

SHERIF MOUSTAFA GAWEESH, Ph.D., P.E.

+1 (307) 761-3039

164 Horseshoe Ln, Apt.732, Laramie, WY 82072

sgaweesh@uwyo.edu , smtkgaweesh@gmail.com

www.sherifgaweesh.com

PROFILE

- Postdoctoral research associate in Civil and Architectural Engineering; deputy director of the driving simulator lab (WyoSafeSim).
- Over 13 years of practical and research experiences in the field of transportation and traffic engineering with a focus on traffic safety; research interests include traffic safety analysis, Connected Vehicle (CV), Intelligent Transportation Systems (ITS), and Big data analysis.
- Strong writing experience gained by co-authoring several high profile scientific manuscripts in different prestigious peer-reviewed journals.
- Possess solid teaching experience for graduate and undergraduate level classes.
- Wide experience in geometric roadway design; worked in industry for more than seven years as a roadway designer engineer / a senior roadway design engineer in Egypt.

EDUCATION

Ph.D. in Transportation Engineering, graduated in 2018

- Thesis: "The Impact of Freight Trucking on Traffic Safety: Are We Ready for the Era of Connected And Automated Vehicles?"

University of Wyoming (UW), Laramie, WY- USA

M.Sc. in Transportation Engineering, graduated in 2013

- Thesis: "The Effect of Resilient Modulus on Flexible Pavement Layers Constructed on Fine Soil"

Shoubra Faculty of Engineering, University of Banha, Cairo, Egypt

B.Sc. in Civil Engineering, graduated in 2006

- Graduated with a degree of Honor (Equivalent to cum laude)

Shoubra Faculty of Engineering, University of Banha, Cairo, Egypt

RESEARCH EXPERIENCE

University of Wyoming (UW), Laramie, WY

Sept 2018-Present

Dept. of Civil and Architectural Engineering

Postdoctoral Research Associate / Deputy Director of the Driving Simulator Lab (WyoSafeSim):

- Lead the research team in conducting research projects to deliver and achieve the project goals. Mentor, assign tasks, and follow-up with the team.
- Participate in and write proposals as co-principle investigator and as the main principle investigator. The proposals are mainly submitted to the WYDOT and the Mountain Plains Consortium (MPC).
- For WyoSafeSim Deputy Director: program and develop driving simulator scenarios, recruit participants, run the experiment, collect, reduce and process simulator data, conduct analysis, and conclude and provide recommendations on the developed experiment. The WyoSafeSim includes two driving simulators, an open cockpit passenger car and a semi-trailer.

Advisor and Instructor for Traffic Engineering-Operation class:

- Construct and develop course materials, in which state-of-art topics are introduced and discussed in the course to keep students on the cutting edge.
- Interactive learning methods are adopted in the class to ensure a productive and a successful course.

Overall, the main responsibilities of each position are the following;

Postdoctoral Researcher:

- Write and submit manuscripts to journals related to transportation research.
- Write technical reports, offer conference presentations.
- Develop and submit proposals to apply for grants.
- Mentor Ph.D. and M.S. transportation researchers.
- Identify, process, and analyze datasets related to traffic safety (crash data demographics, roadway characteristics data, weather data, etc.).
- Run field data collection.

SHERIF MOUSTAFA GAWEESH

RESEARCH EXPERIENCE, continued

Deputy Director of the WyoSafeSim:

- Operate the driving simulator lab.
- Develop and design the driving simulator experiments.
- Develop and design the testing scenarios using Internet Scene Assembler (ISA) software and JavaScript.
- Recruit subjects and conduct the driving experiments.
- Collect, reduce, and analyze the data from the driving simulator.

Class Instructor:

- Develop class notes, exams, quizzes, in-class problems, and assignments.
- Construct interactive learning materials.
- Support students in the learning process.
- Provide a friendly environment in class to ensure a successful semester.

PROFESSIONAL ENGINEERING EXPERIENCE

HAMZA Associates, Cairo, Egypt

Sept 2006 - Jan 2010

Senior Highway Engineer, Design Projects:

“Upgrade of Cairo-Alexandria-Matrouh desert road from the Cairo toll station till Matrouh, Egypt”

- Prepared the conceptual design report for the project.
- Conducted the preliminary geometric design of the 420 km main road 420 km, two service roads, and 32 interchanges.
- Prepared the detailed design drawings for the freeway geometry of the freeway and the interchanges.

“Upgrade Cairo-Alexandria Road from km 21 to km 26, Egypt”

- Conducted the conceptual upgrade design of the freeway.
- Provided conceptual design for the Khan al Azizia interchange.
- Conducted the preliminary geometric design of the roadway and the Interchange.
- Prepared the detailed design drawings for the freeway of the roadway and the Interchange.

“Upgrade Cairo-Alexandria Road from Alexandria toll station to Al-Tameer Freeway, Egypt”

- Conducted the conceptual upgrade design of the freeway.
- Conducted the preliminary geometric design of the roadway.
- Prepared the detailed design drawings for the freeway of the roadway.

“Sohar International Airport, Sultanate of Oman”

- Conducted the preliminary geometric design of the runways and taxiways.
- Prepared the detailed design drawings for the runways and taxiways.

“Modifying and redesigning of Tagoraa interchange in Beyar El Osta Melad, Libya”

- Conducted the conceptual upgrade design of the interchange.
- Conducted the preliminary geometric design of the interchange.
- Prepared the detailed design drawings for the freeway of the interchange.

“Designing and grading the new Egyptian airport cargo area, Egypt”

- Conducted the preliminary design of the airport cargo area.
- Prepared the detailed design drawings and final cargo grading levels.

POLARIS International Industrial Parks (PIIP), Dokki, Giza, Egypt

June 2009 - Dec 2012

Transportation and Highways Consulting Engineer, Design Projects

POLARIS International Industrial Park in 6th of October city, Egypt

- Provided the conceptual design for the road network of the industrial park.
- Prepared the design drawings for the road network of the industrial park.
- Participated in the shop drawing preparation for the road network.
- Prepared detailed signage plan for the road network.
- Reviewed technical and financial reclaim documents of the main contractor.
- Supervised road construction materials testing.

SHERIF MOUSTAFA GAWEESH

PROFESSIONAL ENGINEERING EXPERIENCE, continued

POLARIS AL ZAMIL Industrial Park (PZIP) in 6th of October city, Egypt.

- Provided the conceptual design for the road network of the industrial park.
- Prepared the design drawings for the road network of the industrial park.
- Participated in the shop drawing preparation for the road network.
- Prepared detailed signage plan for the road network.
- Reviewed technical and financial reclaim documents of the main contractor.
- Supervised road construction materials testing.

Head of Highway Engineering and Transportation Systems, Egypt June 2013 - Aug 2014
Senior Consulting Engineers – Extending and upgrading several cities (e.g. Al Buqayq, Al Nairia, Al Mubarraz, Shaqra) in KSA.

- Led and supervised the design team for the preparation of preliminary and design drawings for the road network of the developed cities.
- Led and supervised the design team for the preparation of tender documents.
- Prepared progress reports.
- Prepared detailed work plan and project schedule.

TEACHING EXPERIENCE

University of Wyoming, Laramie, WY

Sept 2018 - Present

Department of Civil and Architectural Engineering –

- Teacher for Geometric Design class, Jan 2020-May 2020: class has 20 students, 4 graduate students and 16 undergraduate students.
- Teacher for Traffic Engineering Operation class, Sept 2019-Dec 2019: class has 25 students, 5 graduate students and 20 undergraduate students.
- Teaching Assistant for Geometric Design class, Sept 2018-Dec 2018: class had 15 undergraduate students and 8 graduate students. The mean value for the course evaluation sheet was 4.08 out of 5. A quote from one of the student's evaluation notes was "...**both Ahmed and Sherif were very knowledgeable about this subject and did a good job answering my questions.**"

Banha University, Cairo, Egypt

Mar 2007 - Aug 2014

Civil Engineering Department, Shoubra Faculty of Engineering –

Graduate Teaching Assistant for undergraduate student courses:

Graduation Project - Transportation Eng.	5th Yr. Students
Transportation Planning	5th Yr. Students
Geometric Design	4th Yr. Students
Traffic Operation	4th Yr. Students
Pavement Materials	4th Yr. Students
Pavement Design	3rd Yr. Students
Structural Analysis (1)-A	2nd Yr. Students
Computer Applications (1)	2nd Yr. Students

AWARDS, LEADERSHIPS, ORGANIZATIONAL SERVICES

Winner of the first "Student of the Year" award for the Institute of Transportation Engineers (ITE) CO/WY Section, 2018: <http://www.cowyite.org/newsletters/2018%20April.pdf> and <http://www.uwyo.edu/ceas/news/2018/180703/index.html>

Islamic Center of Laramie, Vice President Jan 2017-Jan 2019

Institute of Transportation Engineers UW Chapter, President 2017-2018, Treasurer 2016-2017

INVOLVEMENT IN FUNDED PROJECTS

1. (2016-2019) Application Development and Participant Training for Wyoming Connected Vehicle Pilot Deployment Program, U.S. DOT – the Federal Highway Administration (FHWA).
2. (2016-2019) Performance Measures and Independent Evaluation Support for Connected Vehicle Pilot Deployment Program, U.S. DOT – the Federal Highway Administration (FHWA).
3. (2016-2018) Driver Performance and Behavior in Adverse Weather Conditions: An Investigation Using the SHRP2 Naturalistic Driving Study Data, U.S. DOT – the Federal Highway Administration (FHWA).

SHERIF MOUSTAFA GAWEESH

INVOLVEMENT IN FUNDED PROJECTS, continued

4. (2017-2018) Hazardous Materials Flow Study, Sweetwater County Emergency Management Agency.
5. (2017-2018) Hazardous Materials Flow Study, Natrona County Emergency Management Agency.
6. (2016-2017) Developing an Automated Hazardous Materials Placard Recognition System, Wyoming Homeland Security.
7. (2015-2018) Calibration and Validation of the Crash Modification Factors – Highway Safety Manual (Part D) - in Wyoming, University Transportation Centers (UTC)/ Mountain Plain Consortium (MPC).
8. (2015-2017) Calibrating Crash Modification Factors for Wyoming-Specific Conditions: Application of the Highway Safety Manual - Part D, Wyoming Department of Transportation (WYDOT).
9. (2015-2016) Hazardous Materials Flow Study, Laramie County Emergency Management Agency, Wyoming Office of Homeland Security.
10. (2015-2016) Exploring an Effective Field Data Collection Methodology for Hazardous Materials Transportation, Albany County Emergency Management Agency.
11. (2015) Wyoming Commodity Flow Study, Gillette and Douglas County Emergency Management Agency, Wyoming Office of Homeland Security.
12. (2014-2019) Safety Effectiveness of Regulatory Headlights Signs in Wyoming (Phase-I and II). Wyoming Department of Transportation (WYDOT).

SELECTED PUBLICATIONS

► Refereed Journal Publications

Sherif Gaweesh, Mohamed Ahmed, Annalisa Piccorelli, “Developing Crash Prediction Models Using Parametric and Nonparametric Approaches for Rural Mountainous Freeways: A Case Study on Wyoming Interstate 80”. *Journal of Accident Analysis and Prevention* (2019).

<https://doi.org/10.1016/j.aap.2018.10.011>

Guangchuan Yang, Sherif Gaweesh, Mohamed Ahmed, “Development and Assessment of a Connected Vehicle Training Program for Truck Drivers”. *Journal of Transportation Research Record* (2019). <https://doi.org/10.1177/0361198119827904>

Guangchuan Yang, Mohamed Ahmed, and Sherif Gaweesh. “Impact of Variable Speed Limit in a Connected Vehicle Environment on Truck Driver Behavior Under Adverse Weather Conditions: A Driving Simulator Study”. *Journal of Transportation Research Record* (2019).

<https://doi.org/10.1177/0361198119842111>

Mohamed Ahmed, Sherif Gaweesh, and Guangchuan Yang. “A Preliminary Investigation into the Impact of Connected Vehicle Human-Machine Interface on Driving Behavior”. (*International Federation of Automatic Control, IFAC* (2019). <https://doi.org/10.1016/j.ifacol.2019.01.051>

Sherif M. Gaweesh, and Mohamed M. Ahmed. “Evaluating the safety effectiveness of a weather-based variable speed limit for a rural mountainous freeway in Wyoming.” *Journal of Transportation Safety & Security* (2019): <https://doi.org/10.1080/19439962.2019.1583707>

Khaled Shaaban, Sherif Gaweesh, and Mohamed Ahmed. “Characteristics and Mitigation Strategies for Cell Phone Use While Driving Among Young Drivers in Qatar”. *Journal of Transport and Health* (2018). <https://doi.org/10.1016/j.jth.2018.02.001>

Mohamed M Ahmed, Sherif Gaweesh, Khaled Ksaibati, Md Hamidur Rahman, “Assessing the impact of the compliance rate and daytime running lights penetration on the safety effectiveness of regulatory headlight use signs”. *Journal of Sustainable Development of Transport and Logistics* (2018). <http://dx.doi.org/10.14254/jsdtl.2018.3-1.1>

Ali Darzi, Sherif Gaweesh, Mohamed Ahmed, Domen Novak. “Identifying the causes of drivers’ hazardous states using driver characteristics, vehicle kinematics and physiological measurements”. *Journal of Frontiers in Neuroscience* (2018). <https://doi.org/10.3389/fnins.2018.00568>

Mohamed Ahmed, Guangchuan Yang, Sherif Gaweesh, “Assessment of Drivers’ Perceptions of Connected Vehicle Human Machine Interface for Driving under Adverse Weather Conditions: Preliminary Findings from Wyoming” *Journal of Intelligent Transportation Systems: Technology, Planning, and Operations*. In Press

SHERIF MOUSTAFA GAWEESH

SELECTED PUBLICATIONS, continued

► Refereed Conference Publications

Sherif Gaweesh, Mohamed Ahmed, "Exploring an Effective Field Data Collection Methodology for Hazardous Materials Transportation: A Wyoming Case Study". Proceedings of the 95th Transportation Research Board Annual Meeting 2016.

Mohamed Ahmed, Sherif Gaweesh, Khaled Ksaibati, Md. Hamidur Rahaman, "Investigating the Impact of the Compliance Rate on the Safety Effectiveness of Regulatory Headlight Signs in Wyoming". Proceedings of the 95th Transportation Research Board Annual Meeting 2016.

Sherif Gaweesh and Mohamed Ahmed. "Examining Driver Preference for Regulatory Headlight Use Signs Design in Different Weather Conditions: A Driving Simulator Study". Delft University of Technology (TU Delft). Road Safety & Simulation International Conference, 2017.

Sherif Gaweesh and Mohamed Ahmed. "Examining Driver Preference for Regulatory Headlight Use Signs Design in Different Weather Conditions: A Driving Simulator Study". Proceedings of the 97th Transportation Research Board Annual Meeting 2018.

Ali Ghasemzadeh, Mohamed Ahmed, and Sherif Gaweesh. "Multivariate Adaptive Regression Splines and Logistic Regression Models to Identify the Impact of Rainy Weather on Driver Lane-Keeping Performance Considering Driver Demographics and Roadway Characteristics Using SHRP 2 Naturalistic Driving Data". Proceedings of the 97th Transportation Research Board Annual Meeting 2018.

Sherif Gaweesh, Irfan Ahmed, and Mohamed Ahmed. "Evaluating the Safety Effectiveness of Variable Speed Limit: Before–After Study Utilizing Multivariate Adaptive Regression Splines". Proceedings of the 97th Transportation Research Board Annual Meeting 2018.

Sherif Gaweesh, Irfan Ahmed, Mohamed Ahmed, Annalisa Piccorelli. "Parametric and Nonparametric Approaches in Developing Crash Prediction Models for Rural Mountainous Freeways: A Case Study in Wyoming". Proceedings of the 97th Transportation Research Board Annual Meeting 2018.

Sherif Gaweesh, Mohamed Ahmed, "Exploring Factors Affecting Crash Severity for Large Trucks on Rural Mountainous Freeways using a Bayesian Logistic Regression: A Case Study on Wyoming Interstate 80". Proceedings of the 98th Transportation Research Board Annual Meeting 2019.

Rachael Larson, Thomas Peel, Mohamed Ahmed, Sherif Gaweesh, "Quantifying the Safety Effectiveness of Snow Fence Implementations Based on Crash Severity and Snow Fence Type Utilizing Contemporary Statistical Analysis Methods". Proceedings of the 98th Transportation Research Board Annual Meeting 2019.

Guangchuan Yang, Mohamed Ahmed, Sherif Gaweesh, "Impact of Variable Speed Limit in a Connected Vehicle Environment on Truck Driver Behavior Under Adverse Weather Conditions: A Driving Simulator Study". Proceedings of the 98th Transportation Research Board Annual Meeting 2019.

Mohamed Ahmed, Guangchuan Yang, Sherif Gaweesh. "Assessment of Connected Vehicle Human Machine Interface Using a High-Fidelity Driving Simulator: Preliminary Findings from the Wyoming Connected Vehicle Pilot Deployment Program". Proceedings of the 98th Transportation Research Board Annual Meeting 2019.

Omar Raddaoui, Mohamed Ahmed, Sherif Gaweesh, "Evaluation of Connected Vehicle Real-Time Weather and Work Zone Warnings on the Behavior of Truck Drivers: A Driving Simulator Study". Proceedings of the 98th Transportation Research Board Annual Meeting 2019.

Guangchuan Yang, Sherif Gaweesh, Mohamed Ahmed, "Development and Assessment of A Connected Vehicle Training Program for Truck Drivers". Proceedings of the 98th Transportation Research Board Annual Meeting 2019.

SHERIF MOUSTAFA GAWEESH

SELECTED PUBLICATIONS, continued

Mohamed Ahmed, Guangchuan Yang, Sherif Gaweesh, Rhonda Young, Fred Kitchener, "Performance Measurement and System Evaluation of Wyoming Connected Vehicle Pilot Deployment Program: Planning and Pre-Deployment Conditions". Proceedings of the 98th Transportation Research Board Annual Meeting 2019.

► Publications Under Revision

Sherif Gaweesh and Mohamed Ahmed, "Investigating Factors Affecting Crash Severity for Large Trucks on a Rural Mountainous Interstate Road: A Case Study on Wyoming Interstate 80". Journal of Safety Science.

Sherif Gaweesh and Mohamed Ahmed. "Examining Driver Preference for Regulatory Headlight Use Signs Design in Different Weather Conditions: A Driving Simulator Study". Journal of International Association of Traffic and Safety Science (IATSS).

Omar Raddaoui, Sherif Gaweesh, and Mohamed Ahmed. "Assessment of the Effectiveness of Connected Vehicle Weather and Work Zone Warnings in Improving Truck Driver Safety". Journal of International Association of Traffic and Safety Science (IATSS).

Khaled Shaaban, Sherif Gaweesh, and Mohamed Ahmed. "Investigating In-Vehicle Distracting Activities and Crash Risks for Young Drivers Using Structural Equation Modeling". Transportation Research Part F: Psychology and Behaviour.

Sherif Gaweesh and Mohamed Ahmed. "Utilizing Structural Equation Model to Determine Latent Factors of Single and Multi-Truck Related Crashes on Interstate Roads". Transportation Research Board 2020 for possible presentation and publication.

Irfan Ahmed, Sherif Gaweesh, and Mohamed Ahmed. "Exploration Of Hazardous Material Truck Crashes On Wyoming's Interstate Roads Using A Novel Hamiltonian Monte Carlo Markov Chain Bayesian Inference". Transportation Research Board 2020 for possible presentation and publication.

Biraj Subedi, Sherif Gaweesh, Guangchuan Yang, and Mohamed Ahmed. "Connected Vehicle Technology To Protect The Safety Of Highway Patrol Troopers: Training Framework And Lessons Learned From The Wyoming Connected Vehicle Pilot". Transportation Research Board 2020 for possible presentation and publication.

Guangchuan Yang, Mohamed Ahmed, Sherif Gaweesh, and Eric Adomah. "Connected Vehicle Real-Time Traveler Information Messages For Freeway Speed Harmonization Under Adverse Weather Conditions: Trajectory-Level Analysis Using Driving Simulator". Transportation Research Board 2020 for possible presentation and publication.

Waleed Aladelat, Sherif Gaweesh, Milan Zlatovic, and Raoul. "Assessment of Operational Benefits of Connected and Automated Vehicles in Congested Facilities: A Case Study of the San Francisco Bay Bridge". Transportation Research Board 2020 for possible presentation and publication.

► Technical Reports

Sherif Gaweesh and Mohamed Ahmed "Wyoming Hazardous Materials Commodity Flow Study". Wyoming Office of Homeland Security (WOHS) Report, 2015.

Mohamed Ahmed, Khaled Ksaibati, Sherif Gaweesh, Hamidur Rahman, Ali Ghasemzadeh, and Anemone Kasasbeh "Safety Effectiveness of Regulatory Headlight Signs in Wyoming - Phase 1". Wyoming Department of Transportation (WYDOT) Report, 2016.

Sherif Gaweesh and Mohamed Ahmed "Wyoming Commodity Flow Study for Albany County". Wyoming Office of Homeland Security (WOHS) Report, 2016.

SHERIF MOUSTAFA GAWEESH

SELECTED PUBLICATIONS, continued

Sherif Gaweesh and Mohamed Ahmed "Wyoming Commodity Flow Study for Laramie County". Wyoming Office of Homeland Security (WOHS) Report, 2016.

Mohamed Ahmed, Ali Ghasemzadeh, Hesham Eldeeb, Sherif Gaweesh, Joshua Clapp, Khaled Ksaibati, and Rhonda Young "Driver Performance and Behavior in Adverse Weather Conditions: An Investigation Using the SHARP2 Naturalistic Driving Study data -Phase 1", US DOT, the Federal Highway Administration (FHWA), Report, 2016.

Mohamed Ahmed, Sherif Gaweesh, Julfiker Hossain, Sadia Sharmin, and Thomas Peel "Calibrating Crash Modification Factors for Wyoming-Specific Conditions: Application of the Highway Safety Manual - Part D". Wyoming Department of Transportation (WYDOT), Report, 2017.

Sherif Gaweesh, Irfan Ahmed, and Mohamed Ahmed "Wyoming Commodity Flow Study for Natrona County". Wyoming Office of Homeland Security (WOHS) Report, 2017.

Sherif Gaweesh, Irfan Ahmed, and Mohamed Ahmed "Wyoming Commodity Flow Study for Sweetwater County". Wyoming Office of Homeland Security (WOHS) Report, 2017.

REFERENCES

Mohamed Ahmed, Ph.D., P.E.

Associate Professor of Civil Engineering

Director of the UW driving simulator (WYOSIM) lab

University of Wyoming

Department of Civil & Architectural Engineering

1000 E University Ave, Dept. 3295 | Laramie, WY 82071

Fax: (307) 766-2111 Tel: (307) 766-5550 | Email: mahmed@uwyo.edu

Khaled Ksaibati, Ph.D., P.E.

Professor of Civil Engineering

Director of the Wyoming Technology Transfer Center

University of Wyoming

Department of Civil & Architectural Engineering

1000 E University Ave, Dept. 3295 | Laramie, WY 82071

Fax: (307) 766-4444 Tel: (307) 766-6230 | Email: khaled@uwyo.edu

Rhonda Kae Young, Ph.D., P.E.

Chair & Professor of Civil Engineering

Department Civil Engineering

Gonzaga University

502 E. Boone Ave AD Box 26, Spokane, WA 99258

Tel: (509) 313-5754 | Email: youngr1@gonzaga.edu

Annalisa Piccorelli, Ph.D.

Assistant Professor of Statistics

University of Wyoming

Department of Mathematics and Statistics

1000 E University Ave, Dept. 3295 | Laramie, WY 82071

Tel: (307) 766-2207 | Email: apiccore@uwyo.edu