MOHAMMED HAMAD ALMANNAA, Ph.D.

Associate Professor of Traffic and Transportation Engineering

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Public academic curriculum vitae - updated 27 October 2026

Academic Profile

Dr. Mohammed Hamad Almannaa is an Associate Professor in the Department of Civil Engineering, College of Engineering, King Saud University, specializing in traffic and transportation engineering and intelligent transportation systems. He supervises the Traffic Simulation Laboratory. His work applies data and artificial intelligence to traffic safety, congestion management, and decision support. Since August 2026 he has served as a part-time consultant to the National Center for Transport Safety in studies, research, and land crash investigation, and he chairs the Scientific Advisory Council of Aman Association for Traffic Accident Prevention. He has been classified as a Professional Engineer by the Saudi Council of Engineers since September 2022 and holds the PMP certification.

Consulting and Collaboration

Dr. Almannaa provides traffic and transportation engineering consulting to government entities, companies, engineering firms, and individuals in Riyadh and across Saudi Arabia:

Traffic impact studies: preparation and review of traffic impact studies (TIS) for residential and commercial developments, including traffic counts, trip generation, level of service analysis, and parking requirements.

Crash investigation and traffic cases: technical reports and expert opinions on traffic crashes and disputes, and on the application of the Saudi Traffic Law and its implementing regulations.

Traffic data analytics: analysis of crash data, transportation network operational data, congestion, and speed data using statistical modeling and machine learning.

Training courses: traffic impact studies; principles of traffic safety; human factors in road safety; the Road Safety Professional programme (RSP1); technical investigation of land traffic crashes and reporting; traffic congestion causes and solutions; traffic engineering and transport planning; AI applications in transportation; and AI agents and engineering workflow automation.

Research collaboration: joint research projects and publications, and co-supervision of master's and doctoral theses with universities, government entities, and industry.

Media and events: interviews, invited talks, and panel moderation on road safety, congestion, and mobility.

Email: malmannaa@ksu.edu.sa Office phone: +966 11 806 3197 | WhatsApp chat

Education

Ph.D., Civil Engineering (Transportation Engineering), Virginia Tech, USA, 2019.

M.Sc., Civil Engineering (Transportation Engineering), Virginia Tech, USA, 2016.

B.Sc., Civil Engineering (Magna cum Laude), King Saud University, 2012.

Graduate Certificates from Virginia Tech in Urban Computing (2019) and Preparing the Future Professoriate (2018).

Professional Certifications and Graduate Certificates

- Professional Engineer - Saudi Council of Engineers, since September 2022
- Project Management Professional (PMP) - Professional certification in project management
- Certified Trainer - Saudi Council of Engineers, since 2023

- Graduate Certificate in Urban Computing - Virginia Tech, 2019

- Graduate Certificate in Preparing the Future Professoriate - Virginia Tech, 2018

Research and Projects

His work includes 24 peer-reviewed journal articles, conference papers and presentations, a book chapter, and research reports. He has served as Principal Investigator on projects with combined funding exceeding SAR 2 million.

Browse the complete publication list and source links

Current and Recent Projects

- The Impact of Traffic Congestion in Major Saudi Cities: Causes and Solutions (Riyadh, Jeddah, Dammam) - Principal Investigator - Riyadh Chamber / Riyadh Economic Forum; since October 2025. Presented in October 2026.

- Developing a Smart Emergency Medical Services (EMS) System for the Saudi Red Crescent Authority Using Machine Learning Algorithms - Principal Investigator - Deanship of Scientific Research, KSU; since November 2025.

Previous Research Projects

- Traffic State Prediction: A Traveler Equity and Multi-Modal Perspective - Completed project - Urban Mobility and Equity Center, Morgan State University, USA, 2019.

- Developing and Field Implementing an Eco-Cruise Control System in the Vicinity of Traffic Signalized Intersections - Completed project - U.S. Department of Transportation, University Transportation Centers Program, 2017.

- Applying Cluster Analysis Techniques to Traffic Operations - Completed project - Virginia Department of Transportation, USA, 2017.

Institutional Development Projects

- Transforming Academic Advising into a Student-Centered, Data-Driven Ecosystem - Team Leader - KSU, 2025; shortlisted for THE Arab World Awards 2026, Outstanding Support for Students.

- Automation of Academic Advising Services at King Saud University - Institutional project - September 2023 to September 2025.

- Developing the Service and Mechanism for Monitoring Absenteeism at King Saud University - Institutional project - 2025.

- Enhancing Academic Advising: A Comprehensive Assessment and Improvement Initiative - King Saud University - 2025.

- Maturing Aman Association for Traffic Accident Prevention - Institutional development project - 2024.

Leadership and Advisory Roles

Part-time Consultant, National Center for Transport Safety (August 2026-present).

Supervisor, Traffic Simulation Laboratory, King Saud University (2026-present).

Chairman, Scientific Advisory Council, Aman Association for Traffic Accident Prevention (2025-present).

Convener, Transportation Group, Department of Civil Engineering (2023-present).

Item Writer and Reviewer, Engineering Readiness Exam, Transportation Engineering Track, Education and Training Evaluation Commission (2026).

Head of Research and Innovation, AI Center, King Saud University (2024-2025).

Part-time Consultant, Deanship of Admission and Registration Affairs, King Saud University (2023-2025).

Part-time Consultant, Traffic Engineering Department, Riyadh Municipality (2021-2024): reviewed traffic impact studies and contributed to establishing the Riyadh City Traffic Crash Observatory.

Head, Data Analysis Unit, National Road Safety Center (2020-2021).

Member of standing university committees, including the Permanent Higher Committee for Traffic Safety and Transportation and the Permanent Steering Committee for the University Master Plan.

Committees and University Service

- Permanent Higher Committee for Traffic Safety and Transportation, KSU - 2022-present
- Permanent Higher Committee for Academic, Educational and Research Activities, KSU - 2025-present
- AI Committee, College of Engineering - 2025-present
- Permanent Committee for Joint Academic Degrees with International Universities (Graduate Studies) - 2026-present
- Permanent Steering Committee for the University Master Plan
- Executive Committee for the MOU between KSU and the Roads General Authority - since 2023
- Alumni, Statistics and Information Committee - since 2024
- Graduates and Teaching Assistants Affairs Committee - since 2023
- Graduate Studies and Scientific Research Committee - since 2023
- New Faculty Affairs Committee - since 2023
- Chair, Students Guidance and Counseling Committee, College of Engineering - 2021-2022
- Operational Plans and Students Guidance and Counseling Committees - 2020-2021
- Public Relations and Teaching Assistants Affairs Committees - 2019-2020

Judging and Professional Mentoring

- Judge, Ministry of Transport and Logistic Services Innovation Award, 2025.
- Mentor, RDIA-Saudi Aramco Joint AI Innovation Program, 2025.
- Judge and Mentor, King Salman Center for Disability Research Hackathon, 2026.

Professional Memberships and Research Networks

- Saudi Council of Engineers (SCE)
- IEEE Intelligent Transportation Systems Society - Saudi Chapter (Founder and Committee Member, 2026)
- Aman Association for Traffic Accident Prevention - Chairman, Scientific Advisory Council
- Institute of Transportation Engineers (ITE)
- American Society of Civil Engineers (ASCE)
- Gulf Road and Transport Engineering Society
- Chi Epsilon
- Intelligent Transportation Society of Virginia (ITSVA) - 2016-2017
- Bike Barometer - international research network

Training

Certified Trainer, Saudi Council of Engineers (2023-present). Has delivered courses and workshops on traffic safety, driver behavior, crash data analysis, and AI in transportation engineering for the Ministry of Transport and Logistic Services, the National Road Safety Center, and the Saudi Council of Engineers; workshops for the technical teams of

the National Center for Transport Safety on international practice in crash investigation and reporting.

Traffic Engineering and Transport Planning course for Riyadh Municipality engineers - 28-29 October 2026.

Teaching and Supervision

Teaches Traffic Engineering, Transportation Systems and Planning, Applications of Machine Learning and AI in Transportation, Engineering Economy, Introduction to Computer Programming, and Graduation Projects.

Courses and syllabi

- CE 436 - Traffic Engineering
- CE 430 - Transportation Systems
- CE 548 - Machine Learning and Artificial Intelligence Applications in Transportation Systems
- GE 403 - Engineering Economy

Office Hours - First Semester 1448 AH

In person, Office 2A70, College of Engineering. All times are Riyadh local time.

- Sunday: 11:00-12:00; 13:00-15:00
- Tuesday: 11:00-12:00
- Thursday: 08:00-09:00; 10:00-12:00; 13:00-14:00

Electronic timetable | Original attached timetable

Graduate Supervision

Master's and doctoral theses supervised or co-supervised. Names and thesis titles retain their source-language spelling.

- Ayoub Alzabidi - PhD, Co-supervisor, 2025 Developing a Smart Emergency Medical Service System for Saudi Red Crescent Authority Using Machine Learning Algorithms
- Aref Ahmed - PhD, Co-supervisor, 2026 Effect of Socio-demographic Characteristics, Mental Status, and Distractions on Driver Behavior in Saudi Arabia
- Md Nabil Zawad - MSc, Supervisor, 2024 Prediction of Crash Severity on Intercity and Major Intracity Roads in Saudi Arabia Using Spatial, Temporal, and Road Condition Factors
- Omar Kabboush - MSc, Supervisor, 2022 Assessing the Effect of COVID-19 on Traffic Safety of Intercity and Major Intracity Roads in Saudi Arabia
- Hamad Al Mehthel - MSc, Co-supervisor, 2025 Safety Evaluation of Truck Crashes in the Kingdom of Saudi Arabia

External participation in master's and doctoral thesis examination committees at national and international universities.

I welcome co-supervision of master's and doctoral research, participation in thesis examination committees, and research collaboration. malmannaa@ksu.edu.sa

Achievements and Recognition

- THE Arab World Awards 2026 - Outstanding Support for Students - Team Leader of Transforming Academic Advising into a Student-Centered, Data-Driven Ecosystem; the project was shortlisted.
- Saudi Patent SA368033 - E-scooter for Extremely Hot Weather - Saudi patent, 2025.
- UAS4T Competition - 23rd IEEE ITSC, 2020 - First place.
- Lifesavers Traffic Safety Scholar, 2019 - Selected as a Traffic Safety Scholar.
- Travel Funding Program Award - Virginia Tech - 2017-2018 and 2018-2019.

- Student Research Award - ITSVA International Conference, 2016 - Second place.

- KSU Graduate Scholarship - Scholarship for master's and doctoral study at Virginia Tech.

- BSc, King Saud University - First in cohort with class honors; 2012.

PUBLICATIONS AND SCHOLARLY CONTRIBUTIONS

63 separately documented works and contributions. Journal articles, conference papers and presentations, reports, theses, and intellectual property are distinguished below. Publisher and repository links are provided where available; presentation records without a separate full text link to their public documentation.

Journal Articles (24)

1. Aref Ahmed, Faisal Alessa, Mohammed Almannaa, Mohammed Alkahtani (2026). Effect of Gender, Cognitive Distraction, and Environmental Conditions on Young Drivers' Behavior: A Study Using Physiological Sensors and a Driving Simulator. IEEE Access.

Publication source / documentation

2. Md Nabil Zawad; Mohammed Almannaa; Khalid F. Alkahtani (2025). Investigating factors influencing fatalities and injuries in animal-vehicle crashes using a random parameters logit model and ensemble machine learning approaches. PLOS One.

Publication source / documentation

3. Ayoub Al-Zabidi; Mohammed Almannaa; Mohammed Elhenawy; Anis Gharbi (2025). Multi-criteria facility location for emergency medical services using AHP and GIS: Public sector supply chain case in Riyadh. Journal of Engineering Research.

Publication source / documentation

4. Mujahid I Ashqer, Huthaifa I Ashqar, Mohammed Elhenawy, Mohammed Almannaa, Mohammad A Aljamal, Hesham A Rakha, Marwan Bikdash (2024). Evaluating a signalized intersection performance using unmanned aerial data. Transportation letters. Volume 16. Pages 452-460.

Publication source / documentation

5. Cat Woodson, Huthaifa I Ashqar, Mohammed Almannaa, Mohammed Elhenawy, Ralph Buehler (2024). Factors influencing bikeshare service and usage in a rural college town: A case study of Montgomery County, VA. International Journal of Sustainable Transportation. Volume 18. Pages 291-300.

Publication source / documentation

6. Mohammed Almannaa; Asim Alyahya; Huthaifa I. Ashqar; Mohammed Elhenawy (2024). Temporal Shifts in E-Scooter Rider Perspectives: A Longitudinal Investigation in Riyadh, Saudi Arabia. Sustainability.

Publication source / documentation

7. Mahmoud Masoud, Mohammed Elhenawy, Shi Qiang Liu, Mohammed Almannaa, Sebastien Glaser, Wael Alhajyaseen (2023). A simulated annealing for optimizing assignment of e-scooters to freelance chargers. Sustainability. Volume 15. Pages 1869.

Publication source / documentation

8. Omar Kabbush; Mohammed Almannaa; Saif A. Alarifi; Ali Alghamdi (2023). Assessing the Effect of COVID-19 on the Traffic Safety of Intercity and Major Intracity Roads in Saudi Arabia. Arabian Journal for Science and Engineering.

Publication source / documentation

9. Mohammed Almannaa; Md Nabil Zawad; May Moshawah; Haifa Alabduljabbar (2023). Investigating the effect of road condition and vacation on crash severity using machine learning algorithms. International Journal of Injury Control and Safety Promotion.

Publication source / documentation

10. Mohammed H Almannaa, Max G Bareiss, Luke E Riexinger, Feng Guo (2022). In-Depth Evaluation of Association between Crash and Hand Arthritis via Naturalistic Driving Study. Applied Sciences. Volume 12. Pages 12079.

Publication source / documentation

11. Huthaifa I Ashqar, Mohammed Elhenawy, Hesham A Rakha, Mohammed Almannaa, Leanna House (2022). Network and station-level bike-sharing system prediction: A San Francisco bay area case study. Journal of Intelligent Transportation Systems. Volume 26. Pages 602-612.

Publication source / documentation

12. Ayoub Al-Zabidi; Mohammed Almannaa; Mohammed Elhenawy; Anis Gharbi (2022). Statistical modeling of emergency medical services' response and rescue times to road traffic crashes in the Kingdom of Saudi Arabia. Case Studies on Transport Policy.

Publication source / documentation

13. Mohammed Almannaa, Cat Woodson, Huthaifa Ashqar, Mohammed Elhenawy (2022). The COVID-19 impacts on bikeshare systems in small rural communities: Case study of bikeshare riders in Montgomery County, VA. PLoS one. Volume 17. Pages e0278207.

Publication source / documentation

14. Mohammed Hamad Almannaa, Huthaifa I Ashqar, Mohammed Elhenawy, Mahmoud Masoud, Andry Rakotonirainy, Hesham Rakha (2021). A comparative analysis of e-scooter and e-bike usage patterns: Findings from the City of Austin, TX. International Journal of Sustainable Transportation. Volume 15. Pages 571-579.

Publication source / documentation

15. Mohammed Elhenawy, Mostafizur R Komol, Mahmoud Masoud, Shi Qiang Liu, Huthaifa I Ashqar, Mohammed Hamad Almannaa, Hesham A Rakha, Andry Rakotonirainy (2021). A novel crowdsourcing model for micro-mobility ride-sharing systems. Sensors. Volume 21. Pages 4636.

Publication source / documentation

16. Almannaa M.; Alsahhaf F.; Ashqar H.; Elhenawy M.; Masoud M.; Rakotonirainy A. (2021). Perception Analysis of E-Scooter Riders and Non-Riders in Riyadh, Saudi Arabia: Survey Outputs. Sustainability.

Publication source / documentation

17. Mohammed Elhenawy, Huthaifa I Ashqar, Mahmoud Masoud, Mohammed H Almannaa, Andry Rakotonirainy, Hesham A Rakha (2020). Deep transfer learning for vulnerable road users detection using smartphone sensors data. Remote Sensing. Volume 12. Pages 3508.

Publication source / documentation

18. Mohammed H Almannaa, Mohammed Elhenawy, Hesham A Rakha (2020). Dynamic linear models to predict bike availability in a bike sharing system. International journal of sustainable transportation. Volume 14. Pages 232-242.

Publication source / documentation

19. Mohammed H Almannaa, Mohammed Elhenawy, Hesham A Rakha (2019). A novel supervised clustering algorithm for transportation system applications. IEEE transactions on intelligent transportation systems. Volume 21. Pages 222-232.

Publication source / documentation

20. Mohammed Hamad Almannaa, Hao Chen, Hesham A Rakha, Amara Loulizi, Ihab El-Shawarby (2019). Field implementation and testing of an automated eco-cooperative adaptive cruise control system in the vicinity of signalized intersections. Transportation research part D: transport and environment. Volume 67. Pages 244-262.

Publication source / documentation

21. Mahmoud Masoud, Mohammed Elhenawy, Mohammed H Almannaa, Shi Qiang Liu, Sebastien Glaser, Andry Rakotonirainy (2019). Heuristic approaches to solve e-scooter assignment problem. IEEE access. Volume 7. Pages 175093-175105.

Publication source / documentation

22. Mohammed H Almannaa; Mohammed Elhenawy; Hesham A Rakha (2019). Identifying Optimum Bike Station Initial Conditions using Markov Chain Modeling. Transport Findings.

Publication source / documentation

23. Huthaifa I Ashqar, Mohammed H Almannaa, Mohammed Elhenawy, Hesham A Rakha, Leanna House (2018). Smartphone transportation mode recognition using a hierarchical machine learning classifier and pooled features from time and frequency domains. IEEE Transactions on Intelligent Transportation Systems. Volume 20. Pages 244-252.

Publication source / documentation

24. Mohammed Hamad Almannaa, Hao Chen, Hesham A Rakha, Amara Loulizi, Ihab El-Shawarby (2017). Reducing vehicle fuel consumption and delay at signalized intersections: Controlled-field evaluation of effectiveness of infrastructure-to-vehicle communication. Transportation Research Record. Volume 2621. Pages 10-20.

Publication source / documentation

Conference Papers and Presentations (31)

1. Almannaa, M.; Althonayan, A.; Alotaibi, T.; Alsharef, A.; Alarifi, S. (2026). Campus Roundabout Safety Assessment and Mitigation: A Case Study at King Saud University. 10th International Road Safety & Simulation Conference (RSS 2026), Naples, Italy, June 23-26. [Conference presentation]

Publication source / documentation

2. Mohammed Hamad Almannaa (2026). Ramadan as a Natural Experiment in Urban Mobility: Evidence of Network-Level Peak Redistribution from Probe Traffic Data. IEEE International Forum on Research and Technologies for Society and Industry (RTSI 2026), Espoo, Finland, August 16-18, 2026.

Publication source / documentation

3. Md Nabil Zawad; Mohammed Almannaa; Khalid F Alkahtani (2025). Analyzing Determinants of Fatalities and Injuries in Animal- Vehicle Collisions Using Random Parameters Logit Modeling and Ensemble Machine Learning. Transportation Research Procedia. Volume 92. Pages 8.

Publication source / documentation

4. Mohammed Almannaa (2025). Developing A Smart Emergency Medical Service (EMS) System for Saudi Red Crescent Authority Using Machine Learning Algorithms. 1st IUT-International Conference on Core Engineering & Technology (IUT-ICCET 2025), Gazipur, Bangladesh, April 25-27. [Invited keynote]

Publication source / documentation

5. Mohammed Almannaa (2025). Future Trends & Challenges in Road Safety in the GCC. Roads, Bridges, and Tunnels KSA Conference, Jeddah, April 30-May 1. [Panel moderation]

Publication source / documentation

6. Al-Zabidi, A.; Almannaa, M.; Elhenawy, M.; Gharbi, A. (2025). Optimizing Spatial Distribution of Emergency Medical Service Centers in Response to Urban Growth Using AHP and GIS. Rotterdam, The Netherlands, May 25-28, 2025. [Conference presentation]

Publication source / documentation

7. Mohammed Almannaa (2025). Towards a Fully Integrated Urban Mobility Network: Breaking Barriers Between Modes for a Seamless, Smart, and Sustainable City Experience. Mobility Live, Riyadh, October 19-20. [Panel moderation]

Publication source / documentation

8. Almannaa, M.; Zawad, M. N. (2024). Investigating the Effect of Road Maintenance on Traffic Crashes Using Machine Learning Algorithms. 3rd Road Maintenance Forum, Dammam, Saudi Arabia. [Conference presentation]

Publication source / documentation

9. Al-Zabidi, A.; Almannaa, M.; Elhenawy, M.; Gharbi, A. (2024). Optimizing Spatial Distribution of Emergency Medical Service Centers in Response to Urban Growth - IRF 2024. Road Safety & Sustainability Conference (IRF), Riyadh, Saudi Arabia. [Conference presentation]

Publication source / documentation

10. Al-Zabidi, A.; Almannaa, M.; Elhenawy, M.; Gharbi, A. (2024). Optimizing Spatial Distribution of Emergency Medical Service Centers in Response to Urban Growth - Road Maintenance Forum 2024. 3rd Road Maintenance Forum, Dammam, Saudi Arabia. [Conference presentation]

Publication source / documentation

11. Bachir Hussein, Mohammed Almannaa (2023). Crash Severity Predictive Models Using Machine Learning Algorithms: a Case Study of Riyadh, Saudi Arabia. 13th Annual International Conference on Industrial Engineering and Operations Management.

Publication source / documentation

12. Almannaa, M.; Alsahhaf, F.; Ashqar, H.; Elhenawy, M.; Masoud, M.; Rakotonirainy, A. (2021). Analysis of Perception About E-scooter Riders and Non-riders in Saudi Arabia: Survey Outputs. 100th Transportation Research Board Annual Meeting, January. [Conference presentation]

Publication source / documentation

13. Ashqar, H.; Elhenawy, M.; Masoud, M.; Almannaa, M.; Rakotonirainy, A.; Rakha, H. (2021). Smartphone Sensors Transportation Mode Data Classification of Vulnerable Road Users. 100th Transportation Research Board Annual Meeting, January. [Conference presentation]

Publication source / documentation

14. Mousa, S.; Masoud, M.; Elhenawy, M.; Almannaa, M.; Glaser, S.; Rakotonirainy, A. (2020). A Simulated Annealing Algorithm for Solving the E-Scooter to Chargers Assignment Problem. 99th Transportation Research Board Annual Meeting, Washington DC, January 12-16. [Conference presentation]

Publication source / documentation

15. Mohammed H Almannaa, Mohammed Elhenawy, Mahmoud Masoud, Hesham A Rakha (2019). A New Mathematical Approach to Solve Bike Share System Station Imbalances Based On Portable Stations. 2019 IEEE Intelligent Transportation Systems Conference (ITSC). Pages 1721-1726.

Publication source / documentation

16. Thomas CH Lux, Stefan Nagy, Mohammed Almanaa, Sirui Yao, Reid Bixler (2019). A case study on a sustainable framework for ethically aware predictive modeling. 2019 IEEE International Symposium on Technology and Society (ISTAS). Pages 1-7.

Publication source / documentation

17. Mohammed Hamad Almannaa, Max Bareiss, Luke Riexinger, Feng Guo (2019). Are individuals with arthritis more likely to be involved in a crash?. Transportation Research Board 98th Annual MeetingTransportation Research Board.

Publication source / documentation

18. Mahmoud Masoud, Mohammed Elhenawy, Mohammed H Almannaa, Shi Qiang Liu, Sebastian Glaser, Andry Rakotonirainy (2019). Optimal Assignment of e-scooter to Chargers. 2019 IEEE Intelligent Transportation Systems Conference (ITSC). Pages 4204-4209.

Publication source / documentation

19. Mohammed Hamad Almannaa, Mohammed Elhenawy, Hesham A Rakha (2018). A Novel Clustering Algorithm for Traffic Operational Analysis. Transportation Research Board 97th Annual MeetingTransportation Research Board.

Publication source / documentation

20. Almannaa, M.; Chen, H.; Rakha, H.; Loulizi, A.; El-Shawarby, I. (2018). Development and Controlled Field Evaluation of an Automated Eco-Cooperative Adaptive Cruise Control System in the Vicinity of Signalized Intersections. Automated Vehicles Symposium, San Francisco, July 9-12. [Conference presentation]

Publication source / documentation

21. Mohammed Almannaa; Max Bareiss; Luke Riexinger; Feng Guo (2018). Does Arthritis Affect the Behavior of Drivers? - 7th International Symposium on Naturalistic Driving Research. 7th International Symposium on Naturalistic Driving Research, Blacksburg, VA, August 28-30, 2018. [Conference presentation]

Publication source / documentation

22. Mohammed H Almannaa, Mohammed Elhenawy, Feng Guo, Hesham A Rakha (2018). Incremental learning models of bike counts at bike sharing systems. 2018 21st International Conference on Intelligent Transportation Systems (ITSC). Pages 3712-3717.

Publication source / documentation

23. Mohammed Hamad Almannaa, Mohammed Elhenawy, Hesham A Rakha (2018). Predicting Bike Availability in Bikesharing Systems Using Dynamic Linear Models. Transportation Research Board 97th Annual MeetingTransportation Research Board.

Publication source / documentation

24. Huthaifa I Ashqar, Mohammed Elhenawy, Ahmed Ghanem, Mohammed H Almannaa, Hesham A Rakha (2018). Quantifying the effect of various features on the modeling of bike counts in a bike-sharing system. Transportation Research Board 97th Annual MeetingTransportation Research Board.

Publication source / documentation

25. Ahmed Ghanem, Mohammed Elhenawy, Mohammed Almannaa, Huthaifa I Ashqar, Hesham A Rakha (2017). Bike share travel time modeling: San Francisco bay area case study. 2017 5th IEEE International Conference on Models and Technologies for Intelligent Transportation Systems (MT-ITS). Pages 586-591.

Publication source / documentation

26. Mohammed Hamad Almannaa, Hao Chen, Hesham A Rakha, Amara Loulizi, Ihab El-Shawarby (2017). Controlled-Field evaluation of effectiveness of infrastructure to vehicle communication in reducing vehicle fuel consumption and delay at signalized intersections. 96th Annual Transportation Research Board Meeting, Washington, DC.

Publication source / documentation

27. Hao Chen, Hesham A Rakha, Mohammed H Almannaa, Amara Loulizi, Ihab El-Shawarby (2017). Field Implementation of an Eco-Cooperative Adaptive Cruise Control System at Signalized Intersections. Transportation Research Board 96th Annual MeetingTransportation Research Board.

Publication source / documentation

28. Huthaifa I Ashqar, Mohammed Elhenawy, Mohammed H Almannaa, Ahmed Ghanem, Hesham A Rakha, Leanna House (2017). Modeling bike availability in a bike-sharing system using machine learning. 2017 5th IEEE international conference on models and technologies for intelligent transportation systems (MT-ITS). Pages 374-378.

Publication source / documentation

29. Mohammed H Almannaa, Mohammed Elhenawy, Ahmed Ghanem, Huthaifa I Ashqar, Hesham A Rakha (2017). Network-wide bike availability clustering using the college admission algorithm: A case study of San Francisco Bay area. 2017 5th IEEE International Conference on Models and Technologies for Intelligent Transportation Systems (MT-ITS). Pages 580-585.

Publication source / documentation

30. Hao Chen, Hesham A Rakha, Amara Loulizi, Ihab El-Shawarby, Mohammed H Almannaa (2016). Development and preliminary field testing of an in-vehicle eco-speed control system in the vicinity of signalized intersections. IFAC-PapersOnLine. Volume 49. Pages 249-254.

Publication source / documentation

31. Bichiou, Y.; Rakha, H.; Almannaa, M.; Roman, A. (2015). Optimal Intersection Control of Automated and Cooperative Vehicles. Connected and Automated Vehicles, 9th University Transportation Centers Spotlight Conference, Washington DC, November 4-5. [Conference presentation]

Publication source / documentation

Book Chapter (1)

1. Hesham A Rakha, Mohammed Elhenawy, Huthaifa I Ashqar, Mohammed H Almannaa, Ahmed Ghanem (2018). Smart bike-sharing systems for smart cities. Data analytics for smart cities. Pages 111-142.

Publication source / documentation

Research Reports (3)

1. Hesham A Rakha, Mohammed Almannaa, Huthaifa Ashqar, Mohammed Elhenawy, Ahmed Ghanem (2019). Traffic state prediction: A traveler equity and multi-modal perspective. Research report. [Research report]

Publication source / documentation

2. H Rakha, H Chen, Mohammed Almannaa, Ihab El-Shawarby, Amara Loulizi (2016). Developing and field implementing an ecocruise control system in the vicinity of traffic signalized intersections. Research report. [Research report]

Publication source / documentation

3. Hesham A Rakha, Hao Chen, Mohammed Almannaa, Raj Kishore Kamalanathsharma, Ihab El-Shawarby, Amara Loulizi (2016). Field testing of eco-speed control using V2I communication. Research report. [Research report]

Publication source / documentation

Theses and Graduation Project (3)

1. Mohammed Hamad Almannaa (2019). Optimizing Bike Sharing Systems: Dynamic Prediction Using Machine Learning and Statistical Techniques and Rebalancing. PhD dissertation. [PhD dissertation]

Publication source / documentation

2. Mohammed Hamad Almannaa (2016). Field Evaluation of the Eco-Cooperative Adaptive Cruise Control in the Vicinity of Signalized Intersections. Master's thesis. [Master's thesis]

Publication source / documentation

3. M. Almannaa; W. Alangari; F. Aldawish; S. Alsayed; Y. Alsalloum (2012). Design and Behavior of Concrete-Filled Elliptical Steel Stub Columns at Elevated Temperatures. http://fac.ksu.edu.sa/sites/default/files/CE499498_Report__Elliptical_Column.pdf. [Undergraduate graduation project]

Publication source / documentation

Patent (1)

1. Mohammed Almannaa, Hassan Alshehri (2025). E-scooter for Extremely Hot Weather. Patent. [Patent]

Publication source / documentation