

Madiha Bencekri, Ph.D.

Ph.D. Assistant Researcher Professor

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RESEARCH INTERESTS

Transportation Engineering, Urban Planning, Geographic
Information Systems, Data Analytics, and Machine Learning.

Transport Planning, Sustainable
Mobility, Smart City.

EDUCATION

University of Seoul	Seoul, South Korea
<i>Ph.D. Transportation Engineering & Smart Cities</i>	March 2019 – Feb 2024
University of Seoul	Seoul, South Korea
<i>M.S. Urban and Regional Development</i>	Aug 2015 – Feb 2017
Institut National des Postes et Télécommunications	Rabat, Morocco
<i>M.S. in Telecommunications and Computer Engineering</i>	Sep 2007 – June 2010
Classes Préparatoires des Grandes Ecoles d'Ingénieur	Marrakech, Morocco
<i>B.S. in Mathematics and Physics</i>	Sep 2004 – June 2007

ACADEMIC APPOINTMENTS

University of Seoul	Seoul, South Korea
<i>Assistant Research Professor</i>	March 2024 – Present
University of Seoul	Seoul, South Korea
<i>Assistant Researcher</i>	March 2019 – Feb 2024

INDUSTRIAL EXPERIENCE

Casablanca-Settat Regional Government	Casablanca, Morocco
<i>Transport Service Manager</i>	March 2017 – Feb 2019
Korea Land and Housing Corporation	Seoul, South Korea
<i>International Consultant</i>	Jan 2016 – Aug 2016

Casablanca Metropolitan City Government	Casablanca, Morocco
<i>Manager of the Urban Mobility Service</i>	Sep 2011 – June 2015

SKILLS

Transportation and City Planning
<i>Transport Modelling: INRO's EMME, Bentley CUBE, Caliper TransCAD, & PTV Visum/Vissim</i>
Geographic Information Systems
<i>ArcGIS Desktop, ArcGIS Pro, ArcGIS City Engine, & QGIS</i>
Machine Learning & Data Analytics
<i>Python, R (R-Studio), STATA, LIMDEP, Tableau, & SPSS</i>
Others
<i>MATLAB, MATLAB Simulink, MySQL Workbench, Microsoft Visio (UML), & Smart PLS (SEM)</i>

AWARDS

Recipient of the Distinguished Paper Award <i>Transportation Engineering Department, University of Seoul</i>	2024
Recipient of the University of Seoul Smart City Department Scholarship <i>Smart City Department, University of Seoul</i>	2020
Recipient of the University of Seoul International Ph.D. Scholarship <i>University of Seoul</i>	2019 – 2020
Recipient of Distinguished Academic Performance (Master Studies) <i>University of Seoul</i>	2016
Recipient of KOICA Scholarship (Master Studies) <i>University of Seoul</i>	2015 – 2016

PUBLICATIONS

Papers Under Review:

- [1] **Bencekri, M.**, Fan, YV., Lee, D., Choi, M., & Lee, S*. (2024). Optimization of shared bikes system to unlock their economic benefits: land use mix and retail activity. *Journal of Transport Geography* (Accepted: June 12th, 2024).
- [2] **Bencekri, M.**, & Lee, S*. (2024). Enhancing Quality of Service of Paratransit: Insights and Lessons from Casablanca, Morocco. *Transport Policy* (Submission: April 24th, 2024).
- [3] **Bencekri, M.**, Kwak, J., Lee, D., Csiba-Herczeg, A., & Lee, S*. (2024). Assessing the 15-Minute City Framework as a Tool for Natural Heritage Preservation in the Anthropocene Epoch. *International Journal of Urban Sciences* (Submission: May 24th, 2024).

Published Papers:

- [1] **Bencekri, M.**, Kim, S., Fan, YV., & Lee, S*. (2024). Optimizing Carbon-Focused Allocation of Mobility Hubs Using Genetic Algorithms and Ensemble-based Suitability Analysis. *Scientific Reports-Nature* (Accepted: May 21st, 2024)
- [2] Kwak, J., Ku, D., Jo, J., **Bencekri, M.**, Choi, M., & Lee, S*. (2024). Travel Demand Management Strategies to Mitigate Climate Change. *ICE Proceedings Municipal Engineering*.
- [3] **Bencekri, M.**, Lee, D., Ku, D., & Lee, S*. (2023). A Planning Support System for Boosting Walkability. *ICE Proceedings Municipal Engineering*.
- [4] **Bencekri, M.**, Lee, D., Kim, S., Shin, S., & Lee, S*. (2023). Equity-Based Allocation of Mobility Hubs in Seoul. *Chemical Engineering Transactions*.
- [5] **Bencekri, M.**, Ku, D., Lee, D., Fan, YV., Klemes, JJ., Varbanov, S., & Lee, S*. (2023). The Elasticity and Efficiency of Carbon Reduction Strategies in Transportation. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*.
- [6] **Bencekri, M.**, Lee, D., Ku, D., & Lee, S*. (2022). Investigating Carbon Emissions in Korea. *Chemical Engineering Transactions*.
- [7] Tamakloe, R., Sam, EF., **Bencekri, M.**, Das, S., & Park, D*. (2022). Mining Groups of Factors Influencing Bus/Minibus Crash Severities on Poor Pavement Conditions Roads Considering Different Lighting Status. *Traffic Injury Prevention*.
- [8] **Bencekri, M.**, Ku, D., Kwak, J., Kim, J., & Lee, S*. (2021). Review of Eco-Friendly Guidance of Transport Infrastructure: Korea and the World. *Chemical Engineering Transactions*.
- [9] Ku, D., **Bencekri, M.**, Kim, J., Lee, S., & Lee, S*. (2020). Review of European Low Emission Zone Policy. *Chemical Engineering Transactions*.
- [10] **Bencekri, M.**, Ku, D., Na, S., Lee, S., & Lee, S*. (2019). Parking Policies Review: Europe Study Case. *International Journal of Transportation*.
- [11] **Bencekri, M.**, Ku, D., Lee, S., & Lee, S*. (2019). Congestion Pricing Policy in Europe. *International Journal of Transportation*.

Conference Papers:

- [1] **Bencekri, M.**, Ku, D., & Lee, S*. (2023). Planning Support System for Boosting Bikeability in Seoul. *Computational Urban Planning and Urban Management (CUPUM), Montreal, Canada*.
- [2] **Bencekri, M.**, Kim, D., Ku, D., Lee, D., & Lee, S*. (2023). A Hierarchical approach to solve p-mobility hub location problems to reduce carbonization. *10th International Symposium on Transportation Data & Modelling (ISTDM23), Ispra, Italy*.
- [3] ***Bencekri, M.**, Founoun, A., Haqiq, A., & Hayar, A. (2022). Investigation of Shared Bike Demand Using Data Analytics. *IEEE International Smart Cities Conference (ISC2), Pafos, Cyprus*.
- [4] ***Bencekri, M.**, Kweon, S., Kang, G., & Lee, S. (2020). Economic Impact Assessment Model for Low Emission Zone Policy. *The Korean Society of Transportation Conference, Seoul, Korea Republic Of*.
- [5] ***Bencekri, M.**, & Lee, S. (2021). Identification of Key Factors Influencing Biking in Seoul. *International Student Conference on Advanced Science and Technology (ICAST), Kumamoto, Japan*.
- [6] ***Bencekri, M.**, & Lee, S. (2020). GIS-Based Accessibility Assessment within Yeouido. *International Student Conference on Advanced Science and Technology (ICAST), Kumamoto, Japan*.
- [7] ***Bencekri, M.**, Ku, D., & Lee, S. (2020). UNA-Based Accessibility Assessment. *The Korean Society of Transportation Conference, Seoul, Korea Republic Of*.
- [8] ***Bencekri, M.**, & Lee, S. (2019). Smart Parking in Digital Twin. *International Student Conference on Advanced Science and Technology (ICAST), Kumamoto, Japan*.

Published Book Chapters:

- [1] **Bencekri, M.,** Ku, D., Lee, D., & Lee, S*. (2023). A Planning Support System for Boosting Bikeability in Seoul. *Intelligence for Future Cities: Planning Through Big Data and Urban Analytics*. Springer.
- [2] **Bencekri, M.,** Kim, D., Ku, D., Lee, D., & Lee, S*. (2023). A Hierarchical approach to solve p-mobility hub location problems to reduce carbonization. *10th International Symposium on Transportation Data & Modelling (ISTDM23)*.
- [3] *Lee, S. & **Bencekri, M.** (2021). Analysis of Skip-and-Stop Planning Using Smart Card Data. *The Routledge Handbook of Public Transport (1st Edition)*. Taylor & Francis Group.
- [4] *Lee, S. & **Bencekri, M.** (2020). Urban Form and Public Transport Design. *Urban Form and Accessibility: Social, Economic, and Environment Impacts*. Elsevier.

Advisory of Master Students' Thesis:

- [1] **Kalili, L.** (2019). Comparative Analysis of the Project Appraisal Guidance.
- [2] **Yalelet, K.** (2020). Performance Evaluation of Road Network: A Case Study of Ayat-Megenagna Roads of Addis Ababa City.
- [3] **Acharya, S.** (2022). Measurement of Accessibility to Road Network Using Space Syntax in Pokhara, Nepal
- [4] **Soe, W.** (2022). Identification of Maintenance Factors in Rolling Stock Based on Exploratory Factor Analysis.
- [5] **Muluken, A.** (2022). Evaluation of Urban Road Network Optimization Based on Random Utility Model.
- [6] **Gulmaliyeva, N.** (2023). Transition Strategy to Sustainability of Urban Mobility in Baku, Azerbaijan Using a Backcasting Scenario Approach.
- [7] **Uwase, S.** (2023). Assessing the implications of Real-Time Bus Information System (RT-BIS) from user perspective in developing cities: case study Kigali
- [8] **Sultonov, A.** (2024). Development of the BRT in Tashkent City: Demand Forecast of Pilot BRT Line in Shota Rustaveli Street.
- [9] **Jalilov, J.** (2024). Analysis of the Potential of Transit-Oriented Development Around Metro Stations of Tashkent.

REVIEWING SERVICE

Plos One
Civil Engineering (Proceedings of the ICE)
Transport (Proceedings of the ICE)
Sustainable Cities and Society

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