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IOWA STATE UNIVERSITY
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EDUCATION

- PhD, Civil Engineering, Iowa State University
- MS, Agricultural Engineering, Iowa State University
- BEng, Electronic Engineering, University of NIGERIA, Nsukka

PROFESSIONAL EXPERIENCE

- Research Scientist, Institute for Transportation, Iowa State University, 2020–present
- Adjunct Assistant Professor, Department of Civil, Construction and Environmental Engineering, ISU, 2020–present
- Transportation Research Specialist/Geographic Information Systems (GIS) Analyst, Center for Transportation Research and Education, InTrans, ISU, 2008–2020

RESEARCH PROJECTS (Co-PI)

- *Alternative Funding for Iowa Road*, Iowa Highway Research Board, Iowa DOT
- *Pavement Management Support: Iowa DOT and Local Agencies*, Iowa DOT
- *Implementation of the Iowa DOT Pavement Management Optimization Model,* Iowa DOT
- *Planning, Implementation, and Operation of the Iowa Pavement Management Program,* Iowa DOT
- *The Actual Cost of Food Systems on Roadway Infrastructure*, Leopold Center, ISU

OTHER RESEARCH PROJECTS

- *Guide for Preventing and Mitigating the Risk of Bridge and Tunnel Strikes by Motor Vehicles,* National Cooperative Highway Research Program, Transportation Research Board
- *Unreported Deer Crashes on Major Iowa Highways*, Iowa DOT
- *US Road Assessment Program (usRAP) Evaluation of Interstate Truck Routes,* MRI Global
- *Concrete Overlay Performance on Iowa's Roadways,* National Concrete Pavement Technology Center
- *Local Road Safety Plans,* Kimerly-Horn and Associates
- *Iowa DOT District Safety Plans,* Kimerly-Horn and Associates
- *High Friction Surface Treatment for High Crash Locations: Phase II,* Iowa DOT
- *Naturalistic Driving Study: Development of the Roadway Information Database*, Strategic Highway Research Program, Federal Highway Administration
- *Safety and Mobility Impacts of Winter Weather: Phase 1*, Iowa DOT
- *Pavement Management Performance Modeling: Evaluating the Existing PCI Equations*, Iowa DOT
- *Development of Railroad Highway Grade Crossing Consolidation Rating Formula.* Iowa DOT

- *Statewide Heavy-Truck Crash Assessment,* Iowa DOT
- *Safety and Mobility Impacts of Winter Weather Phase 1*, Midwest Transportation Consortium
- *Infrastructure Impacts of Iowa's Changing Economy*, Iowa Highway Research Board, Iowa DOT
- *A Transportation Safety Planning Tool for the City of Ames*, Midwest Transportation Consortium
- *Evaluation of Iowa's Driver Improvement Program*, Midwest Transportation Consortium
- *Asset Management: A Performance Perspective*, Midwest Transportation Consortium
- *Enhancing Motorcycle Conspicuity Awareness in Iowa*, Iowa DOT
- *Pavement Marking and Safety*, Iowa Highway Research Board, Iowa DOT
- *Evaluation for Effective Shielding of Bridge Piers*, Iowa Highway Research Board, Iowa DOT
- *Local Agency Pavement Management System*, Iowa DOT
- *International Road Assessment Program*, MRI Global

SELECTED PUBLICATIONS

- Nlenanya, I. and Smadi, O. 2021. Database Design and Integration Framework for Risk Management for State Highway Agencies, TRR*: Journal of the Transportation Research Board.*
- Nlenanya, I. and Smadi, O., 2021. A Risk Management Database Framework Implementation for Transportation Asset Management. *CivilEng*, Vol. 2, No. 1, pp. 193–213.
- Chen, Y. A., Ceylan, H., Nlenanya, I., Kaya, O., Smadi, O. G., Taylor, P. C., Kim, S., Gopalakrishnan, K. and King, D. E. 2020. Long-term performance evaluation of Iowa concrete overlays. *International Journal of Pavement Engineering*, pp. 1–12.
- Nlenanya, I. 2019. "GIS-based risk management database integration and implementation framework for transportation agencies," Doctoral Dissertation*.* Iowa State University, Ames IA.
- Nlenanya, I., and Smadi, O. 2018. Risk Management and Data Needs: A State of the Practice Survey of State Highway Agencies. *TRR: Journal of the Transportation Research Board*.
- Alhasan, A., Nlenanya, I., Smadi, O. and MacKenzie, C. 2018. Impact of Pavement Surface Condition on Roadway Departure Crash Risk in Iowa. *Infrastructures*, Vol. 3, No. 2, 14 pp.
- Bektas, F., Smadi, O., and Nlenanya, I. 2015. Pavement Condition: A new approach for the Iowa DOT. *Proc., 94th Transportation Research Board Annual Meeting*, Washington, DC, January 11–15.
- Pyrialakou, V. D., Nlenanya, I., and Gkritza, K. 2014. Passenger Transportation Networks and Urbanization Level: Comparison of Classification Schemes. *Proc., 93rd Transportation Research Board Annual Meeting*, Washington, DC, January 12–16.
- Gkritza, K., Nlenanya, I., Jiang, W., Sperry, R., and Smith, D. 2012. Bioeconomy and Transportation Infrastructure Impacts. *Green Energy and Technology: Bioenergy and Bioproducts*, SpringerVerlag.
- Gkritza, K., Nlenanya, I., Jiang, W., Sperry, R., and Smith, D. 2011. Infrastructure Impacts of Iowa's Renewable Energy. *TRR: Journal of the Transportation Research Board*, Vol. 2205, pp. 238–246.
- Nlenanya, I. 2008. *Building an Environmental GIS Knowledge Infrastructure for Development in Sub-Saharan Africa in Data Mining Applications for Empowering Knowledge Societies*. Hershey PA: IDEA Group Inc.
- Nlenanya, I. 2005. "Knowledge Discovery Interface for Environmental Science Applications," Master's Thesis. Iowa State University, Ames, IA.

TECHNICAL REPORTS

- Smadi, O., Hawkins, N., Hans, Z., Bektas, B. A., Knickerbocker, Nlenanya, I., Souleyrette, R., and Hallmark, S. 2015. *Naturalistic Driving Study: Development of the Roadway Information Database*, No. SHRP 2 Report S2-S04A-RW-1.
- Hans, Z., Albrecht, C., Johnson, P. M., and Nlenanya, I. 2015. Nlenanya. *Development of Railroad Highway Grade Crossing Consolidation Rating Formula.* InTrans Project Report #104.
- Hans, Z., Gkritza, K., Cerwick, D., Huang, Y., and Nlenanya, I. 2014. *Statewide Heavy-Truck Crash Assessment,* InTrans Project Report #68.
- Gao, J., Gkritza, K., Smadi, O., Hawkins, N., Bektas, B. A., and Nlenanya, I. 2012. *Asset Management and Safety: A Performance Perspective,* Project No. 2009-01.
- Hans, Z., Hawkins, N., Nlenanya, I., and Lavrenz, S. 2012. *Safety Impacts of Winter Weather on Iowa's Rural Primary Highways*, No. WM-STW12-113A.
- Hans, Z., Hawkins, N., and Nlenanya, I. 2011. *Safety and Mobility Impacts of Winter Weather–Phase I.* Institute for Transportation, Iowa State University, Ames, IA.
- Smadi, O., Nlenanya, I., Ghandour, M., and Lopez Barrera, S. 2011. *The Actual Cost of Food Systems on Roadway* Infrastructure, InTrans Project Report #25.
- Gkritza, K., Smith, D. E., Sperry, R. B., Nlenanya, I., and Jiang, W. *Iowa's Renewable Energy and Infrastructure Impacts*, IHRB Project No. TR-593. Iowa Department of Transportation, Ames, IA.
- Smadi, O., Hawkins, N., Nlenanya, I., and Bektas, B. A. 2010. *Pavement Markings and Safety,* IHRB Project No. TR-580. Institute for Transportation, Iowa State University, Ames, IA.
- McDonald, T. J., Nlenanya, I., and Z. Hans. 2009. *Analysis of Safety Benefits for Shielding of Bridge Piers.* Institute for Transportation, Iowa State University, Ames, IA.

RECENT CONFERENCE PRESENTATIONS

- Nlenanya, I. and Smadi, O. 2020. Database Design and Integration Framework for Risk Management for State Highway Agencies. *Proc., 99th Transportation Research Board Annual Meeting*, Washington, DC, January 12–16.
- Bou-Saab, G., Nlenanya, I., and Alhasan, A. 2019. Correlating Visual–Windshield Inspection Pavement Condition to Distresses from Automated Surveys Using Classification Trees. *Proc., 12th International Conference on Low-Volume Roads*, Kalispell, Montana, September 15–18, 589 pp.
- Nlenanya, I. 2018. Risk Management and Data Needs: A state of the practice survey of state highway agencies. *Proc., 97th Transportation Research Board Annual Meeting*, Washington, DC, January 7–11.
- Nlenanya, I. (Poster, Co-presenter). 2017. Quality Assessment of Pavement Roughness Data using Conditional Inference Trees & Data Visualization Techniques. *Proc., 96th Transportation Research Board Annual Meeting*, Washington, DC, January 8–12.

PROFESSIONAL AFFILIATIONS AND HONORS

- Member, Transportation Research Board AKD30 Low Volume Road Committee
- Alpha Epsilon, The Honor Society of Agricultural, Food, and Biological Engineering
- Associate Member, American Society of Civil Engineers