Reuben Tamakloe, PhD

Research Assistant Professor

The Cho Chun Shik Graduate School of Mobility, KAIST
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EDUCATION

University of Seoul — Seoul, South Korea
Ph.D. Transportation Engineering (smart cities minor) — Sep 2017 – Feb 2022

University of Ghana — Accra, Ghana
BSc. Statistics with Mathematics (minor) — Aug 2010 – Jul 2014

ACADEMIC APPOINTMENTS

Korea Advanced Institute of Science and Technology (KAIST) — Daejeon, South Korea
Research Assistant Professor — Sep 2023 - **Present**
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)

University of Seoul — Seoul, South Korea
Research Professor — Apr 2022 – Aug 2023

INDUSTRIAL EXPERIENCE

Dongil Engineering Consultants Co., Ltd. — Seoul, South Korea
Assistant Researcher — 08.2017 – 12.2022

Korea International Cooperation Agency (KOICA) — Accra, Ghana
Research Assistant and Administrator — 09.2015 – 05.2017

AWARDS

Research Grant (Principal Investigator) — 2022-2025
National Research Foundation (South Korea) - Creative Challenge Research (창의도전연구; KRW 210,000,000 ~ US$160,000)

Outstanding Paper Presentation Award — 2023
Korea Society of Transportation

Best Paper Award for Graduate Students — 2022
University of Seoul Industry-Academic Cooperation Foundation

Best Paper Award for Graduate Students — 2021
University of Seoul Industry-Academic Cooperation Foundation

Excellent Thesis Support for Graduate Students — 2021
University of Seoul

University of Seoul Smart City Department Scholarship — 2020
Smart City Department, University of Seoul

Travel grant for conference attendance (ITS World Congress – Singapore) — 2019
National Research Foundation of Korea

University of Seoul International Student Scholarship 2017 – 2020
University of Seoul

Graduate Student Scholarship 2017 – 2021
Dongil Engineering and Consultants Limited

University of Ghana Scholarship Recipient 2013
University of Ghana Student Financial Aid Office

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

PUBLICATIONS

Published journal articles (SCI(E))
*Corresponding author

[34] ***Tamakloe, R.**, Lee J. K., & Park D. (2024). Exploring the variations in the efficiency of integrated subway stations and the determinants of factors affecting their efficiency before and during the COVID-19 pandemic, ***Cities***

[33] **Tamakloe, R.**, Zhang, K., *Kim, I. (2024). Temporal instability of the determinants of fatal/severe elderly pedestrian injury outcomes in intersections and non-intersections before, during, and after the COVID-19 pandemic. ***Accident Analysis & Prevention***.

[32] ***Tamakloe, R.** & Adanu, E. K. (2024). Critical Patterns Associated with Vehicle-Pedestrian Hit-and-Run Casualty Injury Severity under Different Weather Conditions: An Association Rule Mining Approach. ***IATSS Research***

[31] *Adanu, E. K. **Tamakloe, R.**, Dzinyela, R., Agyemang, W. (2024). Assessing the factors associated with pedestrian injury severity in hit-and-run crashes in Ghana. ***Transportation Letters***

[30] Caesar, D. L., & ***Tamakloe, R.** (2024). Unraveling the Patterns of Critical Contributory Factors and Flag-State Associations Influencing Maritime Casualties: An Association Rule Mining Approach. ***Marine Policy***

[29] **Tamakloe, R.**, Zhang, K., Hossain, A., Kim, I., & *Park, S. H. (2024). Critical risk factors associated with fatal/severe crash outcomes in personal mobility device rider at-fault crashes: A two-step inter-cluster rule mining technique. ***Accident Analysis & Prevention***.

[28] ***Tamakloe, R.**, Zhang, K., Atandzi, J., & Park, D. (2024). Examining urban delivery service user profiles and determinants of drone delivery adoption in Ghana considering usage before and after the COVID-19 pandemic. ***Transport Policy***.

[27] ***Tamakloe, R.**, Adanu, E. K., Atandzi, J., Das, S., Lord, D., & Park, D. (2023). Stability of factors influencing walking-along-the-road pedestrian injury severity outcomes under different lighting conditions: a random parameters logit approach with heterogeneity in means and out-of-sample predictions. ***Accident Analysis & Prevention***.

[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.

Selected journal papers under review (SCI(E))

*Corresponding author

[7] ***Tamakloe, R**., & Caesar, D. L. (2024). Decoding the patterns of critical factor associations collectively driving electric vehicle recommendations. ***Transportation Research Part A - Policy and Practice (revise decision: May 06, 2024)***

[6] Zhang, K., **Tamakloe, R.**, *Kim, I. (2024). A Geospatial Artificial Intelligence Approach for Exploring Fatal/Severe Pedestrian Injury Crash Frequency at School Zone Crash Hotspots. ***Journal of Transport Geography (revise decision: May 27, 2024)***

[5] **Tamakloe, R.**, Zhang, K., *Kim, I. (2024). Temporal instability and differences between school and non-school zone pedestrian injury severities: New insights from deep learning-based Google Street View imagery and out-of-sample prediction. ***Accident Analysis & Prevention.***

Oh, T., Lim, J., **Tamakloe, R.**, & *Kim, I. Enhancing Mutual Understanding of E-Scooter User's Perspective in Overtaking Maneuver Through Replaying Own Driving Trajectory. Accident. ***Analysis & Prevention (revise decision: May 07, 2024)***

[4] **Tamakloe, R.**, Zhang, K., *Kim, I. (2024). Unraveling Seasonal Variations in Factors Impacting Pedestrian Injury Severity in Hit-and-Run Crashes. ***Travel Behaviour and Society.***

[3] ***Tamakloe, R.**, & Caesar, D. L., *Kim, I. (2024). Factors associated with concerns when considering purchasing/leasing light-duty battery electric vehicles: Insights from a commercial vehicle fleet owner survey from California. ***Transportation Research Part D***

[2] ***Tamakloe, R.** & Caesar, D. L. (2024). Factors associated with consumers who prioritize incentives when purchasing their electric vehicle: Insights from California Fuel Cell and Plug-in electric vehicle users. ***Energy Policy***.

[1] ***Tamakloe, R.** & Adanu, E. K. (2024). Insights from Injury Analysis on Passenger Falls from Moving Vehicle Incidents: An Association Rules Mining Approach. ***IATSS Research***

CONFERENCE PROCEEDINGS

International

The TRB 103rd Annual Meeting - Transportation Research Board Annual Meeting, *Washington DC, USA* (7-11 Jan. 2024)

[14] Investigating the Performance of Integrated Transit Stations: A Comparative Study in a Mega-City Before and During the COVID-19 Pandemic

[13] Discovering the Factors Influencing Shared Autonomous Vehicle Adoption: A Cross-Group Analysis Considering Local Ridesharing Access and Historical Experience

[12] Understanding Consumers Prioritizing Incentives in Electric Vehicle Purchases: Identifying Patterns for Effective Policy Strategies

[11] Uncovering Individual Heterogeneity in Pedestrian Crash Severity with Mixed Logit Models

[10] Investigating Critical Factor Associations Affecting Injury Severity Outcomes of Passengers Falling from Moving Vehicles

[9] Investigating Crashes Occurred at School Zones Using Random Parameter Ordered Probit Model

[8] Patterns of Critical Factors Linked to Automated Vehicle–Involved Crashes: A Comparative Analysis of Intersection and Non-Intersection Crash Scenarios

The TRB 102nd Annual Meeting - Transportation Research Board Annual Meeting, *Washington DC, USA* (8-12 Jan. 2023)

[7] Qualitative Analysis of Urban Air Mobility as a Disruptive Technology

[6] Perceptions of Drone Delivery Adoption in Ghana Considering Online Delivery Usage Before and After the Incidence of the COVID-19 Pandemic

[5] Risk Factors Affecting Motorcycle-Barrier Crashes and Injury Severities: Insights from an Innovative Cluster-Regression Technique

The TRB 101st Annual Meeting - Transportation Research Board Annual Meeting, *Washington DC, USA* (9-13 Jan. 2022)

[4] Investigating Chains of Risk Factors Influencing Fatal Powered Two-Wheeler Crashes at Spatio-Temporal Hotspot Locations in South Korea

[3] Investigating Chains of Factors Influencing Motorcycle Crash Casualty Severity at Signalized and Non-Signalized Intersections in a Developing Country

26th ITS World Congress, Suntec Conference Center, *Suntec, Singapore* (21-25 Oct. 2019)

[2] Assessing the impacts of Land Use on Subway Ridership: Identifying a Suitable Sustainable Transport Policy

The 13th UC-US-KU-TU International Joint Seminar, China and France Center, Tongji University, *Shanghai, China* (24 Aug. 2018)

[1] An Analysis of Bus-involved Crashes on Expressway through Conditional Mixed Process

Local (South Korea)

****Student supervisions***

[20] * Analysis of subway station operation efficiency and review of environmental factors impact: Focusing on Seoul Metropolitan City (2023.11). Korean Institute of ITS Conference, Jeju, South Korea.

[19] * Review of previous research on passenger-logistics integrated transportation system and suggestion of future research direction (2023.11). Korean Institute of ITS Conference, Jeju, South Korea.

[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
Travel Behaviour & Society
Transportation Research Part D: Transport and Environment
Transportation Research Part E: Logistics and Transportation Review
Transportation Research Part F: Traffic Psychology and Behaviour
Journal of Transport Geography
Transportation Research Record: Journal of the Transportation Research Board
Transportation Research Board Annual Meeting (TRBAM)
KSCE Journal of Civil Engineering
International Journal of Urban Sciences
International Journal of Sustainable Transportation

MEMBERSHIPS

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

VOLUNTEER AND EXTRA-CURRICULAR ENGAGEMENTS

New Student Mentoring Volunteer – International Student Office, Univ. 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