

DIBAKAR SAHA, Ph.D.

Research Associate

Collaborative Sciences Center for Road Safety (CSCRS)

School of urban and Regional Planning

Florida Atlantic University

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EDUCATION

- Ph.D. Civil Engineering (Specialization in Transportation Engineering), 2014
Florida International University
Dissertation: *Improved Criteria for Estimating Calibration Factors for Highway Safety Manual (HSM) Applications*
- M.S. Civil and Transportation Engineering, 2010
Bangladesh University of Engineering and Technology, Bangladesh
Thesis: *Development of a Mode Choice Model Considering Heterogeneous Traffic of Dhaka City*
- B.S. Civil Engineering, 2008
Bangladesh University of Engineering and Technology, Bangladesh

ACADEMIC APPOINTMENTS

- 2017-Present *Research Associate*, School of Urban and Regional Planning, Florida Atlantic University
- 2015-2017 *Research Associate*, Department of Civil and Environmental Engineering, Florida International University
- 2010-2014 *Graduate Research and Teaching Assistant*, Department of Civil and Environmental Engineering, Florida International University.
- 2008-2009 *Graduate Assistant*, Department of Civil Engineering, Bangladesh University of Engineering and Technology

RESEARCH INTERESTS

- Statistical Modeling and Data Mining Techniques
- Transportation Safety and Safe Systems Approach
- Urban Transportation Planning
- Transportation and Public Health
- Human Factor Studies

PUBLICATIONS

Peer-Refereed Journal Articles

1. **Saha, D.**, P. Alluri, W. Wu, and A. Gan. Spatial Analysis of Macro-Level Bicycle Crashes Using the Class of Conditional Autoregressive Models. *Accident Analysis and Prevention* (in press).

2. Gan, A., P. Alluri, M.A. Raihan, K. Liu, **D. Saha**, and R. Jung. (2017). An Automated System for Prioritizing Highway Improvement Locations and Analyzing Project Alternatives. *Transportation Research Record: Journal of Transportation Research Board*, 2654:65-75.
3. Alluri, P., A. Gan, **D. Saha**, and L. Fernandez. (2017). Evaluation of Signage Alternatives for Express Lane Facilities: A Focus Group Study. *Transportation Research Record: Journal of Transportation Research Board*, 2616:114-121.
4. **Saha, D.**, P. Alluri, and A. Gan. (2017). A Bayesian Procedure for Evaluating the Frequency of Calibration Factor Updates in Highway Safety Manual (HSM) Applications. *Accident Analysis and Prevention*, 98:74-86.
5. **Saha, D.**, P. Alluri, and A. Gan. (2016). A Random Forests Approach to Prioritize Highway Safety Manual (HSM) Variables for Data Collection. *Journal of Advanced Transportation*, 50(4):522-540.
6. Alluri, P., **D. Saha**, and A. Gan. (2016). Minimum Sample Sizes for Estimating Reliable Highway Safety Manual (HSM) Calibration Factors. *Journal of Transportation Safety and Security*, 8(1):56-74.
7. **Saha, D.**, P. Alluri, and A. Gan. (2015). Prioritizing Highway Safety Manual's Crash Prediction Variables Using Boosted Regression Trees. *Accident Analysis and Prevention*, 79:133-144.
8. Suksawang, N., P. Alluri, A. Gan, K. Meneses, F. Cevallos, K. Haleem, and **D. Saha**. (2014). Use of Movable Bus Stop Loading Pads: Feasibility and Design Alternatives. *Journal of Public Transportation*, 17(4):14-30.
9. Haleem, K., A. Gan, P. Alluri, and **D. Saha**. (2014). Identifying Traffic Safety Practices and Needs of Local Transportation and Law Enforcement Agencies. *Journal of the Transportation Research Forum*, 53(1):83-99.

Peer-Refereed Conference Proceedings and Presentations

1. Alluri, P., **D. Saha**, A. Gan, and H. Wang. (2018). *Decision Support System for Selecting Highway Safety Manual (HSM) Methods*. Transportation Research Board 97th Annual Meeting [CD-ROM], paper No. 18-00369, Washington, D.C.
2. **Saha, D.**, P. Alluri, W. Wu, and A. Gan. (2017). *Analysis of Bicycle Crashes with Spatial Autocorrelation: A Comparison of Conditional Autoregressive Models*. Transportation Research Board 96th Annual Meeting [CD-ROM], Paper No. 17-6880, Washington, D.C.
3. Gan, A., P. Alluri, M.A. Raihan, K. Liu., **D. Saha**, and R. Jung. (2017). *An Automated System for Prioritizing Highway Improvement Locations and Analyzing Project Alternatives*. Transportation Research Board 96th Annual Meeting [CD-ROM], Paper No. 17-5233, Washington, D.C.
4. Alluri, P., A. Gan, **D. Saha**, and L. Fernandez. (2017). *Evaluation of Signage Alternatives for Express Lane Facilities: A Focus Group Study*. Transportation Research Board 96th Annual Meeting [CD-ROM], Paper No. 17-6753, Washington, D.C.
5. Alluri, P., **D. Saha**, and A. Gan. (2015). *Prioritization of Highway Safety Manual (HSM) Data Variables Using Random Forest Algorithm*. Transportation Research Board 94th Annual Meeting [CD-ROM], Paper No. 15-2257, Washington, D.C.
6. **Saha, D.**, P. Alluri, K. Haleem, and A. Gan. (2014). *Evaluation of Hybrid Static-Dynamic Sign Designs: A Focus Group Study*. Transportation Research Board (TRB) 93rd Annual Meeting [CD-ROM], Paper No. 14-5616, Washington, D.C.
7. Haleem, K., A. Gan, P. Alluri, and **D. Saha**. (2014). *Identification of Safety Practices, Issues, and Needs of Local Transportation and Law Enforcement Agencies*. Transportation Research Board 93rd Annual Meeting [CD-ROM], Paper No. 14-3440, Washington, D.C.

8. Suksawang, N., P. Alluri, A. Gan, K. Meneses, F. Cevallos, K. Haleem, and **D. Saha**. (2014). *Feasibility and Design of Movable Bus Stop Boarding and Alighting Pads*. Transportation Research Board 93rd Annual Meeting [CD-ROM], Paper No. 14-4448, Washington, D.C.
9. **Saha, D.**, A. Gan, K. Haleem, P. Alluri, and F. Delgado. (2013). *Applications of Hybrid Static-Dynamic Signs for Active Traffic Management: A Worldwide State-of-the-Practice Review*. Transportation Research Board 92nd Annual Meeting [CD-ROM], Paper No. 13-4307, Washington, D.C.
10. **Saha, D.**, A. Gan, K. Haleem, and F. Delgado. (2012). *Use of Hybrid Static-Dynamic Signs: A Critical State-of-the-Practice Review*. Proceedings of the 53rd Annual Transportation Research Forum, Tampa, Florida.

Research Reports and Technical Articles

1. Alluri, P., M.A. Raihan, **D. Saha**, W. Wu, A. Huq, S. Nafis, and A. Gan. (2017). *Statewide Analysis of Bicycle Crashes*. Final Report, Contract No. BDV29-977-23, Florida Department of Transportation, Tallahassee, Florida.
2. Alluri, P., A. Gan, **D. Saha**, L. Fernandez, and E. Sadeghvaziri. (2017). *Evaluation of Signage Alternatives for Express Lanes Facilities*. Final Report, National Center for Transportation Systems Productivity and Management, Atlanta, Georgia.
3. Alluri, P., **D. Saha**, and A. Gan. (2016). *Quantifying the Accuracy of the Enhanced Interchange Safety Analysis Tool (ISATe) Crash Prediction Tools on Florida Highways*. Final Report, Contract No. BDV29-931-10, Florida Department of Transportation Systems Planning Office, Tallahassee, Florida.
4. Alluri, P., K. Liu, A. Gan, and **D. Saha**. (2016). *Generation of 2011-2014 Input Data for SafetyAnalyst*. Final Report, Florida Department of Transportation.
5. Gan, A., M.A. Raihan, P. Alluri, K. Liu, and **D. Saha**. (2016). *Updating and Improving Methodology for Prioritizing Highway Projects on the Strategic Intermodal System (SIS)*. Final Report, Contract No. BDV29-977-14, Florida Department of Transportation, Tallahassee, Florida.
6. Alluri, P., **D. Saha**, K. Liu, and A. Gan. (2014). *Improved Processes for Meeting the Data Requirements for Implementing the Highway Safety Manual (HSM) and SafetyAnalyst in Florida*. Final Report, Contract No. BDK80-977-37, Florida Department of Transportation, Tallahassee, Florida.
7. Alluri, P., K. Haleem, A. Gan, M. Lavasani, and **D. Saha**. (2013). *Comprehensive Study to Reduce Pedestrian Crashes in Florida*. Final Report, Contract No. BDK80 977-32, Florida Department of Transportation, Tallahassee, Florida.
8. Suksawang, N., A. Gan, P. Alluri, K. Haleem, K. Meneses, F. Cevallos, and **D. Saha**. (2013). *Analysis of Movable Bus Stop Boarding and Alighting Areas*. Final Report, Contract No. BDK80-977-23, Florida Department of Transportation, Tallahassee, Florida.
9. Gan, A., **D. Saha**, K. Haleem, P. Alluri, and D. McCarthy. (2012). *Best Practices in the Use of Hybrid Static-Dynamic Signs*. Final Report, Contract No. BDK80 977-15, Florida Department of Transportation, Tallahassee, Florida.
10. Gan, A., K. Haleem, P. Alluri, and **D. Saha**. (2012). *Standardization of Crash Analysis in Florida*. Final Report, Contract No. BDK80-977-10, Florida Department of Transportation, Tallahassee, Florida.
11. **Saha, D.**, A. Gan, and P. Alluri. (2012). *Sign Information Included for Managed Lane Facilities: A State-of-the-Practice Summary*. Special Report, Florida Department of Transportation District 4.

PRESENTATIONS

Invited Lectures

1. *Highway Safety*. Presented at the Transportation and Traffic Engineering Class, Florida International University, March 25, 2016.
2. *Statistical Methods in Highway Safety*. Presented at the Highway Safety Analysis Class, Florida International University, November 10, 2016.
3. *Best Practices in the Use of Hybrid Static-Dynamic Signs*. Presented at the Graduate Seminar, Civil and Environmental Engineering, Florida International University, February 1, 2013.

University Transportation Center (UTC) Conferences and Symposiums

1. Raihan, M.A., P. Alluri, and **D. Saha**. *Impact of Roadway Characteristics on Bicycle Safety*. Presented at the 10th University Transportation Center Spotlight Conference: Bicycles and Pedestrians, Washington, D.C., December 1-2, 2016.
2. **Saha, D.**, P. Alluri, and A. Gan. *Quantifying the Accuracy of the Enhanced Interchange Safety Analysis Tool (ISATe) for Crash Prediction on Florida Freeways*. Presented at the Transportation Research Board 95th Annual Meeting, Washington, D.C., January 10-14, 2016.
3. Alluri, P., Haleem K., A. Gan, M. Lavasani, and **D. Saha**. *Pedestrian Safety at Signalized Intersections in Florida*. Presented at the UTC Conference for the Southeast Region, Atlanta, Georgia, March 24-25, 2014.
4. Steiner, R., S. Washburn, L. Elefteriadou, A. Gan, A. Cavaretta, R. Xu, S. Rachmat, P. Alluri, K. Haleem, **D. Saha**, and A. Diaz. *Roundabouts and Access Management*. Presented at the UTC Conference for the Southeast Region, Orlando, Florida, April 2013.
5. Alluri, P., **D. Saha**, K. Haleem, and A. Gan. *Focus Group Study of Hybrid Static-Dynamic Signs for Traffic Safety Improvements*. Presented at the UTC Safety Symposium at University of Central Florida, Orlando, Florida, February 14, 2013.

RESEARCH EXPERIENCE

Research Associate at collaborative Sciences Center for Road Safety, Florida Atlantic University

1. Identifying the Safety Information Needs of Major cities in the U.S.
2. Safe Systems synthesis and Summit Phase 1

Research Associate at Florida International University

3. Statewide Analysis of Bicycle Crashes (sponsor: FDOT Safety Office)
4. Development of a Web-based Decision Making Tool for the Highway Safety Manual Implementation (sponsor: National Center for Transportation Systems Productivity and Management)
5. Evaluation of Project Processes in Relation to Transportation System Management and Operations (TSM&O) (sponsor: FDOT Traffic Engineering and Operations Office)
6. Quantifying the Accuracy of the Enhanced Interchange Safety Analysis Tool (ISATe) Crash Prediction Tools on Florida Highways (sponsor: FDOT Systems Planning Office)
7. Generation of 2011-2014 Input Data for *SafetyAnalyst* (sponsor: FDOT Safety Office)
8. Evaluation of Signage Alternatives for Express Lanes Facilities (sponsor: National Center for Transportation Systems Productivity and Management)

9. Updating and Improving Methodology for Prioritizing Highway Projects on the Strategic Intermodal System (SIS) (sponsor: FDOT Intermodal Systems Development Office)

Graduate Research Assistant at Florida International University

10. Improved Processes for Meeting the Data Requirements for Implementing the Highway Safety Manual (HSM) and *SafetyAnalyst* in Florida (sponsor: FDOT Safety Office)
11. Roundabouts and Access Management (subcontract from University of Florida)
12. Pedestrian Safety Campaign Support and Data Collection of Driver and Pedestrian Behavior at Rectangular Rapid Flashing Beacon Locations (sponsor: FDOT District 6 Traffic Operations Office)
13. Comprehensive Study to Reduce Pedestrian Crashes in Florida (sponsor: FDOT Safety Office)
14. Analysis of Movable Bus Stop Boarding and Alighting Areas (sponsor: FDOT Public Transit Office)
15. Best Practices in the Use of Hybrid Static-Dynamic Signs (sponsor: FDOT District 4)
16. Standardization of Crash Analysis in Florida (sponsor: FDOT Research Center)
17. Before and After Safety Study of Roadways Where New Medians Have Been Added (sponsor: FDOT Systems Planning Office)

Graduate Research Assistant at Bangladesh University of Engineering and Technology

18. Asphalt Concrete Overlay over the Existing Runway of Zia International Airport, Dhaka (sponsor: Civil Aviation Authority, Bangladesh)

TEACHING EXPERIENCE

Graduate Teaching Assistant, Florida International University

- Advanced Highway Capacity Analysis (Graduate)
- Pavement Design (Graduate)
- Traffic Control Systems Design (Graduate)
- Transportation and Traffic Engineering (Undergraduate)

PROFESSIONAL MEMBERSHIP AND SERVICE

- *Member*, ITE International, 2011-Present
- *Reviewer*, Accident Analysis and Prevention Journal
- *Reviewer*, Journal of Transportation Safety and Security
- *Reviewer*, Journal of Traffic and Transportation Engineering
- *Reviewer*, Transportation Research Record: Journal of Transportation Research Board
- *Reviewer*, Journal of Advanced Transportation
- *Reviewer*, PLOS ONE
- *Judge*, Regional Science and Engineering Fair, Miami-Dade STEM Expo, 2012
- *Treasurer*, ITE Student chapter at Florida International University, 2011 – 2012
- *Student Council Representative*, ITE Student Chapter at Florida International University, 2010 – 2011

ACADEMIC HONORS AND AWARDS

- Selected for Delta Epsilon Iota Academic Honor Society Member, 2014
- Outstanding Leadership Award, ITE Student Chapter at Florida International University, 2011-2012
- Merit Scholarship during Undergraduate Study, Board of Intermediate and Secondary Education, Dhaka, Bangladesh, 2003-2007