

**Thobias Sando, Ph.D., P.E., PTOE.**  
Professor, School of Engineering  
University of North Florida  
1 UNF Drive, Jacksonville, FL 32256

Phone: 904-620-1142  
Fax: 904-620-1391  
Email: [t.sando@unf.edu](mailto:t.sando@unf.edu)  
Web: <http://www.unf.edu/~t.sando>

## EDUCATION

<b>Ph.D.</b>	Florida State University	Civil Engineering (Transportation)	2002 – 2005
<b>M.S.</b>	Florida State University	Civil Engineering (Transportation)	2001 – 2002
<b>B.S.</b>	University of Dar es Salaam, Tanzania	Civil Engineering	1995 – 1999

## PROFESSIONAL EXPERIENCE

Aug 2018 – Present: University of North Florida – Full Professor  
Jan 2015 – August 2017: Civil Engineering Program Coordinator  
Aug 2013 – July 2018: University of North Florida – Associate Professor  
Aug 2007 – July 2013: University of North Florida – Assistant Professor  
Jan 2007 – Aug 2007: Reynolds, Smith & Hills, Inc. – Transportation Engineer  
Jan 2006 – Dec 2006: Connelly & Wicker Inc. – Roadway Design Engineer  
Jan 2001 – Dec 2005: Florida State University – Graduate Research/Teaching Assistant

## AREAS OF EXPERTISE

- Transit Intermodal Facility Design
- Traffic Operations
- Transportation Planning
- Network Traffic Flow Modeling and Simulation
- Applications of Global Positioning System (GPS) in Transportation
- Applications of Geographical Information Systems (GIS) in Transportation
- Modeling of Safety Data
- Applications of Remote Sensing Technologies in Transportation Engineering
- Evaluation of Emerging Transportation Technologies

## UNIVERSITY SERVICE

2016 – Present University adjunct affairs committee  
2015 – 2016 Member, Coastal Engineering faculty search committee  
2015 – 2016 Member, Construction Management faculty search committee  
2015 – 2017 Coordinator, Civil Engineering Program  
2015 – Present Member, University Academic Programs Committee  
2015 – Present Chair, College Curriculum Committee  
2014 – 2016 Member, College Technology Committee  
2013 – 2014 Reviewer, Summer teaching and research development grants  
2013 – 2014 Member, College computer technician search committee

- 2013 – 2014 Member, Ad-hoc committee on assessment of values statement
- 2013 – 2014 Member, School of Engineering Advisor/Instructor Search Committee
- 2013 – 2014 Member, Ad-hoc committee on Introduction to Engineering Course
- 2013 – 2015 Member, University Support Services Committee
- 2012 – 2014 Member, University Campus Technology Committee
- 2012 – 2014 Member, College Curriculum Committee
- 2012 Member, Ad-hoc committee on School of Engineering Bylaws
- 2012 Member, Ad-hoc committee on integrated design course report template
- 2011 – 2013 Member, Campus Technology Committee
- 2011 – Present Member, Support Services Committee
- 2011 – 2012 Member, Mechanical Engineering/ Electrical Engineering faculty search committee
- 2011 – 2012 Member, Search committee for Assistant Director of Research Development
- 2010 – 2011 Member, Mechanical Engineering Search Committee - Thermal Sciences Faculty
- 2010 – 2011 Member, Mechanical Engineering Search Committee - Electromechanical Engineering Faculty
- 2008 – 2009 Member, CE Environmental and Water Resources Faculty Search Committee
- 2009 – 2010 Member, School of Engineering Graduate Program Committee
- 2009 – 2010 Member, University Graduate Transformational Learning Opportunities Review Committee
- 2009 – 2010 Member, Academic Research Technology Specialist Search Committee
- 2008 – 2010 Member, Food Service Advisory Council
- 2008 – 2009 Member, Mechanical Engineering Search Committee
- 2008 – Present Member, UNF African Council
- 2007 – 2010 Member, School of Engineering Outreach Committee
- 2007 – 2008 Member, Construction Management Search Committee for the Advisor/Instructor
- 2007 – 2008 Member, CE Environmental and Water Resources Faculty Search Committee

## **PROFESSIONAL SERVICE AND MEMBERSHIPS**

- 2012 – Present Society of Black Engineers (NSBE), UNF student chapter adviser
- 2012 – Present Reviewer, Journal of Accident Analysis & Prevention
- 2012 – Present Reviewer, 15th IEEE Intelligent Transportation Systems Conference
- 2011 – Present Reviewer, Journal of Transportation Technologies
- 2010 – Present Panel Member, National Academies of Sciences, NCHRP Projects
- 2010 – Present UNF African Regional Council Leader
- 2009 – Present Reviewer, Journal of Transportation Research Record
- 2009 – Present Reviewer, UNF Summer Grant Proposals
- 2009 – Present Reviewer, Advances in Transportation Studies
- 2009 – 2010 Session Chair, School of Engineering 2009 Senior Design Symposium
- 2008 – Present UNF Liaison, Southeastern Consortium for Minorities in Engineering (SECME)
- 2008 – 2011 Panel Member, Transit Cooperative Research Program (TCRP)
- 2008 – 2009 Referee, Institute of Engineers Annual Meeting and Conference Papers

2008 – Present Member, American Association of Civil Engineers (ASCE)  
2007 – Present Advisor, Florida Society of Engineers (FES) UNF Student Chapter:  
2002 – Present Member, Tau Beta Pi  
2001 – Present Member, Institute of Transportation Engineers (ITE)

## **HONORS AND AWARDS**

### *UNF Office of Sponsored Research Programs*

Platinum star award: for accruing \$1 million in sponsored activities. April 2017

### *Florida Engineering Society (FES)*

Engineering Faculty Member of the Year, 2008.

### *School of Engineering at UNF*

Civil Engineering Professor of the Year, 2007-2008.

### *Institute of Transportation Engineers*

ITE Florida Section Student Best Paper Presentation Award: Awarded by ITE Big Bend Chapter, Tallahassee, Florida, December, 2004.

### *Institute of Transportation Engineers*

ITE Florida Section Student Paper Contest Award: Awarded by ITE Florida Section, Orlando, Florida, January, 2003.

### *Quixote Transportation Safety*

Roadway Safety Essay Contest: Finalist Prize in the 2002 Philip E. Rollhaus, JR. Highway Safety Essay Competition.

### *Institute of Transportation Engineers*

ITE Florida Section Student Essay Contest Award: Awarded by ITE Big Bend Chapter, Tallahassee, Florida, December, 2001.

### *University of Dar Es Salaam*

Certificate for Excellent Performance for being the Best Final Year Project in Civil Engineering in 1998/1999 academic year.

### *University of Dar Es Salaam*

Certificate for Excellent Performance for being the Best Third Year Student in Civil Engineering in 1997/1998 academic year.

### *University of Dar Es Salaam*

Certificate for Excellent Performance for being the Best Second Year Student in Surveying in 1996/1997 academic year.

## GRANTS

1. Alluri, P (PI) [FIU] and **Sando, T** (Co-PI). “*Developing Florida-specific Mobility Enhancement Factors (MEFs) and Crash Modification Factors (CMFs) for TSM&O Strategies*”, Funded by the Florida Department of Transportation, Raj Ponnaluri (Project Manager), October 1, 2018 to March 31, 2020. \$215,000 [UNF portion = \$105,000].
2. **Sando, T** (PI) and Alluri, P (Co-PI)[FIU]. “*Exploring the Modified Procurement Framework for Expediting Florida Connected Vehicle (CV) Deployment*”, Funded by the Florida Department of Transportation, Raj Ponnaluri (Project Manager), February 1, 2018 to February 28, 2019. \$105,000.
3. **Sando, T** (PI), Chuan, C (Co-PI) and Alluri, P (Co-PI)[FIU]. “*Evaluation of Incident Response Improvements for Statewide Application: Learning from the New Regional Traffic Management Center in Jacksonville, FL*”, Funded by the Florida Department of Transportation, Pete Vega (Project Manager), January 1, 2017 to June 30, 2018. \$180,000.
4. **Sando, T** (PI) and Alluri, P (Co-PI)[FIU]. “*Evaluation of Project Processes in Relation to Transportation System Management and Operations (TSM&O)*”, Funded by the Florida Department of Transportation, Raj Ponnaluri (Project Manager), February 1, 2016 to January 31, 2018. \$300,000.
5. **Sando, T. (Co-PI)**: Florida State University (FSU), Florida A&M University (FAMU), and the University of North Florida (UNF). “*Center for Accessibility and Safety for an Aging Population (ASAP)*”, Funded by the U.S. Department of Transportation (USDOT), September, 2013 to September, 2018. \$4,242,300. [ UNF portion = \$424,230]
6. **Sando, T** (PI). “*Operational Analysis of Shared Lane Markings and Green Bike Lanes on Limited Access Roadways*” Funded by the Florida Department of Transportation, Mary Anne Koos (Project Manager), March 26, 2013 to March 31, 2014. \$40,126
7. **Sando, T** (PI) and Hunter, W. (Co-PI). “*The Operational Analysis of Shared Lane Markings on Roadways with Speeds Greater than 35 mph*”, Funded by the Florida Department of Transportation, Mary Anne Koos (Project Manager), June 1, 2009 to March 31, 2013. \$103,556.
8. **Sando, T** (PI). “*Safety Implications of Transit Operator Schedule Policies – Phase II: Evaluation of the Influence of Transit Operator External Driving Hours and Rest Breaks on Transit Safety*”, Funded by the Florida Department of Transportation, Victor Wiley (Project Manager), June 25, 2012 to November 25, 2013. \$100,000.
9. Hillsman, E (PI)[USF], Cevallos, F (Co-PI)[FIU], and **Sando, T** (Co-PI)[UNF]. “*Conserve by Transit II - Carbon Footprints for Florida Transit*”, Funded by the Florida Department of Transportation, Amy Datz (Project Manager), January 15, 2010 to June 30, 2011. \$160,000.
10. **Sando, T. (PI)** “*Developing UNF Campus Emergency Evacuation Plan*”. Funded by the UNF Academic Affairs under “*Transformational Learning Opportunity (TLO) Program and UNF Crisis Management Team*”. January 2, 2011 to August 31, 2011. \$32,077.
11. **Sando, T** (PI). “*Revisions of Transit Stations and Lane Width Projects.*”, Funded by the Florida Department of Transportation, Amy Datz (Project Manager), November 1, 2009 to May 31, 2010. \$24,000.

12. **Sando, T** (PI) and Moses, R. (Co-PI). “*Safety Implications of Transit Operator Schedule Policies*”, Funded by the Florida Department of Transportation, Victor Wiley (Project Manager), October 1, 2009 to September 30, 2010. \$80,000.
13. **Sando, T** (PI) and Moses, R. (Co-PI). “*Operational and Safety Impacts of Restriping Inside Lanes of Urban Multi Lane Curbed Roadways to 11' or Less to Create Wider Outside Curb Lanes for Bicyclists*”, Funded by the Florida Department of Transportation, Mary Anne Koos (Project Manager), June 1, 2009 to November 30, 2010. \$131,605.
14. **Sando, T.** “*Development of Transit Related Grant Proposal with FDOT.*” Funded by the UNF Academic Affairs from Summer Proposal Development Funds. May 1, 2009 to August 30, 2009. \$ 7,500.
15. **Sando, T** and El-Safty, A. “*Mass Transit Field Study: Washington, D.C. Subway System.*” Funded by the UNF Academic Affairs under “Transformational Learning Opportunity” Program. July 1, 2009 to June 30, 2010. \$9,000.
16. **Sando, T** (PI) and Moses, R. (Co-PI). “*Integrating Transit into Complete Streets Design Policies.*”, Funded by the Florida Department of Transportation, Amy Datz (Project Manager), October 24, 2008 to April 31, 2009. \$78,000.
17. **Sando, T** (PI) and Moses, R. (Co-PI). “*Facility Design and Engineering for Intermodal Transportation Connectivity.*”, Funded by the Florida Department of Transportation, Amy Datz (Project Manager), January 1, 2008 to December 31, 2008. \$75,000.

## PUBLICATIONS IN PEER-REVIEWED JOURNALS

1. Kitali, A., Alluri, P., **Sando, T.**, Haule, H., Kidando, E., & Lentz, R. (2018). Likelihood Estimation of Secondary Crashes Using Bayesian Complementary Log-Log Model. *Accident Analysis & Prevention*, 119, 58–67.
2. Haule, H., **Sando, T.**, Lentz, R., Chuan, C., and Alluri, P., “Evaluating the impact and clearance duration of freeway incidents”. Accepted for Publication at the *International Journal of Transportation Science and Technology*, 2018.
3. Haule, H., **Sando, T.**, and Alluri, P. “Impact of co-location of response agencies on the traffic incident timeline”. Accepted for Publication at the *Journal of Advances in Transportation Studies Journal*, Section A 46 (2018) 67–80.
4. Ulak, M. B., Ozguven, E. E., Moses, R., **Sando, T.**, Boot, W., Abdelrazig, Y., and Sobanjo, J., "Assessment of Traffic Performance Measures and Safety Based on Driver Age and Experience: A Microsimulation Based Analysis for an Unsignalized T-Intersection", Accepted for Publication at the *Journal of Transportation and Traffic Engineering*, 2018.
5. Mulokozi, E., Teng, H., Kwigizile, V., Chimba, D., and **Sando, T.** Modeling Dynamics of Vehicle-based Performance Measures of High-Occupancy Vehicle (HOV) and General-Purpose Traffic Systems. *ASCE Journal of Transportation Engineering, Part A: Systems*. Volume 144, Issue 2, February 2018.
6. Kidando, E., Moses, R., **Sando, T.**, and Ozguven, E. E., "Incorporating Travel Time Reliability in Predicting the Likelihood of Severe Crashes on Arterial Highways Using Non-parametric Random-Effect Regression", Accepted for Publication at the *Journal of Traffic and Transportation Engineering*, 2018.

7. Njobelo, G. L., **Sando, T.**, Sajjadi, S., Mtoi, E. T., Sobanjo, J., and Ozguven, E. E., "Safety Evaluation of the Advanced Stop Assist System in a Connected Vehicle Environment", Accepted for Publication at the Transportation Research Record, 2018.
8. Kitali, A., Kidando, E., Martz, P., Alluri, P., **Sando, T.**, Moses, R., and Lentz, R. "Evaluating Factors Influencing the Severity of Three-Plus Multiple-Vehicle Crashes Using Real-Time Traffic Data". Accepted for Publication at the Transportation Research Record, 2018.
9. Kidando, E., Moses, R., **Sando, T.**, and Ozguven, E. E., "Evaluating Recurring Traffic Congestion Using Change Point Regression and Random Variation Markov Structured Model", Accepted for Publication at the Transportation Research Record, 2018.
10. Kitali, A. and **Sando, T.**, Castro, A, Kobelo, D., and Mwakalonge, J "Appraisal of Safety Effects of Pedestrian Countdown Signals to Drivers Using Crash Modification Factors", Accepted for Publication in the ASCE Journal of Transportation Engineering.
11. Kitali, A. and **Sando, T.** "A Full Bayesian Approach to Appraise the Safety Effects of Pedestrian Countdown Signals to Drivers" Journal of Accident Analysis & Prevention. Volume 106, 2017, pp 327-335.
12. Machumu, K., **Sando, T.**, and Mtoi, E., "Establishing the Minimum Routing Decision Distance for Express Lanes", Advances in Transportation Studies, Vol. XLII, Nov. 2017.
13. Lwambagaza, L., **Sando, T.**, Mtoi, E. T., Ozguven, E. E., and Sobanjo, J., "Age-Based Simulation of Merging Behavior at Freeway Merging Ramps", Accepted for Publication in the Transportation Research Record, 2017.
14. Vemulapalli, S. S., Ulak, M. B., Ozguven, E. E., **Sando, T.**, Horner, M., Abdelrazig, Y., and Moses, R., "GIS-based Spatial and Temporal Analysis of Aging-Involved Accidents: A Case Study of Three Counties in Florida", Applied Spatial Analysis and Policy, Volume 10, Issue 4, pp. 537-563, 2017,
15. Kidando, E., Moses, R., Ozguven, E. E., and **Sando, T.**, "Bayesian Non-parametric Model for Estimating Multi-state Travel Time Distribution", Volume 2017, 9 pages, *Journal of Advanced Transportation*, 2017, <http://dx.doi.org/10.1155/2017/5069824>.
16. Kitali, A., **Sando, T.**, Ozguven, E. E., and Moses, R., "Understanding the Factors Associated with Severity of Aging Population-involved Pedestrian Crashes in Florida", *Advances in Transportation Studies: Section B* 42, 2017, pp 85 - 98.
17. Kitali, A., Kidando, E., **Sando, T.**, Moses, R., and Ozguven, E. E., "Evaluating Pedestrian Crash Severity Using Bayesian Complementary Log-log Model for Improved Prediction Accuracy", Accepted for Publication in the *Transportation Research Record*, 2017.
18. Kidando, E., Moses, R., Ozguven, E. E., and **Sando, T.**, "Evaluating Traffic Congestion Using the Traffic Occupancy and Speed Distribution Relationship: An Application of Bayesian Dirichlet Process Mixtures of Generalized Linear Model", *Journal of Transportation Technologies*, 2017, 7, pp 318 - 335.
19. Ozguven, E. E., Horner, M., Kocatepe, A., Marcelin, J. M., Abdelrazig, Y., **Sando, T.**, Moses, R., "Metadata-based Needs Assessment for Emergency Transportation Operations with a Focus on an Aging Population: A Case Study in Florida", *Transport Reviews*, Volume 36, Issue 3, pp. 383-412, 2016, <http://dx.doi.org/10.1080/01441647.2015.1082516>.

20. Angel, M.L., **Sando, T.**, Chimba, D., and Kwigizile, V. “Effects of Rain on Traffic Operations on Florida Freeways”. *Transportation Research Record, Journal of the Transportation Research Board (TRB)*, No. 2440 2015, pp. 51-59.
21. Angel, M.L., Johnston, S., O’Steen, K., Brown, C., **Sando, T.**, “Groundwater Control Issues in Transportation Engineering: A Short Review of Dewatering Methods and Lessons Learned”, *Journal of Engineering Science and Technology Review*. Volume 8 No. 3 2015, pp. 8-13
22. Chimba, D., **Sando, T.**, Kwigizile, V., and Kutela, B. “Modeling School Bus Crashes Using Zero-Inflated Model”. *Journal of Transportation and Statistics*. Volume 10 No. 1, 2014, pp. 1-14.
23. **Sando, T.**, Mbatia, G., and Moses, R. “Lane Width Crash Modification Factors for Curb-And-Gutter Asymmetric Multilane Roadways: Statistical Modeling”. *Journal of Transportation and Statistics*. Volume 10 No. 1, 2014, pp. 61-78.
24. Kwigizile, V., **Sando, T.** and Chimba, D. (2014). Understanding the Role of Alcohol and Drugs on Bicyclist Injury Severity. *Advances in Transportation Studies-An International Journal*, Volume 34, Section A, pp. 43-54.
25. Mtoi, E., Moses, R., and **Sando, T.** Modeling Fatigue-Induced Collision Relative Risk: Implications of Service Hours and Fatigue Management Policies on Transit Bus Operators in Florida. *Journal of Transportation Research Forum*. Volume 52 No. 1, 2013, pp. 69-81.
26. Hillsman, E.L., Cevallos, F., and **Sando, T.** Carbon Footprints for Public Transportation agencies in Florida. *Transportation Research Record*, Volume 2287, Transportation Research Board, 2012, pp. 80-88.
27. **Sando, T.** and Mohr, D. “Planning Sample Sizes for Before-After Accident Comparisons” *Journal of Accident Analysis & Prevention*. Volume 45, 2012, pp 826-827.
28. **Sando, T.**, Chimba, D. Kwigizile, V., and Walker, H “Safety Analysis of Continuous Green through Lane Intersections.” *Journal of Transportation Research Forum*, Volume 50, # 1, 2011, pp 5-17.
29. Kwigizile, V., **Sando, T.** and Chimba, D. Inconsistencies of Ordered and Unordered Probability Models for Pedestrian Injury Severity. *Transportation Research Record*, Volume 2264, Transportation Research Board, 2011, pp. 110-118.
30. Kwigizile, V., Chimba, D., and **Sando, T.** “A Cross-Nested Logit Model for Trip Type-Mode Choice: An Application.” *Advances in Transportation Studies, An International Journal*. Section A 23, 2011, pp 29-40.
31. Chimba, D., **Sando, T.**, and Kwigizile, V. “Effect of Bus Sizes and Operations to Crash Occurrences”. *Journal of Accident Analysis & Prevention*. Volume 42, 2011, pp 2063-2067.
32. Chimba, D. and **Sando, T.** “Multinomial probability assessment of motorcycle injury severities”, *Advances in Transportation Studies, An International Journal*, Section B 21, 2010, pp 73-80.
33. Chimba, D., and **Sando, T.** “The prediction of highway traffic accident injury severity with neuromorphic techniques”. *Advances in Transportation Studies, An International Journal*, Section A 19, 2009, pp 17-26.

34. **Sando, T.** and Moses, R. “The Influence of Intersection Geometrics on the Operation of Triple Left-Turn Lanes”, *ASCE Journal of Transportation Engineering*, Volume 135, # 5, 2009, pp 253-259.
35. Mbatta, G., **Sando, T.**, and Moses, R. “Developing Transit Station Design Criteria with a Focus on Intermodal Connectivity”, *Journal of Transportation Research Forum*, Volume 47, No. 3, 2008, pp 77-91.
36. **Sando, T.**, Mussa, R., Sobanjo, J., and Spainhour, L. “Advantages and Disadvantages of Different Crash Modeling Techniques”, *Journal of Safety Research*, Volume 36, # 5, 2005, pp 485-487. Extracted from conference proceedings.
37. **Sando, T.** and Mussa, R., Sobanjo, J. and Spainhour, L. “Quantification of the Accuracy of Low Priced GPS Receivers for Crash Location,” *Transportation Research Forum*, Summer, 2005, pp. 19-32.
38. **Sando, T.** and Mussa, R. “Site Characteristics Affecting Operation of Triple Left-Turn Lanes,” *Transportation Research Record*, Volume 1852, Transportation Research Board, November 2003, pp. 55-62.

#### **PUBLICATIONS IN PEER-REVIEWED FULL-PAPER REFEREED PROCEEDINGS**

1. Haule, H., **Sando, T.**, Lentz, R., Chuan, C., and Alluri, P. Evaluating the Impact and Clearance Duration of Freeway. Accepted for the *Transportation Research Board's 97th Annual Meeting*, Washington DC, USA, January 7-11, 2018.
2. Kitali, A., Kidando, E., **Sando, T.**, Moses, R., Ozguven, E. Predicting the Likelihood of Aging Pedestrian Severe Crashes Using Dirichlet Random-Effect Bayesian Logistic Regression Model. Accepted for the *Transportation Research Board's 97th Annual Meeting*, Washington DC, USA, January 7-11, 2018.
3. Haule, H., **Sando, T.**, Kitali, A., Angel, M., and Ozguven, E. Influence of Intersection Characteristics on Elderly Driver Crash Involvement. Accepted for the *Transportation Research Board's 97th Annual Meeting*, Washington DC, USA, January 7-11, 2018.
4. Njobelo, G., **Sando, T.**, Sajjadi, S., Mtoi, E., Sobanjo, J., and Ozguven, E. Safety Evaluation of the Advanced Stop Assist System in Connected Vehicle Environment Accepted for the *Transportation Research Board's 97th Annual Meeting*, Washington DC, USA, January 7-11, 2018.
5. Njobelo, G., **Sando, T.**, Sajjadi, S., Mtoi, E., Dulebenets, M., and Sobanjo, J. Enhancing The Green Light Optimized Speed Advisory System to Incorporate Queue Formation. Accepted for the *Transportation Research Board's 97th Annual Meeting*, Washington DC, USA, January 7-11, 2018.
6. Lwambagaza, L., **Sando, T.**, and Ozguven, E. Older Drivers’ Behavior at On-Ramp Merging Areas. Accepted for the *Transportation Research Board's 97th Annual Meeting*, Washington DC, USA, January 7-11, 2018.
7. Kidando, E., Moses, R., **Sando, T.**, and Ozguven, E. E. "Evaluating Recurring Traffic Congestion Using Change Point Regression and Random Variation Markov Structured Model". Accepted for the *Transportation Research Board's 97th Annual Meeting*, Washington DC, USA, January 7-11, 2018.



8. Kitali, A., Kidando, E., Martz, P., Alluri, P., **Sando, T.**, Moses, R., and Lentz, R. "Evaluating Factors Influencing the Severity of Three-Plus Multiple-Vehicle Crashes Using Real-Time Traffic Data". Accepted for the *Transportation Research Board's 97th Annual Meeting*, Washington DC, USA, January 7-11, 2018.
9. Kidando, E., Moses, R., **Sando, T.**, and Ozguven, E. E. " Probabilistic Inference and Prediction of Travel Time Reliability: Empirical Analysis of Associated Factors". Accepted for the *Transportation Research Board's 97th Annual Meeting*, Washington DC, USA, January 7-11, 2018.
10. Machumu, K., **Sando, T.**, Mtoi, E., Sajjadi, S" Improving Simulation Assessment of Express Lanes through Managed Lane Evaluation Output in Vissim". Accepted for the *Transportation Research Board's 97th Annual Meeting*, Washington DC, USA, January 7-11, 2018.
11. Kidando, E., Kitali, Lyimo, S., **Sando, T.**, Moses, R., Kwigizile, V., and Chimba, D. "Exploring the Influence of Rainfall on a Stochastic Evolution of Traffic Conditions" Accepted for the *Transportation Research Board's 97th Annual Meeting*, Washington DC, USA, January 7-11, 2018.
12. Salum, J.H., Kitali, A., Bwire, H. **Sando, T.**, Alluri, P. "Factors Influencing the Severity of Motorcycle Crashes in Dar Es Salaam". Accepted for the *Transportation Research Board's 97th Annual Meeting*, Washington DC, USA, January 7-11, 2018.
13. Ulak, M. B., Ozguven, E. E., Moses, R., **Sando, T.**, Boot, W., Abdelrazig, Y., and Sobanjo, J. "Aging Driver-focused Assessment of Traffic Performance Measures and Safety with a Micro-simulation Based Analysis in Florida". Presented at the *Transportation Research Board's 96th Annual Meeting*, Washington DC, USA, January 8-12, 2017.
14. Kitali, A., Kidando, E., **Sando, T.**, Moses, R., and Ozguven, E. E. "Evaluating Pedestrian Crash Severity using Bayesian Complementary log-log Model for Improved Prediction Accuracy". Presented at the *Transportation Research Board's 96th Annual Meeting*, Washington DC, USA, January 8-12, 2017.
15. Lwambagaza, L., **Sando, T.**, Mtoi, E., Ozguven, E. E., and Sobanjo, J. "Age-based Simulation of Driver Merging Behavior at Freeway Merging Ramps". Presented at the *Transportation Research Board's 96th Annual Meeting*, Washington DC, USA, January 8-12, 2017.
16. Kidando, E., Moses, R., Ozguven, E. E., and **Sando, T.** "Truncated Bayesian Non-parametric Modeling of Multistate Travel Time Distribution". Presented at the *Transportation Research Board's 96th Annual Meeting*, Washington DC, USA, January 8-12, 2017.
17. Kitali, A., **Sando, T.**, Castro, A., and Mwakalonge, J. "Developing Crash Modification Factors to Quantify Impacts of Pedestrian Countdown Signals to Drivers". Presented at the *Transportation Research Board's 96th Annual Meeting*, Washington DC, USA, January 8-12, 2017
18. Kitali, A., Machumu, K., **Sando, T.** "Using Naturalistic Driving Data to Analyze the Effects of Drivers' Age Deceleration on Safety and Travel Time". A podium presentation done at the *Fifth International Naturalistic Driving Research Symposium Blacksburg*, Virginia from August 30-September 1, 2016

19. Matata, F., Kitali, A., **Sando, T.**, Bwire, H. “Operational Characteristics of the Newly Introduced Bus Rapid Transit in Dar es Salaam, Tanzania”. Presented at the *Transportation Research Board's 96th Annual Meeting*, Washington DC, USA, January 8-12, 2017
20. Machumu, K., **Sando, T.**, Mtoi, E., Kitali, A. “Simulation-Based Comparative Performance Measures for I-295 Express Lanes in Jacksonville, Florida”. Presented at the *Transportation Research Board's 96th Annual Meeting*, Washington DC, USA, January 8-12, 2017
21. Machumu, K., **Sando, T.**, Mtoi, E., Kitali, A. “Simulation-Based Determination of Minimum Routing Decision Distance for Managed Lanes: Case Study of I-295 in Jacksonville, Florida”. Presented at the *Transportation Research Board's 96th Annual Meeting*, Washington DC, USA, January 8-12, 2017
22. Omidvar, A., Vanli, A., Ozguven, E. E., Moses, R., Barrett, A., Kocatepe, A., Ozel, H., Gumber, C., and **Sando, T.**, “Effects of Traffic Patterns on the Frequency of Aging Driver-involved Highway Crashes: A Case Study on the Interstate-95 in Florida”, Presented at the *Transportation Research Board's 95th Annual Meeting*, Washington, DC, USA, January 10-14, 2016.
23. Ozguven, E. E., Vanli, A., Barrett, A., Moses, R., Gumber, C., Kocatepe, A., Ozel, H., Omidvar, A., and **Sando, T.**, “Travel Time and Roadway Capacity Reliability for an Aging Population: The Development of a Model Integrating Roadway Traffic with Aging Adults' Driving Behavior”, Presented at the *Gerontological Society of America's 68th Annual Scientific Meeting*, Orlando, FL, USA, November, 18-22, 2015.
24. Gumber, C., Barrett, A., Ozguven, E. E., Moses, R., Vanli, A., Kocatepe, A., Ozel, H., Omidvar, A., and **Sando, T.**, “Explaining Gender Differences in Self-regulated Driving: What Roles Do Health Limitations and Transportation Alternatives Play?”, Presented at the *Transportation Research Board's 95th Annual Meeting*, Washington, DC, USA, January 10-14, 2016.
25. Ozguven, E. E., Horner, M., Kocatepe, A., Marcelin, J. M., Abdelrazig, Y., **Sando, T.**, Moses, R. “Metadata-based Needs Assessment for Emergency Transportation Operations with a Focus on an Aging Population: A Case Study in Florida”. In *Transportation Research Board's 94th Annual Meeting*. Transportation Research Board.
26. Angel, M., **Sando, T.**, Chimba, D., and Kwigizile, V., “The Effects of Rain of Traffic Operations on Florida Freeways”. Published in the Proceedings of the *Transportation Research Board 93<sup>rd</sup> Annual Meeting*, Washington D.C., January 2014.
27. **Sando, T.**, Angel, M., Hunter, W., Chimba, D., and Kwigizile, V. “Operational Analysis of “Sharrows” on Roadways with Narrow Lane Widths”. Published in the Proceedings of the *Transportation Research Board 92nd Annual Meeting*, Washington D.C., January 2013.
28. Chimba, D., Kutela, B., Kwigizile, V., and **Sando, T.**, “Paralleling Influence of Unscheduled and Scheduled Roadwork Characteristics on Traffic Incident Durations”. Published in the Proceedings of the *Transportation Research Board 92nd Annual Meeting*, Washington D.C., January 2013.
29. Kwigizile, V., **Sando, T.** and Chimba, D., “Modeling Bicyclist Injury Severity: Focus on Impact of Alcohol and Drug Use”. Published in the Proceedings of the *Transportation Research Board 91st Annual Meeting*, Washington D.C., January 2012.

30. Hillsman, E.L., Cevallos, F., and **Sando, T.** “Carbon Footprints for Public Transportation Agencies in Florida”. Published in the Proceedings of the *Transportation Research Board 91st Annual Meeting*, Washington D.C., January 2012
31. Mbatta, G., **Sando, T.**, and Moses, R., “Developing Lane-Width Crash Modification Factors for Urban Multilane Roadways with Curb-and-Gutter and Asymmetric Lanes”. Published in the Proceedings of the *Transportation Research Board 91st Annual Meeting*, Washington D.C., January 2012.
32. **Sando, T.**, Angel, M., Mtoi, E., and Moses, R. “Analysis of the Relationship between Operator Driving Hours and Involvement in Preventable Collisions”. Published in the Proceedings of the *Transportation Research Board 90th Annual Meeting*, Washington D.C., January 2011.
33. **Sando, T.**, Mtoi, E., and Moses, R., “Potential Causes of Driver Fatigue: A Study of Transit Bus Operators in Florida”. Published in the Proceedings of the *Transportation Research Board 90th Annual Meeting*, Washington D.C., January 2011.
34. Kwigizile, V., **Sando, T.** and Chimba, D., “Inconsistencies of Ordered and Unordered Probability Models for Pedestrian Injury Severity”. Published in the Proceedings of the *Transportation Research Board 90th Annual Meeting*, Washington D.C., January 2011.
35. **Sando, T.**, Chimba, D. Kwigizile, V., and Moses, R., “Operational Analysis of Interaction between Vehicles and Bicyclists on Highways with Wide Curb Lanes”. Published in the Proceedings of the *Transportation Research Board 90th Annual Meeting*, Washington D.C., January 2011.
36. **Sando, T.**, Chimba, D., Kwigizile, V., and Walker, H., “Safety Characteristics of Unconventional Continuous Green Through Lane Intersections”, Published in the Proceedings of the *Transportation Research Board 89th Annual Meeting*, Washington D.C., January 2010.
37. **Sando, T.**, Mbatta, G., Chimba, D., and Moses, R. “Influence of Narrower Lanes on Bus Sideswipe Crashes”, Published in the Proceedings of the *Transportation Research Board 89th Annual Meeting*, Washington D.C., January 2010.
38. Chimba, D., **Sando, T.**, Kwigizile, V., and Moses, R. “Synchronizing Roadway and Traffic Operations Influencing Bus Crashes”, Published in the Proceedings of the *Transportation Research Board 89th Annual Meeting*, Washington D.C., January 2010.
39. **Sando, T.** and Mussa, R. “Quantification of the effects of Geometric Features on Operational Performance of Triple Left-Turn Intersections”. Published in the Proceedings of the *3rd International Symposium on Highway Geometric Design*, Chicago, Illinois, June 2005.
40. **Sando, T.** and Mussa, R. “Site Characteristics Affecting Operation of Triple Left-Turn Lanes”. Published in the Proceedings of the *Transportation Research Board 82nd Annual Meeting*, Washington D.C., January 2003.

#### **PUBLICATIONS IN ABSTRACT REVIEWED CONFERENCES (Up to Year 2009)**

1. **Sando, T.**, Mbatta G., and Moses, R. “A Proposed Procedure for Developing Transit Station Design Criteria with a Focus on Intermodal Connectivity”. Paper in Proceedings

- of the *Institute of Transportation Engineers 2009 Annual Meeting and Exhibit*. San Antonio, Texas, August 2009.
2. **Sando, T.**, Mbatta, G, and Moses, R. “Development of the Design Handbook for Bus, Rapid Transit & Rail Projects in Florida”. Paper presented at the *Bi-Annual FDOT Design Conference in Orlando, FL*, August, 2008.
  3. **Sando, T.** “The Influence of Daylight Savings Time in PM Peak Travel Pattern on I-95 Corridor in Jacksonville, FL”. Paper presented at the *49th Annual Forum of the Transportation Research Forum*. Fort Worth, TX, March 2008.
  4. **Sando, T.**, Mussa, R., Sobanjo, J., and Spainhour, L. “Implementation of Acyclic Graph Technique in Modeling Highway Safety Data”. Paper to be presented at the *47th Annual Forum of the Transportation Research Forum*. New York, NY, March 2006.
  5. **Sando, T.**, Mussa, R., Sobanjo, J., and Spainhour, L. “Advantages and Disadvantages of Different Crash Modeling Techniques”. Paper presented at the *31st International Traffic Records Forum*. Buffalo, New York, July 2005.
  6. **Sando, T.**, Mussa, R., Sobanjo, J., and Spainhour, L. “GPS Usability in Crash Location”. Paper in Proceedings of the *Institute of Transportation Engineers 2004 Annual Meeting and Exhibit*. Orlando, Florida, August 2004.
  7. Wu, H., **Sando, T.**, Mussa, R., Sobanjo, J., and Spainhour, L. “GPS/GIS Integration for Improving Crash Location Data Accuracy,” Paper in *Proceedings of ESRI International GIS User Conference*, San Diego , California , August 2004.
  8. **Sando, T.**, Mussa, R., Wu, H., Sobanjo, J., and Spainhour, L. “A Cost-Effective GIS Safety Analysis Tool for Improving Highway Safety,” Paper in *Proceedings of ESRI International GIS User Conference*, San Diego, California, August 2004.
  9. **Sando, T.**, Mussa, R., Sobanjo, J., and Spainhour, L. “Development of a Cost-Effective GIS Crash Analysis Tool for Highway Safety Improvement”. Paper presented at the *30th International Traffic Records Forum*. Nashville, Tennessee, July 2004.
  10. **Sando, T.**, Mussa, R., Sobanjo, J., and Spainhour, L. “The Potential of GPS Receivers for Improving the Accuracy of Crash Location Data”. Paper presented at the *30th International Traffic Records Forum*. Nashville, Tennessee, July 2004.
  11. **Sando, T.**, Chimba, D. and Mussa, R. “Macro Analysis of Statewide Interstate System Crash Data - GIS Approach”. Paper presented at the *30th International Traffic Records Forum*. Nashville, Tennessee, July 2004.
  12. **Sando, T.** and Mussa, R. “Factors Affecting Operation of Triple Left Turn Lanes”. Paper in *Proceedings of Institute of Transportation Engineers (ITE) 2003 Technical Conference and Exhibit*, Ft. Lauderdale, FL, March 23-26, 2003.
  13. Mussa, R., **Sando, T.** and Muchuruza, V. “Laboratory Evaluation of Adhesives Used in Installation of Piezoelectric Sensors.” Poster Presentation at the North American Travel Monitoring Exhibition & Conference, Orlando, FL, May 12-16, 2002.

\*A list of the abstract reviewed conferences is not up-to-date because I stopped tracking them about eight years ago and focused on full-paper peer-reviewed articles.

## **PERSONNEL HIRED/SUPERVISED (SUPPORTED BY SPONSORED RESEARCH)**

### **Graduate Research Assistants**

1. Michelle L. Angel
2. Hoang Hung
3. Lina Lwambagaza
4. Angela Kitali
5. Kelvin Machumu
6. *Gwamaka Njobelo\**
7. *Henrick Haule\**
8. *Alican Karaer\**
9. *Richard Lentz\**
10. *Festo Mjogolo\**
11. *Abenezer Demissie\* (funded by TERI and supervised by me)*
12. *Ahmed Alzahrani\* (Funded by Saudi government)*

*\*Current graduate research assistants*

### **Undergraduate Student Assistants**

1. Michelle Angel\*
2. Sean Corcoran
3. Ronald Kareiva
4. Ezekiel Baumgardner
5. Donald C Jones
6. Travis Buschow
7. Hoang Hung\*
8. Quynh Giao Pham
9. Angelique Castro\*
10. Emilie Candela

*\*Later recruited for the MS program*

### **EDUCATIONAL ACTIVITIES**

#### *Courses Taught*

TTE5255: Traffic Signal Systems  
 CGN4931: Special Topic: Traffic Engineering Analysis  
 TTE5205: Operational Analysis of Transportation Facilities  
 TTE6315: Highway Safety Analysis  
 TTE5805: Advanced Highway Geometric Design  
 CGN4931: Special Topics in Civil Engineering: Transportation System  
 TTE5205: Operational Analysis of Transportation Facilities  
 CGN4151: Engineering Management  
 EGN6457: Advanced Research Methods for Engineer  
 EGN3613: Economics for Engineers  
 CGN6933: Advanced Research Methods for Engineers – CGN6933  
 TTE4004: Transportation Engineering – TTE4004  
 TTE4201: Advanced Transportation Engineering – TTE4201

CGN4931 /EEL 4930/ EML 3553: Project Engineering  
 EGN1001: Introduction to Engineering I  
 EGN2009: Introduction to Engineering II  
 CGN3322: Civil Engineering Geomatics  
 CGN3501: Civil Engineering Materials  
 EGN3613: Economics for Engineers  
 CGN4931: Special Topics: Undergraduate Research in Transportation Engineering

*Summary of Instructor Survey Questionnaires*

Term	Course Name	Credit Hours	Enrolled	Overall Instructor Rating
Fall, 2007	TTE 4004: Transportation Engineering	3	34	4.73
	CGN 3322: Civil Engineering Surveying	3	51	3.95
Spring, 2008	TTE 4201: Advanced Transportation Engineering	3	5	4.8
	CGN 3501: Civil Engineering Materials	4	26	4.58
Summer, 2008	CGN 4931: Decision Making for Engineers	2	15	4.27
Fall, 2007	TTE 4004: Transportation Engineering	3	43	4.11
	CGN 3322: Civil Engineering Surveying	3	46	3.54
Spring, 2008	TTE 4201: Advanced Transportation Engineering	3	22	4.83
	CGN 3501: Civil Engineering Materials	4	45	4.33
Summer, 2008	CGN 4931: Decision Making for Engineers	2	15	Data not available
	CGN 3322: Civil Engineering Surveying	3	14	4.62
Fall, 2009	TTE 4004: Transportation Engineering	3	43	4.39
	CGN 3322: Civil Engineering Surveying	3	38	4.46
Spring, 2010	TTE 4201: Advanced Transportation Engineering	3	11	4.75
Summer, 2010	CGN 3322: Civil Engineering Surveying	3	10	4.67
	TTE 4004: Transportation Engineering	3	54	4.67
Fall, 2010	CGN 3322: Civil Engineering Surveying	3	34	4.5
	EGN 2009: Introduction to Engineering II	2	28	3.94*
Spring, 2011	EGN 1001: Introduction to Engineering I	2	45	3.83*
	TTE 4201: Advanced Transportation Engineering	3	20	4.33
Summer, 2011	CGN 6933: Advanced Research Methods	3	11	4.44
	CGN 3322: Civil Engineering Surveying	3	10	4.63
Fall, 2011	EGN 2009: Introduction to Engineering II	2	91	3.74*
	CGN 3322: Civil Engineering Geomatics	3	22	4.78
	TTE 4004: Transportation Engineering	3	41	4.13
	CGN4931: ST: Undergraduate Res. in Transp. Eng.	3	6	5.00
Spring, 2012	CGN6933: Advanced Research Methods	3	8	4.13
	TTE 4201: Advanced Transportation Engineering	3	10	4.43
Summer, 2012	EGN 3613: Economics for Engineers	2	59	4.71
	CGN 4931: Project Engineering	3	12	4.55
	EEL 4930: Project Engineering	3	18	4.78
	ELM 3553: Project Engineering	3	16	4.40
Fall, 2013	EGN 2009: Introduction to Engineering II	2	47	3.81
	CGN 3322: Civil Engineering Geomatics	3	40	4.50
	TTE 4004: Transportation Engineering	3	29	4.52
	CGN6933: Advanced Research Methods	3	22	4.00
Spring, 2014	CGN 4931: Advanced Highway Geometric Design	3	13	4.50
	EGN 3613: Economics for Engineers	3	90	4.18
Summer, 2014	CGN 4931: Project Engineering	3	8	4.50
	EEL 4930: Project Engineering	3	1	4.83
Fall, 2014	EML 3553: Project Engineering	3	24	3.80
	EGN 2009: Introduction to Engineering II	2	45	3.47
	CGN 3322: Civil Engineering Geomatics	4	42	4.04
	TTE 4004: Transportation Engineering	3	29	4.63

Spring,2015	EGN6457: Advanced Research Methods	3	22	4.00
	CGN 4151: Engineering Management	3	12	4.50
	TTE 4201: Advanced Transportation Engineering	3	14	4.40
	TTE 5205: Operational Analysis of Transportation Facilities	3	3	5.00
Summer,2015	CGN 3322: Civil Engineering Geomatics	4	13	4.33
Fall,2015	CGN 6933 Special Topic: Transportation Systems Engineering for the Elderly	3	6	Data not available
	CGN 4931 Special Topic: Transportation Systems Engineering for the Elderly	3	7	Data not available
	EGN6457: Advanced Research Methods	3	15	4.33
	TTE 4004: Transportation Engineering	3	46	4.18
Spring,2016	CGN 3322: Civil Engineering Geomatics (section 1)	4	28	3.40*
	CGN4931: Advanced Highway Design	3	10	4.25
Fall,2016	EGN6457: Advanced Research Methods	3	10	5.00
	TTE 4004: Transportation Engineering	3	36	3.75
	TTE 6315: Highway Safety Analysis	3	7	Data not available
Spring,2017	TTE 5205: Operational Analysis of Transportation Facilities	3	7	Data not available
	TTE 4201: Advanced Transport Engineering	3	14	5.00
	CGN 3322C: Civil Engineering Geomatics (section 1)	4	24	4.18
	CGN 3322C: Civil Engineering Geomatics (section 2)	4	30	4.27

\*Please note that these courses were taught by a group of faculty members (3 to 5 instructors). Due to the instructional structure of these particular courses, evaluations may not reflect individual faculty performance.

## GRADUATE STUDENTS

### Current Thesis Option Students

1. Gwamaka Njobelo – *Expected graduation: Spring 2018*
2. Henrick Haule – *Expected graduation: Spring 2018*
3. Alican Karaer – *Expected graduation: Summer 2018*
4. Festo Mjogolo - *Expected graduation: Fall 2018*
5. Abenezzer Demissie - *Expected graduation: Summer 2018*
6. Ahmed Alzahrani - *Expected graduation: Spring 2019*

### Graduated (As Major Advisor)

1. Michelle Angel, “*The Effects of Rain on Traffic Safety and Operations on Florida Freeways*”, December 2014
2. Hung Hoang, “*Safety Implications of Transit Operator Schedule Policies*”, April 2016
3. Lina A. Lwambagaza, “*Modeling Older Driver Behavior on Freeway Merging Ramps*”, July 2016
4. Angela E. Kitali, “*Bayesian Approach on Quantifying the Safety Effects of Pedestrian Countdown Signals to Drivers*”, May 2017
5. Kelvin Machumu, “*Enhancing the Existing Microscopic Simulation Modeling Practice for Express Lane Facilities*”, July 2017

### Graduated (As Committee Member)

1. Killian Paul Eckert, May 2013
2. Luis Humberto Montoya, April 2014
3. M. Hunter Bradesen, April 2015

4. Andrea P. Toro, June 2015
5. Carolina Burnette, July 2016

*Transformational Learning Opportunities (TLO) Involvement*

Leader for TLO project titled “Developing UNF Campus Emergency Evacuation Plan.” Spring and summer semesters, 2011

Leader for TLO project titled “Mass Transit Field Study: New York and Washington, D.C. Subway Systems.” Spring semester, 2010.