit and perceptions in understanding the choice of unsustainable modes	Juan de Dios Ortúzar, Emeritus Professor, Pontificia Universidad Católica de Chile, Chile	
08:55		10:55			
Session VII - Modelling Travel Behaviour and TDM: Success Stories?					
Chairs: Dr. Asenso Gyambibi, BRRI, Kumasi / Prof. Juan de Dios Ortúzar, Pontificia Universidad Católica de Chile					
08:55		09:10		Modelling Travel Behaviour and TDM: Success Stories?	
			Modelling aberrant behavior of drivers using the Manchester Driver Behaviour Questionnaire (DBQ) in Sierra Leone		Amadu Kabia, Regional Transport Research and Education Centre Kumasi, KNUST
09:10		09:25			Augustus Ababio-Donkor, Regional Transport Research and Education Centre Kumasi, KNUST
09:25		09:40			Kobina Amo-Aidoo, Regional Transport Research and Education Centre Kumasi, KNUST
09:40		09:55			Grigorios Fountas, Edinburgh Napier University
09:55		10:10			Gabriel Obed Fosu, Kwame Nkrumah University of Science and Technology
10:10		10:25		Zunu Kokolo Duyann, Regional Transport Research and Education Centre Kumasi, KNUST	
10:25		10:55		Q & A	
10:55		11:10			
Coffee Break					
Plenary Session					
11:10		11:35			
Keynote					
Chair: Ing. Kwabena Bempong, Ghana Institution of Engineering (GhIE)					
11:10		11:35		Keynote Speaker	
			The challenges of urban tourism demand management: concepts, data and the use of gamification	Jan-Dirk Schmöcker, Associate Professor, Dep. of Urban Management, Kyoto University, Japan	
11:35		13:50			
Session VIII - TDM, Internet of Things, and Travel Behaviour					
Chairs: Ing. Kwabena Bempong, GhIE / Prof. Jan-Dirk Schmoecker, Kyoto University, Japan					
11:35		11:50		TDM, Internet of Things, and Travel Behaviour	
			Preference for internet-based ride hailing (Uber And Bolt) and hired taxis services in Ghana		Thomas Ojo, University of Cape Coast
11:50		12:05			Simeon Stevenson Turay, Regional Transport Research and Education Centre Kumasi, KNUST
12:05		12:20			Adjei boateng, Regional Transport Research and Education Centre Kumasi, KNUST
12:20		12:35			Enoch Enning, Kwame Nkrumah University of Science and Technology, Kumasi
12:35		12:50			Stellah Namulindwa, Kyoto University, Japan
12:50		13:05			Jaime Sierra Muñoz, Politecnico di Milano Department of Architecture and Urban Studies& European Commission Joint Research Centre
13:05		13:20			Qi Yu, Tongji University, China
13:20		13:50		Q & A	
13:50		14:50			
Lunch Break					
Plenary Session					
14:50		15:40			
Keynotes					
Chair: Ing. Naa Lamkai Quayee Ballard, CSIR -Building and Road Research Institute, Kumasi					
14:50		15:15		Keynote Speaker	
			The nexus of rapid urbanisation, mobility, accessibility and public health in African cities	Charles A. Adams, Regional Transport Research and Education Centre Kumasi, KNUST	
15:15		15:40		Keynote Speaker	
			Kumasi Bus Rapid Transit project: Lessons learnt from Accra Ayalolo Service	Ing Nana Poku & Randolph Wilson, Kumasi Metro Assembly (KMA)	
15:40		17:00			
Panel Discussion					
Chairs: Dr. Bayero Salih Farah, Director-General, Nigerian Institute of Transport Technology					
15:40		17:00		Panel Discussion	
			Journeying towards inclusive mobility: overcoming urban and intercity public transport challenges in Ghana	Panel Members: Reps of State Transport Corporation (STC), Metro Mass Transit Company Ltd, Building and Road Research Institute-Kumasi , Ghana Private Road Transport Union (GPRTU), KMA, World Resource Institute	
17:00		17:30			
Closing Remarks					