

**TRAVEL DEMAND MANAGEMENT SYMPOSIUM
TDM'23**

TDM 2023 Kumasi at a Glance

GMT	Monday, September 18	Tuesday, September 19	Wednesday, September 20
08:00	Arrival and Registration	Registration	Registration
09:00		Keynote	Keynotes
10:00	Opening Ceremony	Plenary Session: Session IV - Public Transportation in a Digital Era: Has Technology Changed Our Transportation System?	Plenary Session:
11:00	Cocoa Break/Photography	Cocoa Break	Session VII - Modelling Travel Behaviour and TDM: Success Stories?
12:00	Keynote	Keynote	Keynote
13:00	Parallel session Session I.A - TDM in the Age of New Mobility Options Session I.B - TDM and Traffic Safety Strategies	Plenary Session: Session V - TDM and Women's Emerging Travel Patterns	Coffee Break
14:00	Lunch Break	Lunch Break	Plenary Session Session VIII - TDM, Internet of Things, and Travel Behaviour
15:00	Keynotes	Keynotes	Keynotes
16:00	Plenary Session Session II - Climate Change and TDM	Parallel session: Session VI.A- Transport Poverty Session VI.B - TDM: Beyond the Conventional Transportation Problems	Lunch Break
17:00	Cocoa Break	Cocoa Break	Panel Discussion
18:00	Plenary Session: Session III - TDM and Clean Transport: Lessons for the Next Generations	Workshop for Graduate Students	Keynotes
19:00	Closing Remarks for Day 1	Closing Remarks and Closure for Second Day	Closing Remarks
20:00			
21:00		Akwaaba to Asanteman Dinner	

PROGRAM OUTLINE

DAY 1: MONDAY 18TH SEPTEMBER 2023

8:00 - 9:00

Arrival and Registration

9:00 - 10:00

Opening Ceremony (Main Auditorium)

Chair: Prof. Yaw Adubofour Tuffour, TRECK, KNUST

OPENING CEREMONY

10:30 - 11:00

Cocoa Break / Photograph

Plenary Session (Main Auditorium)

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 - 13:35

Session I.A (Main Auditorium) - 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

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

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

Comparative study of urban transport and accessibility patterns: a case study of three african port cities

Ismael A. Guirreh, African Centre of Excellence in Logistics and Transportation (CEALT), University of Djibouti, Djibouti

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

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

12:45 13:00

Estimation of PCE factors for traffic at signalized intersections for capacity analysis in Monrovia

Miller Garmi, Regional Transport Research and Education Centre Kumasi, KNUST

13:00 13:15

Assessing the Influence of Educational Attainment on Perceived Accessibility Level in Developing Coastal Cities: Case study of Djibouti city

Moktar I. Omar, African Centre of Excellence in Logistics and Transportation (CEALT), University of Djibouti, Djibouti

13:15 13:45

Informal and shared mobility: current practices in Lagos Nigeria

Musa Bala, Nigerian Building and Road Research Institute (NBRI), Nigeria

13:30 14:00

Q & A

11:30 14:15

Session I.B (Syndicate Room) - TDM and Traffic Safety Strategies

Chairs: Prof. Enoch Sam, University of Education, Winneba / Prof. Grigorios Fountas, Aristotle University of Thessaloniki

11:30 11:45

Road accident blackspot evaluation study on highways in the Eastern region of Ghana"

Elizabeth Arjarquah, 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	TDM and Traffic	Effective trigger speeds for vehicle activated signs in the Scottish borders area	Adebola Olowosegun , Edinburgh Napier University
12:30	12:45	Safety Strategies	Generating consensus on road safety issues and priorities in Ghana: A modified Delphi Approach	Daniel Hardy Wuaku , National Road Safety Authority
12:45	13:00		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
13:00	13:15		An investigation into the causes of road traffic crashes In Montserrado County, Liberia	Leroy Leeleh , Regional Transport Research and Education Centre Kumasi, KNUST
13:15	13:30		National road safety strategies in developing countries: post-implementation evaluation of the evolving Ghanaian national road safety strategy	Sunday Owonibi , Regional Transport Research and Education Centre Kumasi, KNUST
13:30	13:45		Temporal and causal factors of bus crashes in Ghana	Marcos Aboagye , Regional Transport Research and Education Centre Kumasi, KNUST
13:45	14:15		Q & A	

14:15 15:15 Lunch Break

Plenary Session (Main Auditorium)

15:15 15:40 Session II - Climate Change and TDM

Chair: **Dr. Bayero Salih Farah**, Director-General, Nigerian Institute of Transport Technology, Kwame Nkrumah University of Science and Technology, Kumasi

15:15	15:40	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
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Plenary Session (Main Auditorium)

15:40 17:20 Session III - TDM and Clean Transport: Lessons for the Next Generations

Chairs: **Prof. Glenn Lyons**, University of the West of England, UK

15:40	15:55	TDM and Clean Transport: Lessons for the Next Generations	Sustainable urban transport: barriers to active transport for work trips in the port city of Tema, Ghana	Emmanuel Dzisi , Regional Transport Research & Education Centre Kumasi, KNUST
15:55	16:10		Spatial distribution of traffic air pollutant and risk of health burden for roadside dwellers exposure near trafficked intersection	Samuel Ajayi , Regional Transport Research and Education Centre Kumasi, KNUST
16:10	16:25		Promoting sustainable urban mobility: cycling trends and challenges in developing cities - a comparative study of Tema, Lome, and Djibouti	Kodjo Djossou , Regional Centre of Excellence for Sustainable Cities in Africa (CERVIDA), University of Lome, Togo
16:25	16:40		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 , Regional Transport Research and Education Centre Kumasi, KNUST Kumasi.
16:40	16:55		Sustainable urban mass transit in a green economy	Sunday Agu , Nigerian Institute of Transport Technology, Zaria
16:55	17:20		Q & A	

17:20 17:35 Cocoa Break

17:35 17:50 Closing Remarks for Day 1

DAY 2: TUESDAY 19TH SEPTEMBER 2023

08:00 08:30 Registration

Plenary Session (Main Auditorium)

08:30 08:55 Keynote

Chairs: **Dr. Asenso Gyambibi**, CSIR Building and Road Research Institute (BRRI), Kumasi

08:30	08:55	Keynote Speaker	Preference for internet-based ride hailing (Uber And Bolt) and hired taxis services in Ghana	Thomas Ojo , University of Cape Coast
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Plenary Session (Main Auditorium)

08:55 10:05 Session IV - Public Transportation in a Digital Era: Has Technology Changed Our Transportation System?

Chairs: **Dr. Asenso Gyambibi**, CSIR Building and Road Research Institute (BRRI), Kumasi

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	Cift Dumedah , Kwame Nkrumah University of Science & Technology, Kumasi, Ghana
09:25	09:40		Modeling travel mode shift to light-rail on the Abuja-Kaduna corridor, Nigeria	"Ayodele Salami , Nigerian Institute of Transport Technology (NITT), Zaria "
09:40	10:05		Q & A	

10:05 10:20 Cocoa Break

Plenary Session (Main Auditorium)

10:20		11:10		Keynote	
Chair: Prof. Abena Obiri-Yeboah , Kumasi Technical University, Ghana					
10:20	10:45	Keynote Speaker	Women travel behaviour and TDM strategies: much fruitful outcomes?	Wafaa Saleh , Professor of Transport Engineering, Edinburgh Napier University, UK	
10:45	11:10	Keynote Speaker	A white paper on fairness and inclusivity in mobility. Evaluating services against user needs	Chiara Leva Maria , Technological University Dublin, Ireland	
Plenary Session (Main Auditorium)					
11:10		12:35		Session V - TDM and Women's Emerging Travel Patterns	
Chair: Prof. Abena Obiri-Yeboah , Kumasi Technical University, Ghana					
11:10	11:25	TDM and Women's Emerging Travel Patterns	Conceptualisation of safe-access for women on public transport	Ajeni Ari , Technological University Dublin, Ireland	
11:25	11:40		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	
11:40	11:55		Analysis of women accessibility and utilization to public transport services in Gusau LGA, Zamfara State, Nigeria	Badiru Abdulhakeem , Participant - Professional, Nigeria	
11:55	12:10		Investigating urban mobility challenges of women in freetown, Sierra Leone	Mary Kargbo , Fourah Bay College University of Sierra Leone, Freetown, Sierra Leone	
12:10	12:35	Q & A			
12:35		13:35		Lunch Break	
Plenary Session (Main Auditorium)					
13:35		14:50		Keynotes	
Chairs: Prof. Clifford Amoako , Kwame Nkrumah University of Science and Technology, Kumasi					
13:35	14:00	Keynote Speaker	On-demand meal delivery: The ghost kitchen location problem	Michael Bell , Professor of Ports & Maritime Logistics, Institute of Transport and Logistics Studies, University of Sydney, Australia	
14:00	14:25	Keynote Speaker	Researching transport poverty with informal settlers in the African context	Karen Lucas , Professor of Human Geography & Director of Research, Manchester Urban Institute, University of Manchester, UK	
14:25	14:50	Keynote Speaker	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	
Parallel Session (VI.A & VI.B)					
14:55		16:20		Session VI.A (Main Auditorium) - Transport Poverty	
Chairs: Dr. Gifty Adom-Asamoah , KNUST, Ghana / Dr. Chiara Leva Maria , Technological University of Dublin, Ireland					
14:55	15:10	Transport Poverty	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	
15:10	15:25		Transport poverty scoreboard for the European Union	Cornelia-Madalina Suta , Cambridge Econometrics, Belgium	
15:25	15:40		Public and private transport accessibility analyses with a socioeconomic perspective	"Juan Nicolás Ibáñez , European Commission, Joint Research Centre (JRC)	
15:40	15:55		Transport related inequalities in the sustainable transition debate	Giulio Mattioli , Research Fellow, Urban Development Research Group, Department of Spatial Planning, TU Dortmund University	
15:55	16:20	Q & A			
14:55		16:20		Session VI.B (Syndicate Room) - TDM: Beyond the Conventional Transportation Problems	
Chairs: Prof. Emmanuel Appiah-Adjei , KNUST, Ghana / Prof. Michael Bell , University of Sydney, Australia					
14:55	15:10	TDM: Beyond the Conventional transportation problems	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	
15:10	15:25		The Covid-19 pandemic and people's travel behaviour in Kumasi, Ghana	Enock Osei , CONPRO Limited Kumasi,	
15:25	15:40		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	
15:40	16:05		Q & A		
16:20		16:35		Cocoa Break	
Plenary Session (Main Auditorium)					
16:35		17:45		Workshop for Next Generation of Transport Researchers	
16:35	17:45	Workshop	Publication game: how to play and win	Dr. Kofi Adanu , Alabama Transport Institute, USA	
			Publication review process, ethics and authorship	Prof. Wafaa Saleh , Edinburgh Napier University, UK	
17:35		17:50		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 (Main Auditorium)

08:30 09:20

Keynote

Chair: **Prof. Emmanuel Akowuah**, Kwame Nkrumah University of Science and Technology, 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	09:20	Keynote Speaker	Public transport in a digital era	John Nelson , Chair in Public Transport, Institute of Transport and Logistics Studies, University of Sydney, Australia

09:20 11:20

Session VII - Modelling Travel Behaviour and TDM: Success Stories?

Chairs: **Prof. Emmanuel Akowuah**, KNUST/ **Prof. Juan de Dios Ortúzar**, Pontificia Universidad Católica de Chile

09:20	09:35	Modelling Travel Behaviour and TDM: Success Stories?	Influence of socio-demographic characteristics on mode of travel for work trips in the port city of Tema, Ghana	Collins Abrefah Nketiah , Regional Transport Research and Education Centre Kumasi, KNUST
09:35	09:50		Macroscopic Traffic Flow Model Considering Timid and Aggressive Driver Behavior, and Lateral Viscosity	Gabriel Obed Fosu , Kwame Nkrumah University of Science and Technology
09:50	10:05		Commuter Behavioural Intention in Travel Mode Choice to and from the CBD of Kumasi	Kobina Amo-Aidoo , Regional Transport Research and Education Centre Kumasi, KNUST
10:05	10:20		Who is more likely to be affected by the cost-of-living crisis? An exploratory analysis of changes in travel habits in Scotland	Grigorios Fountas , Aristotle University of Thessaloniki
10:20	10:35		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
10:35	10:50		Modeling aberrant behavior of drivers using the Manchester Driver Behaviour Questionnaire (DBQ) in Liberia	Zunu Kokolo Duyann , Regional Transport Research and Education Centre Kumasi, KNUST
10:50	11:20	Q & A		

11:20 11:35

Coffee Break

Plenary Session (Main Auditorium)

Keynote

Chair: **Ing. Kwabena Bempong**, President of Ghana Institution of Engineering (GhIE)

11:35	12:00	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
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12:00 14:00

Session VIII - TDM, Internet of Things, and Travel Behaviour

Chairs: **Ing. Kwabena Bempong**, GhIE / **Prof. Jan-Dirk Schmoecker**, Kyoto University, Japan

12:00	12:15		Assessing the determinants of feeder service provision using revealed preference data: a pilot paratransit drivers perspective with machine learning approach	Simeon Stevenson Turay , Regional Transport Research and Education Centre Kumasi, KNUST
12:15	12:30		Estimating passenger demand using machine learning models: a systematic review	Adjei boateng , Regional Transport Research and Education Centre Kumasi, KNUST
12:30	12:45		Development of a smartphone-based road condition assessment system	Enoch Enning , Kwame Nkrumah University of Science and Technology, Kumasi
12:45	13:00		Assessing time dependent paratransit fare affordability using Lorenz curves And Gini coefficients.	Stellah Namulindwa , Kyoto University, Japan
13:00	13:15		Exploring car dependence in Lombardy, Italy: a bivariate maps case study approach	Jaime Sierra Muñoz , Politecnico di Milano Department of Architecture and Urban Studies & European Commission Joint Research Centre
13:15	13:30		Smart cockpit: efficient travel demand recognition with large language model	Qi Yu , Tongji University, China
13:30	14:00		Q & A	

14:00 15:00

Lunch Break

Plenary Session (Main Auditorium)

Keynotes

Chair: **Prof. Daniel Atuah Obeng**, Kwame Nkrumah University of Science and Technology, Ghana Institution of Engineering (GhIE)

15:00	15:25	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
15:25	15:50	Keynote Speaker	Kumasi Bus Rapid Transit project: Lessons learnt from Accra Ayalolo Service	Ing Nana Poku & Randolph Wilson , Kumasi Metro Assembly (KMA)

15:50 17:10

Panel Discussion

Chairs: **Prof. Daniel Atuah Obeng**, KNUST/ **Ing. Naa Lamkai Quayé Ballard**, CSIR -Building and Road Research Institute, Kumasi

15:50	17:10	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
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17:10 17:40

Closing Remarks