

Reuben Tamakloe, PhD

Research Assistant Professor

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RESEARCH INTERESTS

Machine Learning, Advanced Econometric Analysis, Traffic Safety, Transportation Planning (Autonomous/Electric Vehicles), Emerging Logistics Delivery Modes

EDUCATION

University of Seoul <i>Ph.D. Transportation Engineering (Smart Cities minor)</i>	Seoul, South Korea Sep 2017 – Feb 2022
University of Ghana <i>BSc. Statistics with Mathematics (minor)</i>	Accra, Ghana Aug 2010 – Jul 2014

ACADEMIC APPOINTMENTS

Korea Advanced Institute of Science and Technology (KAIST) <i>Research Assistant Professor</i> Principal Investigator (PI) for a project funded by the National Research Foundation (NRF – 창의도전연구; KRW 210,000,000 ~ US\$160,000) of South Korea (Exploring the overall efficiency improvement potential of including shared autonomous vehicles in public transit networks)	Daejeon, South Korea Sep 2023 - Present
University of Seoul <i>Research Professor</i>	Seoul, South Korea Apr 2022 – Aug 2023

SKILLS

STATA NLOGIT/LIMDEP	R Python	Gephi ArcGIS
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INDUSTRIAL EXPERIENCE

Dongil Engineering Consultants Co., Ltd. <i>Assistant Researcher</i>	Seoul, South Korea 08.2017 – 12.2022
Korea International Cooperation Agency (KOICA) <i>Research Assistant and Administrator</i>	Accra, Ghana 09.2015 – 05.2017
Enterprise Life Assurance Company <i>Premium Admin Officer</i>	Accra, Ghana 08.2014 – 08.2015
Ghana Revenue Authority (GRA) <i>Internship</i>	Accra, Ghana 08.2009 – 08.2010

AWARDS

Recipient of Research Grant (Principal Investigator) <i>National Research Foundation (South Korea) - Creative Challenge Research (창의도전연구)</i>	2022-2025
Recipient of Best Paper Award for Graduate Students <i>University of Seoul Industry-Academic Cooperation Foundation</i>	2022

Recipient of Best Paper Award for Graduate Students <i>University of Seoul Industry-Academic Cooperation Foundation</i>	2021
Recipient of Excellent Thesis Support for Graduate Students <i>University of Seoul</i>	2021
Recipient of University of Seoul Smart City Department Scholarship <i>Smart City Department, University of Seoul</i>	2020
Recipient of participation certificate at the Joint Online Training on Making Cities Resilient <i>UNDRR GETI, UNOSSC & PAHO</i>	2020
Awarded a travel grant <i>National Research Foundation of Korea</i>	2019
Recipient of the University of Seoul International Student Scholarship <i>University of Seoul</i>	2017 – 2020
Recipient of Graduate Student Scholarship <i>Dongil Engineering and Consultants Limited</i>	2017 – 2021
Recipient of the University of Ghana Scholarship Recipient <i>University of Ghana Student Financial Aid Office</i>	2013

TEACHING EXPERIENCE

University of Seoul	Seoul, South Korea
Department of Transportation Engineering	
Logistics Management (Undergraduate course)	Spring 2023
Introduction to Transportation Engineering (Undergraduate course - core)	Spring 2023
Big Data Analysis in Transportation (Undergraduate course)	Fall 2022
Advanced Discrete Choice Model I (Graduate course)	Fall 2022

MEMBERSHIPS

Korean Transportation Association
Ghana Transportation Professionals Forum
KSCE CELeN Student
Korean Society of Hazard Mitigation
Korea Institute of Intelligent Transport Systems

PUBLICATIONS

Journal papers under review (International)

*corresponding author

- [7] ***Tamakloe, R.**, & Caesar, D. L. (2023). Decoding the patterns of critical factor associations collectively driving electric vehicle recommendations. *Transportation Research Part A - Policy and Practice (revise decision: July 19, 2023)*
- [6] ***Tamakloe, R.**, Atandzi, J. & Park, D. (2023). Examining urban delivery service user profiles and perceptions of drone delivery adoption in Ghana considering usage before and after the COVID-19 pandemic. *Transport Policy (revise decision: June 12, 2023)*.
- [5] ***Tamakloe, R.**, Adanu, E. K., Atandzi, J., Das, S., & Lord, D. (2023). Walking-along-the-road pedestrian crash injury severity outcomes under different lighting conditions: Insights from a correlated random parameters approach with heterogeneity in means and variances with out-of-sample predictions. *Accident Analysis & Prevention (revise decision: August 20, 2023)*
- [4] **Tamakloe, R.**, Lee, H., & Park D. (2023). Variability of Factors Driving Shared Autonomous Vehicle

- Adoption: a Cross-Group Analysis Based on Local Ride-Sharing Access and Historical Experience. *Sustainable Cities and Society*
- [3] ***Tamakloe, R.,** & Caesar, D. L. (2023). Factors associated with consumers who prioritize incentives when purchasing their electric vehicle: Insights from California Fuel Cell and Plug-in electric vehicle users. *Transport Policy*
 - [2] Caesar, D. L., & ***Tamakloe, R.** (2023). Unraveling the Patterns of Critical Contributory Factors and Flag-State Associations Influencing Maritime Casualties: An Association Rule Mining Approach. *Accident Analysis and Prevention*
 - [1] ***Tamakloe, R.,** Adanu, E. K., Atandzi, J., Das, S., & Park, D. (2023). Exploring clusters of factors associated with fatal distracted driving pedestrian-involved crashes in Ghana. *International Journal of Injury Control and Safety Promotion*.

Published journal articles (International: 2019 – present)

- [26] Das, S., Dutta, A., **Tamakloe, R.,** & Khan, M. N. (2023). Analyzing the time-varying patterns of contributing factors in work zone-related crashes. *Journal of Transportation Safety & Security*.
- [25] **Tamakloe, R.,** Das, S., Adanu, E. K., & Park, D. (2023). Key factors affecting motorcycle-barrier crash severity: an innovative cluster-regression technique. *Transportmetrica A: Transport Science*.
- [24] **Tamakloe, R.,** & Park, D. (2023). Discovering latent topics and trends in autonomous vehicle-related research: A Structural Topic Modelling approach. *Transport Policy*.
- [23] **Tamakloe, R.** (2023). Risk Factors Influencing Fatal Powered Two-Wheeler At-Fault and Not-at-Fault Crashes: An Application of Spatio-Temporal Hotspot and Association Rule Mining Techniques. *Informatics*
- [22] Das, S., **Tamakloe, R.,** Zubaidi, H., Obaid, I., & Rahman, M. A. (2023). Bicyclist injury severity classification using a random parameter logit model. *International Journal of Transportation Science and Technology*.
- [21] Zubaidi, H., **Tamakloe, R.,** Al-Bdairi, N. S. S., Alnedawi, A., & Obaid, I. (2022). Exploring senior motorcyclist injury severity crashes: Random parameter model with heterogeneity in mean and variance. *IATSS Research*.
- [20] **Tamakloe, R.,** & Park, D. (2022). Factors influencing fatal vehicle-involved crash consequence metrics at spatio-temporal hotspots in South Korea: application of GIS and machine learning techniques. *International Journal of Urban Sciences*, 1-35.
- [19] **Tamakloe, R.,** Park, D., & Chang, H. (2022). Discovering research topics, trends, and perspectives in COVID-19-related transportation journal articles. *International Journal of Urban Sciences*, 26(4), 710-738.
- [18] **Tamakloe, R.,** Hong, J., Kim, J., & Park, D. (2022). Factors affecting fatal PTW at-fault crash outcome metrics at intersections and non-intersections in South Korea. *Journal of Transportation Safety & Security*, 1-36.
- [17] Das, S., **Tamakloe, R.,** Kutela, B., & Hossain, A. (2022). Pattern recognition from injury severity types of frontage roadway crashes. *Journal of Transportation Safety & Security*, 1-22.
- [16] **Tamakloe, R.,** Sam, E. F., Bencekri, M., Das, S., & Park, D. (2022). Mining groups of factors influencing bus/minibus crash severities on poor pavement condition roads considering different lighting status. *Traffic injury prevention*, 23(5), 308-314.
- [15] Obaid, I., Alnedawi, A., Aboud, G. M., **Tamakloe, R.,** Zubaidi, H., & Das, S. (2022). Factors associated with driver injury severity of motor vehicle crashes on sealed and unsealed pavements: random parameter model with heterogeneity in means and variances. *International journal of transportation science and technology*.
- [14] **Tamakloe, R.,** Das, S., Aidoo, E. N., & Park, D. (2022). Factors affecting motorcycle crash casualty severity at signalized and non-signalized intersections in Ghana: Insights from a data mining and binary logit regression approach. *Accident Analysis & Prevention*, 165, 106517.
- [13] Das, S., **Tamakloe, R.,** Zubaidi, H., Obaid, I., & Alnedawi, A. (2021). Fatal pedestrian crashes at intersections: Trend mining using association rules. *Accident Analysis & Prevention*, 160, 106306.
- [12] **Tamakloe, R.,** Lim, S., Sam, E. F., Park, S. H., & Park, D. (2021). Investigating factors affecting bus/minibus accident severity in a developing country for different subgroup datasets characterised by time, pavement, and light conditions. *Accident Analysis & Prevention*, 159, 106268.
- [11] **Tamakloe, R.,** Hong, J., Tak, J., & Park, D. (2021). Finding evacuation routes using traffic and network structure information. *Transportation research part D: transport and environment*, 95, 102853.
- [10] **Tamakloe, R.,** Hong, J., & Park, D. (2020). A copula-based approach for jointly modeling crash severity and number of vehicles involved in express bus crashes on expressways considering temporal stability

- of data. *Accident Analysis & Prevention*, 146, 105736.
- [9] Hong, J., **Tamakloe, R.**, & Park, D. (2020). Application of association rules mining algorithm for hazardous materials transportation crashes on expressway. *Accident Analysis & Prevention*, 142, 105497.
 - [8] Hong, J., **Tamakloe, R.**, Tak, J., & Park, D. (2020). Two-Stage Double Bootstrap Data Envelopment Analysis for Efficiency Evaluation of Shared-Bicycle Stations in Urban Cities. *Transportation Research Record*, 2674(6), 211-224.
 - [7] Hong, J., **Tamakloe, R.**, & Park, D. (2020). Discovering insightful rules among truck crash characteristics using apriori algorithm. *Journal of advanced transportation*, 2020, 1-16.
 - [6] **Tamakloe, R.**, Hong, J., & Tak, J. (2021). Determinants of transit-oriented development efficiency focusing on an integrated subway, bus and shared-bicycle system: Application of Simar-Wilson's two-stage approach. *Cities*, 108, 102988.
 - [5] **Tamakloe, R.**, & Hong, J. (2020). Assessing the efficiency of integrated public transit stations based on the concept of transit-oriented development. *Transportmetrica A Transport Science*, 16(3), 1459-1489.
 - [4] Hong, J., **Tamakloe, R.**, Lee, S., & Park, D. (2019). Exploring the topological characteristics of complex public transportation networks: focus on variations in both single and integrated systems in the Seoul metropolitan area. *Sustainability*, 11(19), 5404.
 - [3] Hong, J., **Tamakloe, R.**, & Park, D. (2019). A comprehensive analysis of multi-vehicle crashes on expressways: a double hurdle approach. *Sustainability*, 11(10), 2782.
 - [2] Hong, J., **Tamakloe, R.**, Lee, G., & Park, D. (2019). Insight from scientific study in logistics using text mining. *Transportation research record*, 2673(4), 97-107.
 - [1] Hong, J., **Tamakloe, R.**, Park, D., & Choi, Y. (2019). Estimating incident duration considering the unobserved heterogeneity of risk factors for trucks transporting HAZMAT on expressways. *Transportation research record*, 2673(2), 232-242.

CONFERENCE PROCEEDINGS

Submitted/planned first authored 2024 TRBAM papers

- [9] Discovering the Collective Associations of Key Factors Influencing Electric Vehicle Recommendations
- [8] Discovering the Factors Influencing Shared Autonomous Vehicle Adoption: A Cross-Group Analysis considering Local Ride-Sharing Access and Historical Experience
- [7] Do Factors Affecting Pedestrian Walking-Along-the-Road Injury Severity Differ under Different Lighting Conditions? A Random Parameters Approach with Out-of-Sample-Predictions
- [6] Investigating Critical Factor Associations Affecting Injury Severity Outcomes of Passengers Falling from Moving Vehicles
- [5] Unearthing Hidden Topics and Trends in Autonomous Vehicle-Related Research: An Innovative Structural Topic Modeling Approach
- [4] Understanding Consumers Prioritizing Incentives in Electric Vehicle Purchases: Identifying Patterns for Effective Policy Strategies
- [3] Patterns of Critical Factors Linked to Automated Vehicle-Involved Crashes: A Comparative Analysis of Intersection and Non-Intersection Crash Scenarios
- [2] Investigating the Performance of Integrated Transit Stations: A Comparative Study in a Mega-City before and during the COVID-19 Pandemic
- [1] Investigating the Patterns of Critical Contributory Factors and Flag-State Associations Influencing Maritime Casualties: An Association Rule Mining Investigation

International

- [7] **The TRB 102nd Annual Meeting - Transportation Research Board Annual Meeting, Washington DC, USA**: Qualitative Analysis of Urban Air Mobility as a Disruptive Technology
- [6] **The TRB 102nd Annual Meeting - Transportation Research Board Annual Meeting, Washington DC, USA**: Perceptions of Drone Delivery Adoption in Ghana Considering Online Delivery Usage Before and After the Incidence of the COVID-19 Pandemic
- [5] **The TRB 102nd Annual Meeting - Transportation Research Board Annual Meeting, Washington DC, USA**: Risk Factors Affecting Motorcycle-Barrier Crashes and Injury Severities: Insights from an Innovative Cluster-Regression Technique
- [4] **The TRB 101st Annual Meeting - Transportation Research Board Annual Meeting, Washington DC, USA**: Investigating Chains of Risk Factors Influencing Fatal Powered Two-Wheeler Crashes at Spatio-Temporal Hotspot Locations in South Korea

- [3] **The TRB 101st Annual Meeting - Transportation Research Board Annual Meeting**, *Washington DC, USA*: **Investigating** Chains of Factors Influencing Motorcycle Crash Casualty Severity at Signalized and Non-Signalized Intersections in a Developing Country
- [2] **26th ITS World Congress**, Suntec Conference Center, *Suntec, Singapore*: Assessing the impacts of Land Use on Subway Ridership: Identifying a Suitable Sustainable Transport Policy
- [1] **The 13th UC-US-KU-TU International Joint Seminar**, China and France Center, Tongji University, *Shanghai, China*

Local (South Korea)

****Student supervisions***

- [18] Road lighting condition, pedestrian maneuver and pedestrian injury severity: A joint analysis using an advanced econometric approach (2023.04). Korean Institute of ITS Conference, Yeosu, South Korea.
- [17] Are electric vehicle users willing to recommend their vehicles to others? (2023.04). Korean Institute of ITS Conference, Yeosu, South Korea.
- [16] * Investigating how usage experience impacts consumer preference variability for shared autonomous vehicles (2023.04). Korean Institute of ITS Conference, Yeosu, South Korea.
- [15] * Learning about the variations in research interests regarding last-mile logistics among OECD and Non-OECD countries (2023.04). Korean Institute of ITS Conference, Yeosu, South Korea.
- [14] * Hybrid delivery system: A literature review and future directions (2023.04). Korean Institute of ITS Conference, Yeosu, South Korea.
- [13] * Trends and patterns in sustainable transportation research (2023.04). Korean Institute of ITS Conference, Yeosu, South Korea.
- [12] * The determinants of factors affecting transit station efficiency before, during and after the COVID-19 pandemic (2023.04). Korean Institute of ITS Conference, Yeosu, South Korea.
- [11] A structural topic modeling approach to exploring autonomous vehicle-related research (2023.02). The Korean Society of Transportation Conference, Gangnam, Seoul, South Korea.
- [10] * Variations in the determinants of bicycle-transit station efficiency pre- and post- COVID-19 pandemic (2023.02). The Korean Society of Transportation Conference, Gangnam, Seoul, South Korea.
- [9] Drone delivery for urban logistics after COVID: How can we bolster its adoption? (2022.11). Korean Institute of ITS Conference, Jeju, South Korea.
- [8] Performance of public transport stations through the pandemic: Are there any key patterns? (2022.11). Korean Institute of ITS Conference, Jeju, South Korea.
- [7] How different are researcher perspectives regarding COVID-19 and transportation? (2022.06) Korean Institute of ITS Conference, Jeju, South Korea.
- [6] A machine learning approach to identifying factors influencing motorcycle crashes at critical hotspot locations (2022). KITS International Conference, Jeju JDC Conference Center, Jeju, South Korea.
- [5] Finding evacuation paths considering dynamic spatio-temporal vulnerability information and network structure (2020.11). The Korean Institute of ITS Conference, Online.
- [4] An Application of Simar-Wilson Bootstrap Data Envelopment Analysis to Investigate the Efficiency of Shared-Bicycle Stations in Seoul (2019.11). The Korean Institute of ITS Conference, St. John's Hotel, Gangneung, South Korea.
- [3] Topological Analysis of Multimodal Transportation Network in Seoul Based on Graph-Based Methods (2019.04). The Korean Institute of ITS Conference, Halla Convention center, Cheju Halla University, Jeju, South Korea.
- [2] Comparing the characteristics of multivehicle crashes using Cragg's double-hurdle regression model (2018.11). The Korean Institute of ITS Conference, The Genesis Building, Kyungsung University, Busan, South Korea.
- [1] A Study for Conditional Mixed Process Model of Bus-related Crashes on Expressway (2018.04). The Korean Institute of ITS Conference, Halla Convention center, Cheju Halla University, Jeju, South Korea.

REVIEWING SERVICE

Accident Analysis and Prevention
 Transport Policy
 Cities

Transportation Research Part E: Logistics and Transportation Review
 Transportation Research Part F: Traffic Psychology and Behaviour
 Transport Geography
 Transportation Research Record: Journal of the Transportation Research Board
 KSCE Journal of Civil Engineering
 International Journal of Urban Sciences
 Sustainability
 Sensors
 Safety
 International Journal of Environmental Research and Public Health
 Processes

VOLUNTEER AND EXTRA-CURRICULAR ENGAGEMENTS

New Student Mentoring Volunteer – International Student Office, University of Seoul	Jan 2021 – Jun 2021
Organizing Secretary – Ghanaian Students in Korea and Associates, South Korea	2020 – Present
University Representative (University of Seoul) – Ghanaian Students in Korea and Associates, South Korea	2019 – 2020
Leader, Program Planning Team – Ghana Association of Statistics Students, University of Ghana	2013 – 2014