David A. Noyce PhD, PE

CONSULTING CIVIL ENGINEER

4 MOTO

Forensic Vehicle Engineers

With over 20 years of research focused on the operational and behavioral aspects of transportation safety and operations, David works with 4Moto Engineers providing accident reconstruction consulting services in the areas of traffic operations, roadway design, pedestrian and bicycle safety, traffic control devices, human factors/driver behavior, construction work zones, and vehicle dynamics.

David is Chairman of the Department of Civil and Environmental Engineering at the University of Wisconsin-Madison and also holds an affiliated appointment with the Department of Industrial and Systems Engineering. Additionally, he serves as Director of the Wisconsin Traffic Operations and Safety Laboratory and the Wisconsin Driving Simulator Laboratory at the university. David's research areas include driver comprehension and behavior, driver distraction, traffic signal operations, left-turn operations, traffic control devices, and automated vehicle systems.

FORENSIC ENGINEERING EXPERIENCE

4Moto Engineers Madison, WI
Consulting Civil Engineer 2019-present

Crane Engineering / Safety Engineering Associates Madison, WI
Consulting Civil Engineer 2003-2018

- Accident reconstruction consulting services in the areas of traffic operations, roadway design, pedestrian and bicycle safety, traffic control devices, and human factors/driver behavior

EDUCATION

Doctor of Philosophy
Civil Engineering (Transportation)
Texas A&M University, 1999

Master of Science
Civil and Environmental Engineering
University of Wisconsin-Madison, 1995

Bachelor of Science
Civil and Environmental Engineering
University of Wisconsin-Madison, 1984

Graduate Studies
Master of Business (MBA) Program
University of Wisconsin-Whitewater, 1989-1994

LICENSURE AND CERTIFICATIONS

Licensed Professional Engineer
Wisconsin, #25726

PROFESSIONAL AFFILIATIONS

Transportation Research Board,
National Academy of Sciences
1998-present

Institute of Transportation Engineers
1990-present

American Society for Engineering Education
2000-present

American Society of Civil Engineers
1994-present

National Committee on Uniform Traffic Control Devices
2001-2017

ITS America 1997-present

Eno Transportation Foundation 1997-present

National Society of Professional Engineers
1992-1994, 2016-present

4Moto Engineers LLC 2326 Vondron Road Madison, Wisconsin 53718 608 286-1040 www.4MotoEngineers.com

ACADEMIC APPOINTMENTS

University of Wisconsin-Madison 2002-present

Current appointments include:

- Department Chairman-Department of Civil and Environmental Engineering
- Arthur F. Hawnn Professor-Department of Civil and Environmental Engineering
- Professor (affiliate)-Department of Industrial and Systems Engineering
- Professor (affiliate)-Gaylord Nelson Institute for Environmental Studies
- Director-Wisconsin Traffic Operations and Safety (TOPS) Laboratory
- Director-Wisconsin Driving Simulator Laboratory
- Associate Director-SaferSim University Transportation Center

University of Massachusetts-Amherst

- Adjunct Professor 2002-present
- Assistant Professor 1998-2002
- Director-Massachusetts Traffic Safety Research Program (MassSAFE) 1998-2002
- Associate Director-Driver Performance Laboratory 1998-2002

Texas A&M University / Texas Transportation Institute

Researcher/Lecturer 1995-1998

University of Wisconsin-Madison

Researcher 1994-1995

OTHER PROFESSIONAL EXPERIENCE

Barrientos & Associates, Inc. Madison, WI

1992-1994

Warzyn/EWI/Woodward-Clyde, Inc. Middleton, WI

1989-1992

Crispell-Snyder, Inc. Elkhorn, WI

1986-1989

- Highway/Transportation/Civil-Site Group Manager for several consulting firms
- Led the design and construction of transportation and site development projects

Illinois Department of Transportation Ottawa, IL

Civil Engineer II 1984-1986

- Geometric design of transportation facilities; construction management

SELECTED PUBLICATIONS

1. Song, Yu, and David A. Noyce. "Assessing Effects of Transit Signal Priority on Traffic Safety: Empirical Bayes Before-After Study Using King County, Washington Data." Transportation Research Record: Journal of the Transportation Research Board, 2018, in press.
2. Zhou, Yang, Soyoung Ahn, Madhav V. Chitturi, and David A. Noyce. "Rolling Horizon Stochastic Optimal Control Strategy for ACC and CACC Under Uncertainty." Transportation Research Part C, Emerging Technologies, Elsevier, Vol. 83, 2017, pp. 61-76.
3. Chen, Danjue, Soyoung Ahn, Madhav V. Chitturi, and David A. Noyce. "Towards Vehicle Automation: Roadway Capacity Formulation for Traffic Mixed with Regular and Automated Vehicles." Transportation Research Part B, Methodological, Elsevier, Vol. 100, 2017, pp. 196-221.
4. Chen, Danjue, Soyoung Ahn, Madhav V. Chitturi, and David A. Noyce. "Truck Platooning on Uphill Grades under Cooperative Adaptive Cruise Control (CACC)." Transportation Research Procedia, Elsevier, Vol. 23, 2017, pp. 1059-1078.
5. Li, Xhixia, Madhav V. Chitturi, Andrea R. Bill, and David A. Noyce. "Operational Evaluation of Two-Lane Roundabouts at Freeway Ramp Terminals : Comparison Between Roundabout and Signalized Interchanges." Transportation Research Record: Journal of the Transportation Research Board, No. 2637, 2017, pp. 99-113.
6. Burdett, Beau, Andrea R. Bill and David A. Noyce. "Evaluation of Roundabout-Related Single-Vehicle Crashes." Transportation Research Record: Journal of the Transportation Research Board, No. 2637, 2017, pp. 17-26.
7. Shaw, John, Madhav V. Chitturi, and David A. Noyce. "Special-Color Pavement Marking for Highway Work Zones: Literature Review of International Practices." Transportation Research Record: Journal of the Transportation Research Board, No. 2617, 2017, pp. 76-86.
8. Chitturi, Madhav V., Ibrahim Alsghan, Kelvin R. Santiago-Chaparro, and David A. Noyce. "Field Evaluation of Elongated Pavement Marking Signs." Transportation Research Record: Journal of the Transportation Research Board, No. 2624, 2017, pp. 28-37.
9. Burdett, Beau, Ibrahim Alsghan, Li-Hong Chiu, Andrea R. Bill, and David A. Noyce. "Analysis of Rear-End Crashes at Roundabout Approaches." Transportation Research Record: Journal of the Transportation Research Board, No. 2585, 2016, pp. 29-38.
10. Chen, Danjue, Soyoung Ahn, Soohyuk Bang and David A. Noyce. "Car-Following and Lane-Changing Behavior Involving Heavy Vehicles." Transportation Research Record: Journal of the Transportation Research Board, No. 2561, 2016, pp. 89-97.
11. Shaw, John, Carlyn Muir, Ian Johnston, and David A. Noyce. "Developing Australia's Highway Safety Professionals: What Can the United States Learn?" Transportation Research Record: Journal of the Transportation Research Board, No. 2582, 2016, pp. 87-94.
12. Santiago-Chaparro, Kelvin R., Madhav V. Chitturi, Andrea R. Bill, and David A. Noyce. "Automated Turning Movement Counts for Shared Lanes: Leveraging Vehicle Detection Data." Transportation Research Record: Journal of the Transportation Research Board, No. 2558, 2016, pp. 30-40.

13. Khan, Ghazan, Andrea R. Bill, Kevan Shafizadeh, and David A. Noyce. "Incorporating Safety Into Targeted Pavement Friction Data Collection and Maintenance Procedures." Transport, Vol. 31, Issue 2, 2016, pp. 167-176.

14. Cheng, Yang, Steven T. Parker, Bin Ran, and David A. Noyce. "Work Zone Crash Cost Prediction Using a Least Median Squares Linear Regression Model." Transportation Research Record: Journal of the Transportation Research Board, No. 2555, 2016, pp. 38-45.

15. Gates, Timothy J., and David A. Noyce. "A Conceptual Framework for Dynamic Extension of the Red Clearance Interval as a Countermeasure for Red-Light-Running." Accident Analysis and Prevention, Volume 96, 2016, pp. 341-350.

16. Li, Zhixia, Madhav V. Chitturi, Lang Yu, Andrea R. Bill, and David A. Noyce. "Sustainability Effects of Next-Generation Intersection Control for Autonomous Vehicles." Transport, Vol. 30, No. 3, 2015, pp. 342-352.

17. Li, Zhixia, John. E. Ash, Ghazan Khan, Andrea R. Bill, David A. Noyce, and Lisa Austin. "Decision Tree-Based Method for Safety Treatment Selection at Intersections Involving Shared-Use Low-Volume Roads." Transportation Research Record: Journal of the Transportation Research Board, No. 2472, 2015, pp. 185-193.

18. Lang Yu, Zhixia Li, Andrea R. Bill, and David A. Noyce, "Development of Freeway and Interchange Safety Performance Functions with Respect to Roadway Lighting–A Pilot Study." Transportation Research Record: Journal of the Transportation Research Board, No. 2485, 2015, pp. 16-25.

19. Zheng, Dongxi, Madhav V. Chitturi, Andrea R. Bill, and David A. Noyce. "Analyses of Multiyear Statewide Secondary Crash Data and Automatic Crash Report Reviewing." Transportation Research Record: Journal of the Transportation Research Board, No. 2514, 2015, pp. 117-128.

20. Santiago, Kelvin R., Madhav V. Chitturi, Andrea R. Bill, and David A. Noyce. "Expanding the Capabilities of Existing Vehicle Detection Infrastructure to Monitor Red Light Running." International Journal of Engineering Management and Economics, Volume 5, No. 3/4, Inderscience, 2015, pp. 196-208.

21. Khan, Ghazan, Andrea R. Bill, and David A. Noyce. "Exploring the Feasibility of Classification Trees versus Ordinal Discrete Choice Models for Analyzing Crash Severity." Transportation Research Part C, Emerging Technologies, Elsevier, Vol. 50, 2015, pp. 86-96.

22. Burdett, Beau A., Zhixia Li, Andrea R. Bill, and David A. Noyce. "Accuracy of Injury Severity Ratings on Police Crash Reports." Transportation Research Record: Journal of the Transportation Research Board, No. 2516, 2015, pp. 58-67.

23. Zheng, Dongxi, Madhav Chitturi, Andrea Bill, and David A. Noyce. "Secondary Crash Identification on a Large-Scale Highway System." Transportation Research Record: Journal of the Transportation Research Board, No. 2432, 2015, pp. 82-90. **Winner of TRB Best Paper Award and Patricia F. Waller Best Paper Award.**