Majbah Uddin

R&D Associate Staff at Oak Ridge National Laboratory

1 Bethel Valley Road, Oak Ridge, TN 37830

(865) 341-1306 | ✉ uddinm@ornl.gov | in majbahuddin | 🎓 Google Scholar | ⦿ 0000-0001-9925-3881

Professional Experience

Oak Ridge National Laboratory   *Oak Ridge, TN*

R&D Associate Staff   *Dec 2021 - Present*

Oak Ridge National Laboratory   *Oak Ridge, TN*

Postdoctoral Research Associate   *Sept 2019 - Nov 2021*

University of South Carolina   *Columbia, SC*

Postdoctoral Research Associate   *May 2019 - Sept 2019*

University of South Carolina   *Columbia, SC*

Graduate Research Assistant   *Aug 2013 - Apr 2019*

Stamford University Bangladesh   *Dhaka, Bangladesh*

Lecturer   *Feb 2013 - Aug 2013*

Education

University of South Carolina   *Columbia, SC*

PhD in Civil Engineering   *2019*

University of South Carolina   *Columbia, SC*

MAS in Applied Statistics   *2018*

University of South Carolina   *Columbia, SC*

MS in Civil Engineering   *2015*

Bangladesh University of Engineering and Technology   *Dhaka, Bangladesh*

BS in Civil Engineering   *2012*

Journal Articles

1. Lim, H., **M. Uddin**, Y. Liu, S.-M. Chin, & H.-L. Hwang (2022). A Comparative Study of Machine Learning Algorithms for Industry-Specific Freight Generation Model. *Sustainability*, 14(22), 15367. doi:10.3390/su142215367

2. **Uddin, M.**, S. Anowar, & N. Eluru (2021). Modeling Freight Mode Choice Using Machine Learning Classifiers: A Comparative Study Using the Commodity Flow Survey (CFS) Data. *Transportation Planning and Technology*, 44(5), 543–59. doi:10.1080/03081060.2021.1927306

3. **Uddin, M.**, & N. Huynh (2020). Injury Severity Analysis of Truck-Involved Crashes under Different Weather Conditions. *Accident Analysis & Prevention*, 141, 105529. doi:10.1016/j.aap.2020.105529

4. **Uddin, M.**, & N. Huynh (2020). Model for Collaboration among Carriers to Reduce Empty Container Truck Trips. *Information*, 11(8), 377. doi:10.3390/info11080377

5. **Uddin, M.**, & N. Huynh (2019). Reliable Routing of Road-Rail Intermodal Freight under Uncertainty. *Networks and Spatial Economics*, 19, 929–952. doi:10.1007/s11067-018-9438-6

6. **Uddin, M.**, & N. Huynh (2018). Factors Influencing Injury Severity of Crashes Involving HAZMAT Trucks. *International Journal of Transportation Science and Technology*, 7(1), 1–9. doi:10.1016/j.ijtst.2017.06.004

7. **Uddin, M.**, & F. Ahmed (2018). Pedestrian Injury Severity Analysis in Motor Vehicle Crashes in Ohio. *Safety*, 4(2), 20. doi:10.3390/safety4020020

8. **Uddin, M.**, R. Allen, N. Huynh, J. Vidal, K. Taaffe, L. Fredendall, & J. Greenstein (2018). Operating Room Turnover Time Autocorrelation while using Mobile Applications. *mHealth*, 4, 38. doi:10.21037/mhealth.2018.09.07

9. **Uddin, M.**, R. Allen, N. Huynh, J. Vidal, K. Taaffe, L. Fredendall, & J. Greenstein (2018). Assessing Operating Room Turnover Time via the Use of Mobile Application. *mHealth*, 4, 12. doi:10.21037/mhealth.2018.05.03

10. **Uddin, M.**, & N. Huynh (2017). Truck-Involved Crashes Injury Severity Analysis for Different Lighting Conditions on Rural and Urban Roadways. *Accident Analysis & Prevention*, 108, 44–55. doi:10.1016/j.aap.2017.08.009

11. Rahman, M., **M. Uddin**, & S. Gassman (2017). Pavement Performance Evaluation Models for South Carolina. *KSCE Journal of Civil Engineering*, 21(7), 2695–2706. doi:10.1007/s12205-017-0544-7

12. **Uddin, M.**, R. Allen, N. Huynh, J. Vidal, K. Taaffe, L. Fredendall, & J. Greenstein (2017). Effectiveness of a Countdown Timer in Reducing OR Turnover Time. *Journal of Mobile Technology in Medicine*, 6(3), 25–33. doi:10.7309/jmtm.6.3.5

13. **Uddin, M.**, & N. Huynh (2016). Routing Model for Multicommodity Freight in an Intermodal Network under Disruptions. *Transportation Research Record*, 2548, 71–80. doi:10.3141/2548-09

14. **Uddin, M.**, & N. Huynh (2015). Freight Traffic Assignment Methodology for Large-Scale Road-Rail Intermodal Networks. *Transportation Research Record*, 2477, 50–57. doi:10.3141/2477-06

15. **Uddin, M.**, N. Huynh, J. Vidal, K. Taaffe, L. Fredendall, & J. Greenstein (2015). Evaluation of Google's Voice Recognition and Sentence Classification for Health Care Applications. *Engineering Management Journal*, 27(3), 152–162. doi:10.1080/10429247.2015.1054752

Book Chapter

1. Huynh, N., **M. Uddin**, & C. Minh (2017). "Data Analytics for Intermodal Freight Transportation Applications." Data Analytics for Intelligent Transportation Systems, 1st edition, Chapter 10, Edited by M. Chowdhury, A. Apon, & K. Dey, Elsevier Science.

Conference Proceeding

1. Liu, Y., A. Siekmann, V. Sujan, **M. Uddin**, F. Xie, & S. Ou (2022). Providing Levelized Cost and Waiting Time Inputs for HDV Hydrogen Refueling Station Planning: A Case Study of U.S. I-75 Corridor. *Annual International Green Energy Conference*.

2. **Uddin, M.**, Y. Liu, F. Xie, V. Sujan, & A. Siekmann (2022). Modeling Freight Traffic Demand and Highway Networks for Hydrogen Fueling Station Planning: A Case Study of U.S. Interstate 75 Corridor. *Annual International Green Energy Conference*.

3. Comert, G., C. Pierce, Z. Berk, N. Huynh, R. Petrulis, & **M. Uddin** (2020). Delivering Contextual Knowledge and Critical Skills of Disruptive Technologies through Problem-Based Learning in Research Experiences for Undergraduates Setting. *Proceedings of the American Society for Engineering Education's Virtual Annual Conference*.

Presentations (selected)

1. Uddin, M., H.-L. Hwang, & M.S. Hasnine. An Interpretable Machine Learning Framework to Understand Bikeshare Demand before and during the COVID-19 Pandemic in New York City. TRB Annual Meeting, Washington, DC, Jan 2023.

2. Liu, Y., M. Uddin, S.-M. Chin, H.-L. Hwang, & J. Chen. Examining Rail Transportation Route of Crude Oil in the US using Crowdsource Social Media Data. TRB Annual Meeting, Washington, DC, Jan 2023.

3. Uddin, M., H.-L. Hwang, & S.-M. Chin. Sentiment Analytics as Part of Public Participation in the Transportation Scenario Planning. TRB Conference on Scenario Planning in Transportation, Washington, DC, Sep 2022.

4. Uddin, M., & H.-L. Hwang. Factors Influencing Mode Choice of Adults with Travel-Limiting Disability. International Conference on Transportation Development, Virtual, Jun 2021.

5. Uddin, M., S.-M. Chin, H.-L. Hwang, C. Wang, & H. Lim. Assessing the Potential Impact of Lane-Tracking Technology for Autonomous Vehicles on Traffic Safety. International Conference on Transportation Development, Virtual, Jun 2021.

6. Hyeonsup, Lim, Y. Liu, M. Uddin, H.-L. Hwang, & S.-M. Chin. Development of U.S. Nationwide Freight Flow and Infrastructure Data. ORNL Software and Data Expo, Oak Ridge, TN, May 2021. **Received Best Demo award**

7. Uddin, M., & H.-L. Hwang. A Bi-Objective Optimization Framework For Municipal Solid Waste Transportation. INFORMS Annual Meeting, Virtual, Nov 2020.

8. Uddin, M., & S.-M. Chin. Movements of Construction and Demolition Debris in the United States. Annual Vanderbilt Postdoctoral Association Symposium, Nashville, TN, Oct 2020.

9. Uddin, M., H.-L. Hwang, & S. Hargrove. Movements of Municipal Solid Waste in the United States. Oak Ridge Postdoctoral Association Research Symposium, Oak Ridge, TN, July 2020.

10. Uddin, M., S.-M. Chin, & H.-L. Hwang. Multimodal Transportation Flows of Crude Oil in the United States. Oak Ridge Postdoctoral Association Research Symposium, Oak Ridge, TN, July 2020.

11. Uddin, M., S. Anowar, & N. Eluru. Modeling Freight Mode Choice Using Machine Learning Classifiers: A Comparative Study Using the Commodity Flow Survey Data. TRB Annual Meeting, Washington, DC, Jan 2020.

12. Uddin, M., & N. Huynh. Model for Collaboration Among Carriers in Domestic Intermodal Freight Transport. TRB Annual Meeting, Washington, DC, Jan 2020.

Honors & Awards

2022   **Poster Presentation Award,** Oak Ridge Postdoctoral Association Research Symposium

2021   **Postdoc Development Path,** ORNL Employee and Organizational Development

2021   **Best Demo Award,** ORNL Software and Data Expo

2020   **Most Cited Article Award,** International Journal of Transportation Science and Technology

2020   **Best Paper Award,** Journal: Safety

2019   **Breakthrough Graduate Scholar Award,** University of South Carolina

2019   **M. Bert Storey Endowed Graduate Fellowship,** University of South Carolina

2018   **Participant,** VREF Advanced Studies Institutes on Sustainable Urban Freight Systems, RPI

2018   **Student Honor Panel,** TRB Marine Transportation System Research and Development Conference

2018   **M. Bert Storey Endowed Graduate Fellowship,** University of South Carolina

2017   **HSIS Excellence in Highway Safety Data Award,** Federal Highway Administration

2016   **Highway Safety Data Research Paper Competition Award,** Federal Highway Administration