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FORENSIC TRANSPORTATION ENGINEERING

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DANIEL V. McGEHEE, PhD

SENIOR PRINCIPAL, HUMAN FACTORS | DMCGEHEE@KITTELSON.COM

AREAS OF EXPERTISE

- Driver perception–response time and hazard detection
- Attention, distraction, and cognitive workload
- Crash avoidance and evasive behavior under time pressure
- Driver expectation in the roadway environment
- Driver–vehicle interface design and task demand
- Smartphone interaction, infotainment systems, and multitasking
- Younger, inexperienced, and older driver performance
- ADAS and Automated driving

EDUCATION

Ph.D., Human Factors, University of Leeds, England

M.S., Human Factors/Engineering Psychology, University of Idaho

B.A. Psychology, Central Washington University

EXPERIENCE

2026-present Consultant/Senior Principal--Human Factors, Kittleson LLC.

2016-present *Full Professor*, Industrial and Systems Engineering; professor of emergency medicine, occupational and environmental health, and public policy (by courtesy)

Director, Driving Safety Research Institute and National Advanced Driving Simulator; *Director*, Applied Cognitive Engineering Laboratory.

1996-2016 *Director and Research Scientist/Engineer*, Human Factors and Vehicle Safety Research Program, University of Iowa, Public Policy Center

Adjunct Associate Professor, Mechanical and Industrial Engineering, Occupational and Environmental Health, and Emergency Medicine (by courtesy).

1993-1996 *Project Manager*, Human Factors Research Group, Center for Computer-Aided Design, Iowa Driving Simulator, University of Iowa College of Engineering.

1993 *Consultant*, FHWA TravTek Safety Evaluation.

- 1991-1992 *Graduate Research Intern*, Vehicle Safety Research Department, General Motors Research Laboratories (summers), Warren, Michigan.
- 1990-1993 *Graduate Research Assistant*, Human Factors Research Laboratory University of Idaho.
- 1987-1990 *Technical Aide*, Crew Systems/Human Factors, Advanced Flight Deck Research Department, Boeing Commercial Airplanes, Seattle, Washington.

Consulting

Senior Principal, Human Factors, Kittleson, LLC. 2026-present
Senior Principal Scientist, Human Factors, Crash Analytics, LLC (Owner). 2001-2026
Litigation consulting; proprietary industry advising, data collection, analysis.

Grants and Contracts—Awarded as PI:

Funding from US DOT, State DOTs, NIH, Auto Industry - \$42,666,767

Honors, Awards, and Professional Memberships

Sigma Xi, Scientific Honor Society (2022)

SAE Excellence in Oral Presentation Award, Detroit, Michigan (2016)

Iowa Board of Regents Staff Excellence Award (2015).

Distinguished Research Professional of the Year. University of Iowa (2015).

Commissioner's Special Award for Traffic Safety. State of Iowa, Governors Traffic Safety Bureau and Department of Public Safety (2011).

Visiting Professor, Shantou Medical University, Shantou, China (2011).

Co-Convener: National Academy of Sciences/National Research Council/Transportation Research Board, human factors workshop on young drivers (2010).

Convener, Human Factors Workshops. TRB, National Academies (2009).

Co-Convener: National Academy of Sciences/National Research Council /Transportation Research Board, workshop of IRB and ethical issues in naturalistic driving (2008).

Co-Convener: National Academy of Sciences/National Research Council /Transportation Research Board, workshop of Teen Driver Performance and Behavior (2007).

Convener: First International Workshop on Driver Metrics. Ottawa, Canada (Oct., 2006).

Keynote Speaker: University of Iowa Tau Beta Pi Engineering Honors Society Lecture: Cognitive Design: Developing Technology for the Human Mind (2004)

Jerome H. Ely Award, Human Factors and Ergonomics Society (2003)
Best Article Award in Human Factors Journal

Co-founder, Intl Symposium on Human Factors, Training & Vehicle Design (2001-present).

Jerome H. Ely Award, Human Factors and Ergonomics Society (1998)
Best Article Award in Human Factors Journal

Member, Human Factors and Ergonomics Society (1987-present)

Member, Society of Automotive Engineers (1997-present)

Member, Association for the Advancement of Automotive Medicine (2002-present)

Transport Affiliate, Transportation Research Board (TRB), National Research Council, National Academy of Sciences. (1993-present)

President, Human Factors Society, University of Idaho Student Chapter (1991, 1992).

Program Chairman, Human Factors Society, Puget Sound Chapter–Seattle (1988 - 1989).

Treasurer, Human Factors Society, Puget Sound Chapter–Seattle (1989).

Member, PSI CHI, National Honor Society for Psychology.

Committees–National/International

Trilateral US-EU-Japan working group in human factors in automated vehicles (one of three US members). 2015-present

Founder, International working group on ‘The First Crash.’ 2014-present.

Appointed Member, United States—European Union Distraction Working Group. 2010-2020.

Chairman, Data Needs Subcommittee, National Academy of Sciences, Transportation Research Board. 2010-present

Member, Young Driver Committee, National Academy of Sciences, Transportation Research Board. 2006-present.

Vice-Chair, Society of Automotive Engineers Safety & Human Factors Committee, 2004-present.

Chair, Human Factors & Ergonomics Society Surface Transportation Technical Group, 1998-2001

Program Chairman, Surface Transportation Committee, Human Factors and Ergonomics Society (1996-1997).

Member, SAE Safety and Human Factors Committee, (1993-present).

Co-Founder, Surface Transportation Committee, Human Factors & Ergonomics Society (1993).

Member, Transportation Research Board, A3BO2: User Characteristics, 2000-2004

Member, Transportation Research Board, A3BO8: Simulation & operator characteristics 1996-2000

Conference Leadership

General Co-chair and Organizer: Driving Assessment 2021: The 11th International Symposium on Human Factors in Driver Assessment, Training and Vehicle Design, Virtual

General Co-chair and Organizer: Driving Assessment 2019: The 10th International Symposium on Human Factors in Driver Assessment, Training and Vehicle Design, Santa Fe, NM

General Co-chair and Organizer: Driving Assessment 2017: The 9th International Symposium on Human Factors in Driver Assessment, Training and Vehicle Design, Manchester, VT

General Co-chair and Organizer: Driving Assessment 2015: The 8th International Symposium on Human Factors in Driver Assessment, Training and Vehicle Design, SnowBird, Utah

General Co-chair and Organizer: Driving Assessment 2013: The 7th International Symposium on Human Factors in Driver Assessment, Training and Vehicle Design, Bolton Landing, New York.

General Co-chair and Organizer: Driving Assessment 2011: The 6th International Symposium on Human Factors in Driver Assessment, Training and Vehicle Design, Squaw Valley, California.

General Co-chair and Organizer: Driving Assessment 2009: The 5th International Symposium on Human Factors in Driver Assessment, Training and Vehicle Design, Big Sky, Montana.

General Co-chair and Organizer: Driving Assessment 2007: The 4th International Symposium on Human Factors in Driver Assessment, Training and Vehicle Design, Stevenson, Washington.

General Co-chair and Organizer: Driving Assessment 2005: The 3rd International Symposium on Human Factors in Driver Assessment, Training and Vehicle Design, Rockport, Maine.

General Co-chair and Organizer: Driving Assessment 2003: The 2nd International Symposium on Human Factors in Driver Assessment, Training and Vehicle Design, Park City, Utah.

General Co-chair and Organizer: Driving Assessment 2001: The 1st International Symposium on Human Factors in Driver Assessment, Training and Vehicle Design, Aspen, Colorado.

Moderator, The Safety of Voice Systems in Vehicles, 2001 Human Factors and Ergon. Soc. MSP.

Moderator; Interface Design Considerations for Emerging Vehicle Control Technologies, Intelligent Transportation Society of America Annual Meeting, 2000. Boston, MA.

Program Chair; Surface Trans. Section, Human Factors and Ergon. Society, 1998. Houston, Texas.

Program Chair; Surface Trans. Section, Human Factors and Ergonomics Society, 1998. Chicago, IL.

Program Chair: Driver Performance and Behavior. Human Factors and Ergonomics Society, 1997. Albuquerque, New Mexico.

Program Chair: Crash Causation and Risk. Human Factors and Ergonomics Society, 1996. Philadelphia, Pennsylvania.

Program Chair: Driver Behavior Session. 17th International Symposium in Visibility and Driver Behavior 1996. Transportation Research Board, National Research Council.

Publications (as of February 2026)

Citations 5,896

h-index 35

175 Total articles published

Refereed Archival Journal Publications (66 published)

1. Salehi, H., **McGehee, D.V.**, Gaspar, J., Carney, C. (2025). Can Drivers Construct Accurate Mental Models of Autopilot?. In: Gesa Praetorius, Steven Mallam, Amit Sharma, Dimitrios Ziakkas and Riccardo Patriarca (eds) Advances in Human Factors of Transportation. <http://doi.org/10.54941/ahfe1006505>
2. **McGehee, D.V.** (2025). Universities and colleges teach the most valuable career skills when they don't stick narrowly to preprofessional education. *The Conversation*. <https://doi.org/10.64628/AAI.35ggrnqh>
3. Uc, E., Magnotta, V., Axelson, E., Dawson, J., Mani, M., Comellas, A., **McGehee, D.V.**, and Darling, W. (2024). The 2-Minute Walking Test Predicts Aerobic Fitness, Motor Function, and Brain Health in Parkinson's disease (PD). *Movement Disorders* (Vol. 39, pp. S489-S490).

4. Uc, E., Magnotta, V., **McGehee, D.V.**, Axelson, E., Mani, M., Dawson, J., and Darling, W. (2023). White matter lesion burden is associated with poorer clinical and driving outcomes in mild Parkinson's disease. *Movement Disorders* (Vol. 38, pp. S723-S723).
5. Mitropoulos-Rundus, **McGehee, D.V.**, & Schwarz, C. (2023). [Analyzing driver foot behavior between regenerative and service braking](#). SAE International journal of transportation safety 11(09-11-01-0001).
6. C. Schwarz, O. Ahmad, T. Brown, J. Gaspar, G. Wagner and **D. V. McGehee** (2023), "The Long and Winding Road: 25 Years of the National Advanced Driving Simulator," in *IEEE Computer Graphics and Applications*, vol. 43, no. 4, pp. 121-128, doi: 10.1109/MCG.2023.3277228.
7. Burt, TS, Brown, TL, Schmidt, R., **McGehee, D.V.**, Milavetz, G., Gaffney, G., Berka, C. (2022). [Perceived effects of cannabis: Generalizability of changes in driving performance](#). *Traffic Injury Prevention* 23 (sup1). S8-S13
8. Shull EM, Gaspar JG, **McGehee D.V.**, Schmitt R. Using Human–Machine Interfaces to Convey Feedback in Automated Driving (2022). *Journal of Cognitive Engineering and Decision Making*. 2022;16(1):29-42. doi:[10.1177/15553434221076827](https://doi.org/10.1177/15553434221076827)
9. **McGehee, D.V.**, Roe, C., Kasarla, P., Wang, C. (2022). Quantifying and recommending seat belt reminder timing using naturalistic driving video data. *Journal of Safety Research*. <https://doi.org/10.1016/j.jsr.2021.12.022>
10. Mitropoulos-Rundus, C., Schwarz, C., & **McGehee, D.V.** (2021). Benefits Estimation of Regenerative Braking versus Service Braking. *Ergonomics*, 0(ja), 1–21. <https://doi.org/10.1080/00140139.2021.1908601>
11. Burt, T.S., Brown, T.L., Milavetz, G., **McGehee, D.V.** (2021). [Mechanisms of Cannabis Impairment: Implications for Modeling Driving Performance](#). *Forensic Science International*. Elsevier.
12. Burt, T. S., Brown, T. L., Schmitt, R., **McGehee, D.V.**, Milavetz, G., Gaffney, G. R., & Berka, C. (2021). Perceived effects of cannabis and changes in driving performance under the influence of cannabis. *Traffic Injury Prevention*, 1-6. <https://doi.org/10.1080/15389588.2021.1933459>
13. Faust, K.S., Casteel, C. **McGehee, D.V.**, Peek-Asa, C., Rohlman, D., Ramirez, M. (2021). [Examining the Association Between Age and Tractor Driving Performance Measures Using a High-Fidelity Tractor Driving Simulator](#). *Journal of Agricultural Safety and Health*.
14. Faust, K.S., Casteel, C. **McGehee, D.V.**, Peek-Asa, C., Rohlman, D., Ramirez, M. (2021). [Development and use of a high-fidelity tractor driving simulator to examine the effect of age on crash risk. Injury prevention](#). *Injury Prevention. British Medical Journal*. 27:A15-A-16.

15. Faust, K.S., Casteel, C. **McGehee, D.V.**, Peek-Asa, C., Rohlman, D., Ramirez, M. (2020). [Examination of realism in a high-fidelity tractor driving simulator.](#) *Journal of Agricultural Safety and Health*. 26 (4), 123-37.
16. Gasper, J.G., **McGehee, D.V.** (2019). [Driver brake response to sudden unintended acceleration while parking.](#) *Transportation Research: Interdisciplinary Perspectives*, 2, 100039.
17. Nylen, A.B., Reyes, M.L., Roe, C.A., **McGehee, D.V.** (2019). [Impacts on driver perceptions in initial exposure to ADAS technologies.](#) *Transportation Research Record*. Journal of the National Academy of Sciences, 2673 (10), 354-360.
18. Wilkenson, M.E., **McGehee, D.V.**, (2019). [Auditory global positioning system and advanced driver assistance system: a safer alternative to bioptic telescopes for drivers who are visually impaired?](#) *Optometry and Visual Science* 96 (2). 130-132.
19. Missikpode, C. Peek-Asa, C., **McGehee, D.V.**, Wallace, R. (2019). [Classifying and predicting risky driving among novice drivers: a group-based trajectory approach.](#) *Journal of Safety Research*. 68 215-333
20. Missikpode, C. Peek-Asa, C. **McGehee, D.V.**, Torner, J. Wakeland, W., Wallace, R. (2018). [Teen driver system modeling: a tool for policy analysis.](#) *Injury Epidemiology*. Vol. 5: 34-44.
21. Wu, Y., Boyle, L.N., **McGehee, D.V.** (2018). [Evaluating variability in foot to pedal movements using functional principal component analysis.](#) *Accident Analysis and Prevention*. Vol. 118: 146-153.
22. Carney, C., Harland, K.K., **McGehee, D.V.** (2018). [Examining teen driver crashes and the prevalence of distraction: Recent trends 2007-2015.](#) *Journal of Safety Research*, Vol 64; 21-27.
23. Stewart, K., Fan, J., Schwarz, C., **McGehee, D.V.** (2018). [Geospatial analysis of residential parking behaviors using a semantic modeling approach.](#) *Travel Behavior and Society* 11, 9-11.
24. Merat, N., Seppelt, B., Louw, T., Engstrom, J., Lee, J.D., Green, C.A., Monk, C., Itoh, M., **McGehee, D.V.**, Sunda, T., Unoura, K., Victor, T., Schieben, A., Keinath, A. (2018). [The “out of the loop” concept in automated driving: Proposed definition, measures and implications.](#) *Cognition, Technology and Work*. 1-12.
25. Wu, Y., Boyle, L.N., **McGehee, D.V.**, Ebe, K., Foley, J. (2017). [Foot placement during error and pedal applications in naturalistic driving.](#) *Accident Analysis and Prevention*. Vol 99, part A. pp 102-109.
26. Yang, J.Z., Li, L., Wu, H.Q., **McGehee, D.V.**, Peek-Asa, C. (2017). [A comparative analysis of child passenger restraint use in China and the United States.](#) *World Journal of Pediatrics*. 13 (6), 593-598.

27. **McGehee, D.V.**, Roe, C., Ng Boyle, L., We, Y., et al. (2016). [The Wagging Foot of Uncertainty: Data Collection and Reduction Methods for Examining Foot Pedal Behavior in Naturalistic Driving.](#) *SAE Int. J. Trans. Safety*, 4(2): 289-294.
28. Carney, C., Harland, K.S., **McGehee, D.V.** (2016). [Using Event-Triggered Naturalistic Data to Examine the Prevalence of Teen Driver Distractions in Rear-End Crashes.](#) *Journal of Safety Research*. Vol. 57; 47-52.
29. McDonald, A.B., **McGehee, D.V.**, Chrysler, S.T., Askelson, N.M., Angell, L.S., Seppelt, B.D. (2016). [National survey identifying gaps in consumer knowledge of advanced safety vehicle systems.](#) *Transportation Research Record*. 2559: 1-6.
30. Harland, K., Carney, C., **McGehee, D.V.**, Weiss, M., Raby, M. (2016). [Analysis of Naturalistic Driving Videos of Fleet Services Drivers to Estimate Driver Error and Potentially Distracting Behaviors as Risk Factors for Rear-end versus Angle Crashes.](#) *Traffic Injury Prevention*. 17 (5); 465-471
31. Oneyear, N., Hallmark, S. Carney, C., **McGehee, D.V.** (2016). [Prediction of lane encroachment on rural two-lane curves using the SHRP2 naturalistic driving study data.](#) *Transportation Research Record*.
32. Hamann, C., Peek-Asa, C., **McGehee, D.V.** (2015). [69 helmet camera study of adult and child bicycling patterns and injury risk factors by gender.](#) *Injury Prevention. British Medical Journal*. Vol 21.
33. Hallmark, S.L., Tyner, S., Oneyear, N., Carney, C. and **McGehee, D.V.** (2015). [Evaluation of driving behavior on rural 2-lane curves using the SHRP2 naturalistic driving study data.](#) *Journal of Safety Research*.
34. Wu, Y., Boyle, L.N., **McGehee, D.V.**, Ebe, K., Foley, J. (2015). [Modeling types of pedal applications using a driving simulator.](#) *Human Factors: The Journal of the Human Factors and Ergonomics Society*.
35. Klauer, S., Ehsani, J., **McGehee, D.V.**, Manser, M. (2015). [The effect of secondary task engagement on adolescents driving performance and crash risk.](#) *Journal of Adolescent Health*. 57(1) 36-43.
36. **McGehee, D.V.** (2014). [Visual and cognitive distraction metrics in the age of the smart phone.](#) *Annals of Advances in Automotive Medicine*. 58: 15–23.
37. Durbin, D., **McGehee, D.V.**, Fisher, D.L., McCartt, A. (2014). [Special considerations in distracted driving with teens.](#) *Annals of Advances in Automotive Medicine*. 58:69-83.
38. Chen, X.J., Yany, J.Z., Peek-Asa, C., **McGehee, D.V.**, Li, L.P. (2014). [Parents' knowledge, attitude, and use of child restraints in Shantou, China.](#) *American Journal of Preventative Medicine*. 46(1): 85-88.

39. Jennissen, C. A., Marsico, J., Steffen, J., Schnell, T., **McGehee, D.V.**, & Denning, G. (2012). [187 Computer Modeling to Investigate the Risk of All-Terrain Vehicle Rollover While Turning](#). *Annals of Emergency Medicine*, 60(4), S67.
40. Jennissen, C., Marsico, J., Steffen, J., Schnell, T., **McGehee, D.V.**, & Denning, G. (2012). [Optimizing seat length design to minimize extra passengers on all-terrain vehicles](#). *Injury prevention; British Medical Journal*, 18.
41. **McGehee, D.V.** (2011). [The building blocks of driver distraction policy](#). *Ergonomics in Design*. 19: 25-27.
42. Lee, J. D., **McGehee, D. V.**, Brown, J. L., Richard, C. M., Ahmad, O., Ward, N. J. (2011). [Matching simulator characteristics to highway design problems](#). *Transportation Research Record*, Journal of the Transportation Research Board; No. 2248; 53-60.
43. **McGehee, D.V.**, Carsten, O.M.J. (2010). [Perception and biodynamics in pre-crash response](#). *Annals of Advances in Automotive Medicine*. 54: 315-331.
44. Carney C., **McGehee D.V.**, Lee J.D., Reyes, M., Raby, M. (2010). [Using an Event-Triggered Video Intervention System to Expand the Supervised Learning of Newly Licensed Adolescent Drivers](#). *American Journal of Public Health*. 100(6): 1101-6.
45. **McGehee, D.V.**, Carney, C., Raby, M. Lee, J.D., Reyes, M. (2007). [Extending parental mentoring using an event-triggered video intervention in rural teen drivers](#). *Journal of Safety Research*. 38: 215–227.
46. Lee, J. D., **McGehee, D. V.**, Brown, T. L., & Nakamoto, J. (2007). [Driver sensitivity to brake pulse duration and magnitude](#). *Ergonomics*, 50(6), 828-836.
47. Lee, J. D., **McGehee, D. V.**, Brown, T. L., & Marshall, D. C. (2006). [Effects of adaptive cruise control and alert modality on driver performance](#). *Transportation Research Record* 1980(1): 49-56.
48. Donmez, B., Boyle, L.N., Lee, J. and **McGehee, D.V.** (2006) [Drivers' attitudes toward imperfect mitigation strategies](#). *Transportation Research Part F*, 9, 6, 387-398.
49. Hoffman, J., Lee, J.D., **McGehee, D.V.**, Gellatly, A. (2005). [Visual Sampling of in-vehicle text messages: the effects of number of lines and page presentation](#). *Transportation Research Record*: 1937: 22-31.
50. **McGehee, D.V.**, Lee, J.D., Dawson, J, Rizzo, M. (2004). [A quantitative analysis of steering adaptation on a high performance driving simulator](#). *Transportation Research, Part F: Traffic Psychology and Behavior*. 7(3): 181 - 196.
51. Lee, J.D., **McGehee, D.V.**, Brown, T.L., Reyes, M.L. (2002) [Collision warning timing, driver distraction, and driver response to imminent rear-end collisions in a high fidelity driving simulator](#). *Human Factors: The Journal of the Human Factors and Ergonomics Society*. 44(2): 314-334.

52. **McGehee, D.V.**, Brown, T.L., and Lee, J.D., Wilson, T. (2002). [Warning timing and collision avoidance behavior in stationary lead vehicle crashes.](#) *Transportation Research Record: Journal of the Transportation Research Board.* 1803: 1-7.
53. Hoffman, J., Lee, J.D., Brown, T.L., **McGehee, D.V.**, (2002). [Comparison of Braking in a High Fidelity Simulator with Test Track Data.](#) *Research Record: Journal of the Transportation Research Board.* 1803: 59-65.
54. Rizzo, M., **McGehee, D.V.**, Dawson, J., Anderson, S. (2001). [Simulated car crashes at intersections in drivers with Alzheimer's Disease.](#) *Alzheimer Disease and Associated Disorders.* 15(1), 10-20.
55. Brown, T. L., Lee, J. D., & **McGehee, D. V.** (2001). [Human performance models and rear-end crash avoidance algorithms.](#) *Human Factors: The Journal of the Human Factors and Ergonomics Society.* 43: 462-482.
56. Schnell, T., Aktan, F., **McGehee, D.V.**, Dvorak, M., Hunt, J., Reyes, A., Sorak, D. (2001) "[Pedestrian Visibility under Automobile Lowbeam Headlight Illumination, with and without Headlight Covers](#)", *Transportation Research Record* 1773: 114-126.
57. Brown, T. L., Lee, J. D., & **McGehee, D. V.** (2000). [An attention-based model of driver performance in rear-end collision situations.](#) *Transportation Research Record:* 1724:14-20.
58. **McGehee, D.V.**, Raby, M., & Nourse, G.E. (2000). Defining the operator interface of a snowplow lane tracking system from field interviews and surveys. [Transportation Research Record: Journal of the Transportation Research Board.](#) 1700: 38-44.
59. Mazzae, E.N., Baldwin, G.H.S, **McGehee, D.V.** (1999). [Driver crash avoidance behavior with ABS in an intersection incursion scenario on the Iowa Driving Simulator.](#) Society of Automotive Engineers. *SAE Journal* 1999-01-1290.
60. Dingus, T.A., **McGehee, D.V.**, R.N. Manakkal, S.J. Jahns., J.M. Hankey, and C. Carney (1997). [Human factors field evaluation of automotive headway maintenance/collision warning devices.](#) *Human Factors: The Journal of the Human Factors and Ergonomics Society*, 39(2). 216-229. **Winner of the Jerome H Ely Best Article award in the Journal Human Factors.**
61. Lee, J., **McGehee, D.V.**, T.A. Dingus, and T. Wilson (1997). Collision avoidance behavior of unalerted drivers' using a front-to-rear-end collision warning display on the Iowa Driving Simulator. [Transportation Research Record: Journal of the Transportation Research Board.](#) National Research Council.
62. Rizzo, M., S.R. Reinach, **McGehee, D.V.** and J. Dawson (1997). [Simulated car crashes in drivers with Alzheimer's Disease.](#) *Archives of Neurology: American Medical Assoc.* 54. 545-551.
63. Dingus, T.A., M.C. Hulse, M.A. Mollenhauer, R.N. Fleischman, D.V. **McGehee**, and N. Manakkal (1997). [Effects of Age, System Experience, and Navigation Technique on](#)

[Driving with an Advanced Traveler Information System.](#) *Human Factors Journal: The Journal of the Human Factors and Ergonomics Society.* 39(2), 177-199.

64. Reinach, S.J., M. Rizzo and D.V. **McGehee** (1996). Driving with Alzheimer's Disease: The anatomy of a crash. [International Journal of Alzheimer's Disease and Associated Disorders.](#) 1:21-27
65. Rizzo, M., S.R. Reinach, **D.V. McGehee**, and K. Laird (1997). [Simulated car crashes and crash predictors in Drivers with Alzheimer's Disease.](#) *Annals of Neurology;* 54(5):545-551.
66. Rizzo, M., S.R. Reinach, **D.V. McGehee**, and T.A. Dingus (1995). Simulated car crashes and the useful field of view. [Investigative Ophthalmology & Visual Science.](#) (37:3).

Peer reviewed journal editorials (5 published)

67. Epstein, A., McGehee, D.V. (2020) [The future of roadway safety.](#) *Transportation Research News.* Transportation Research Board. National Academy of Sciences.
68. Peek-Asa, C., **McGehee, D.V.**, Ebel, B. (2014). [Increasing safe teenaged driving: Time to integrate the growing evidence base.](#) *JAMA Pediatrics* doi:10.1001/2014.582.
69. Winston, F.K., McDonald, C.C., and **D.V. McGehee** (2014). ["Adolescents with ADHD demonstrate driving inconsistency."](#) *Journal of Pediatrics* 164(3): 674-675.
70. Winston, F.K., McDonald, C.C., **McGehee, D.V.** (2013). [Are we doing enough to prevent the perfect storm? Novice drivers, ADHD, and distracted driving.](#) *JAMA Pediatrics.* 167(10): 892-894.
71. **McGehee, D.V.** (2010). Shifting driver distraction. [Highway to Justice.](#) A Joint publication of the American Bar Association and the National Highway Traffic Safety Administration (3)5.

Peer reviewed proceedings articles (55 published)

1. Salehi, H., **McGehee D.V.**, Gaspar, J., Carney, C. (2025—in press). Can drivers construct accurate mental model of Autopilot? *Advances in Human Factors in Transportation.*
2. Mason, J., Gaspar, J., Carney, C., Kim, J., Domeyer, J., Lenneman, J., & **McGehee, D.V.** (2023). Do Drivers Require Education After Over-The-Air Adas Updates? *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 67(1), 2150-2151. <https://doi.org/10.1177/21695067231192206>
3. Gaspar, J. G., Carney, C., Mason, J., **McGehee, D. V.**, Domeyer, J., & Lenneman, J. (2023). A Network Analysis Approach to Quantifying Changes in ADAS from Over-the-Air Updates. *Proceedings of the Human Factors and Ergonomics Society Annual*

Meeting, 67(1), 2055-2061. <https://doi.org/10.1177/21695067231192458>

4. Corcoran, N.M., **McGehee, D.V.**, Noonan, T.Z. (2019). [A temporal analysis if safety drivers taking back control in public roadway automated driving trials](#). Proceedings of the Human Factors and Ergonomics Society Annual Meeting. Seattle, WA.
5. Chun, S., Ghalehjegh, N.H., Choi, J.B., Schwarz, C.W., Gaspar, J.G., **McGehee, D.V.**, Baek, S.S. (2019). NADS-Net: [A nimble architecture for driver and seatbelt detection via convolutional networks](#). Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV).
6. Reyes, M.L., Roe, C.A., McDonald, A.B., Freiburg, J.E., **McGehee, D.V.** (2017). [Adaptive Cruise Control: First Impressions Matter](#). *SAE World Congress. Technical paper 2017-01-1382*.
7. **McGehee, D.**, McDonald, A., Reyes, M., Roe, C. (2017). [As the Technology Evolves, the Consumer Education Must, Too](#). *Proceedings of the 2017 International Technical Conference on the Enhanced Safety of Vehicles*, US National Highway Traffic Safety Administration.
8. Reyes, M., **McGehee, D.**, McDonald, A., Roe, C. (2017). An Evaluation of How Lane Keeping Assist Anomalies in On-Road Driving Affect Driver Trust. *Road Safety & Simulation International Conference*, Hague, Netherlands. Poster.
9. McDonald, A., **McGehee, D.V.**, Reyes, M.L., and Roe, C.A. (2016). *A Drive Into Understanding Consumer Mental Model and Trust About Advanced Vehicle Safety Systems*. Automated Vehicles Symposium, San Francisco, CA. Poster.
10. McDonald, A.B., Reyes, M.L., Roe, C.A., **McGehee, D.V.**, (2017). Driver understanding of ADAS and evolving consumer education. [25th International Technical Conference on the Enhanced Safety of Vehicles. Detroit, MI. 17-0373](#).
11. Reyes, M.L., Marshall, D., **McGehee, D.V.** (2016). [Public opinion toward all-passenger seat belt laws in Iowa](#). Transportation Research Board 94th Annual meeting. Washington, DC.
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End Collision Circumstances on the Iowa Driving Simulator. *74th Annual Transportation Research Board Meeting*. Washington, D.C.

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56. **McGehee, D.V.**, Lee,, J.D., Rizzo, M. & Boyle, L.N. (2019). *Proceedings of the Tenth International Driving Symposium on Human Factors in Driving Assessment, Training, and Vehicle Design*. Santa Fe, NM: The University of Iowa, Public Policy Center.
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Technical Reports

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70. McDonald, A.B., Reyes, M.L., Roe, C.A., Friberg, J.E., Faust, K.S., and **McGehee, D.V.** (2016). Technology Demonstration Study. The University of Iowa and National Safety Council, Iowa City, IA.
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92. **McGehee, D.V.**, T. Brown, and T. Wilson (1998). Examination of drivers' collision avoidance behavior in a stationary lead vehicle situation using a front-to-rear-end collision warning system. USDOT/NHTSA Office of Crash Avoidance Research Technical Report. Contract DTNH22-93-C-07326.
93. Wilson, T., Miller, S., Burns, M., Chase, C. Butler, W., **McGehee, D.V.**, Dingus, T.A. (1998). Light vehicle forward-looking, rear-end collision warning system performance guidelines. NHTSA HS-808-948.
94. Stoner, J.W., Evans, D.F., **McGehee, D.V.** (1997). Development of vehicle simulation. California PATH Research Report UCB-ITS-PRR-97-25.

95. Mollenhauer, M., **D.V. McGehee**, T.L. Cumming, V. Neale, T. Dingus and V. Inman (1997). Safety Evaluation of the ADVANCE Mobile Navigation Assistant. Volpe National Transportation Systems Laboratory. US Department of Transportation Technical Report.
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105. Dingus, T.A., **D.V. McGehee**, M.C. Hulse, S.J. Jahns, R. N. Manakkal, M.A. Mollenhauer, and R.N. Fleischman (1994). TravTek evaluation task C3 – camera car study. *Federal Highway Admin. Technical Report No. FHWA-RD-94-076.*

Invited Lectures

1. **McGehee, D.V.** (2026) The vaccine and self driving car paradox. University of Michigan Transportation Institute.
2. **McGehee, D.V.** (2024). **Keynote speaker.** University of Leeds (UK) International conference on driving simulation. The past, present and future of driving simulation
3. **McGehee, D.V.** (2024). Transitions in automation and driving. AAA Foundation for Traffic Safety Annual Meeting. UNC-Chapel Hill.
4. **McGehee, D.V.** (2021). Increasing safety in automated driving. University of Dayton HFES.
5. **McGehee, D.V.** (2021). The future of automated driving. AARP national convention.
6. **McGehee, D.V.** (2020). Digital infrastructure. American Society of Civil Engineers. Virtual
7. **McGehee, D.V.** (2019). Buy ADAS vehicles for your fleet now. Keynote for National Fleet Administrators.
8. **McGehee, D.V.** (2018). Law enforcement issues in Automated Driving. International Association of Police Chiefs Annual Meeting. Orlando, FL.
9. **McGehee, D.V.** (2018). Automated Driving Systems. National Association of Women Highway Safety Leaders. Atlanta, GA.
10. **McGehee, D.V.** (2018). Legal questions in automated vehicles. University of Iowa College of Law Colloquium. Iowa City, Iowa.
11. **McGehee, D.V.** (2018). Legal issues in driver distraction – data from the inside out. Iowa Attorney General’s office and Iowa County Attorneys Association. West Des Moines, Iowa
12. **McGehee, D.V.** (2018). Roadway infrastructure for automated driving systems. Greater Iowa Asphalt Conference, Des Moines.
13. **McGehee, D.V.** (2017). Driver performance and understanding assessment in automated driving systems. SIP-ADUS International Conference on Connected and Automated Vehicles. Tokyo, Japan.
14. **McGehee, D.V.** (2016). Engineering consumer understanding of higher levels of automation. SIP-ADUS International Conference on Connected and Automated Vehicles. Tokyo, Japan.
15. **McGehee, D.V.** (2016). The past, present and future of automated driving. College of Engineering Seminar Series, Montana State University.
16. **McGehee, D.V.** (2015). Policy issues in automated driving. American Association of Motor Vehicle Administrators International Conference.
17. **McGehee, D.V.** (2015). Cognitive distraction in naturalistic driving. NHTSA Hearing on Cognitive distraction. Washington, DC.
18. **McGehee, D.V.** (2015). Why teens crash—distraction is key. American Association of Motor Vehicle Administrators International Conference.
19. **McGehee, D.V.** (2015). Automotive Traumatology. University of Iowa Grand Rounds.
20. **McGehee, D.V.** (2014). Understanding teen driving crashes. University of Iowa Hospitals and Clinics Nursing Grand Rounds.
21. **McGehee, D.V.** (2014). Crash injury mechanisms and assessment in the field. Department of Applied Mechanics. Chalmers University of Technology. Gothenburg, Sweden.
22. **McGehee, D.V.** (2014). Coding pre and post impact postural response for injury prediction. National Highway Traffic Safety Administration, Washington DC.

23. **McGehee, D.V.** (2014). Strategic partnerships in automated vehicles: Advantage Iowa. Iowa Economic Development Authority.
24. **McGehee, D.V.** (2014). Driving STEM. Iowa STEM Education Program. Iowa City.
25. **McGehee, D.V.** (2012). Crash causes, distraction and mitigation in young drivers. Hearing on Driver Distraction. National Transportation Safety Board, Washington, DC. Invited by NTSB chairman, Deborah Hersman.
26. **McGehee, D.V.** (2012). From Green to Blue: how teens drive. Iowa Nurses Association Conference.
27. **McGehee, D.V.** (2011). Driver distraction: history and definitions. US DOT National Highway Traffic Administration (NHTSA) Regional Administrators Conference.
28. **McGehee, D.V.** (2011). Beaming into the Trauma Bay: Advanced Video Data Recorders and Crash Injury Assessment. Society of Automotive Engineering Event Data Recorder Symposium. Danville, Virginia.
29. **McGehee, D.V.** (2011). Research tools in driver performance and behavior research. Jinan University School of Medicine. Guangzhou, China.
30. **McGehee, D.V.** (2011). Safety policy and driving safety. China Centers for Disease Control and Prevention. Guangdong Province, Guangzhou, China.
31. **McGehee, D.V.** (2011). Research tools in driver performance and behavior research. Shantou University Medical School. Shantou, China.
32. **McGehee, D.V.** (2010). Shifting driver distraction. Iowa Prosecuting Attorney's Association. Des Moines, Iowa.
33. **McGehee, D.V.** (2010). The history of driver distraction research. Driver Distraction Summit, US DOT. Washington, DC. Invited by US Secretary of Transportation, Raymond J. LaHood.
34. **McGehee, D.V.** (2010). Perception and biodynamics in pre-crash response. Montana State University. Bozeman, Montana.
35. **McGehee, D.V.** (2010). Teen driver research and data in Iowa. Testimony at House and Senate Transportation Committee. Des Moines, Iowa.
36. **McGehee, D.V.** (2010). Driver distraction –data and definitions. Testimony at Senate Transportation Committee. Des Moines, Iowa.
37. **McGehee, D.V.** (2010). Driver distraction –data and definitions. Testimony at House Transportation Committee. Des Moines, Iowa.
38. **McGehee, D.V.** (2010). Using event data recorders for teen driving research. Keynote speaker—Governors Traffic Safety Bureau.
39. **McGehee, D.V.** (2010). Young driver behavior and development. University of Leeds. Yorkshire, England.
40. **McGehee, D.V.** (2009). Advanced data recorders in crash reconstruction. Iowa Medical Examiners Annual Meeting. Des Moines, Iowa.
41. **McGehee, D.V.** (2009). Roadway Design around driver behavior. State Highway Design Conference. Ames, Iowa.
42. **McGehee, D.V.** (2007). 366,000 miles of video feedback. Children's Hospital of Pennsylvania, University of Pennsylvania. Philadelphia, Pennsylvania.
43. **McGehee, D.V.** (2007). The use of naturalistic driving and simulation to examine pre-impact response. CIRP University of Pennsylvania. Philadelphia, Pennsylvania.
44. **McGehee, D.V.** (2007). The use of video interventions in teen driving. Child and Youth Injury Prevention Conference. Des Moines, Iowa.
45. **McGehee, D.V.** (2007). Extending Parental Mentoring Using an Event-Triggered Video Intervention in Rural Teen Drivers. National Safety Council: GDL and Beyond.

- Research Foundations for Policy and Practice Symposium. Tucson, Arizona.
46. **McGehee, D.V.** (2006). The first generation of avionics innovation: Human factors design metrics and theory. University of Hyderabad, India.
 47. **McGehee, D.V.** (2005) Neurophysiologic mechanisms in pre-impact withdrawal and bracing. Department of Experimental Psychology, University Oxford. Oxford, England.
 48. **McGehee, D.V.** (2005). Bugs on the windshield: how the natural world prepares for danger response. University of Newcastle upon Tyne Department of Neurobiology. Newcastle, England.
 49. **McGehee, D.V.** (2005). Thoughts on a 50-year plan for traffic safety in the developing/less mechanized world. International Programs Symposium, University of Iowa. Iowa City, Iowa.
 50. **McGehee, D.V.** (2004). Keynote Speaker, Paul D. Scholz Symposium on Technology and its Role in Society: Cognitive Design: Developing Technology for the Human Mind. Tau Beta Pi engineering honors society. Perception and Biodynamics in crash- related pre-impact bracing: A systems engineering approach rooted in Nature. University of Iowa.
 51. **McGehee, D.V.** (2003). Integrating crash telematics with crash impact: understanding how bracing influences injury outcomes. University of Virginia. Charlottesville, Virginia.
 52. **McGehee, D.V.** (2002). The technology behind the science of driving. State of Iowa: First conference on older drivers. Des Moines, Iowa.
 53. **McGehee, D.V.** (2002). The biodynamics of pre-impact bracing: toward an active crash test dummy. Department for Transport. London, England.
 54. **McGehee, D.V.** (2002). Towards a 'true' biofidelic test dummy. Transport Research Laboratories, Crash Biomechanics Department. Crowthorne, England.
 55. **McGehee, D.V.**, and D. LeBlanc (2002). Forward Collision Warning Standard: US position. International Standards Organization. London, England.
 56. **McGehee, D.V.** (2002). Pre-impact bracing. Biomechanics Department. Motor Industry Research Association. Nuneaton, England.
 57. **McGehee, D.V.** (2002). The biodynamics of pre-impact bracing: Towards an active crash dummy. National Center for Crash Biomechanics, National Highway Traffic Safety Administration, US DOT. Washington DC.
 58. **McGehee, D.V.** (2001). The design and evaluation of a lane tracking system for snow-plows. University of Leeds, Institute for Transport Studies. Leeds, England.
 59. **McGehee, D.V.**, (1998). Forward Collision Warning Standards for Crash Avoidance. Panel member and presenter on Collision Warning System Driver Interface Issues. Society of Automotive Engineers International Congress. Detroit, Michigan.
 60. **McGehee, D.V.** (1997). From aircraft cockpits to automobiles: How experimental psychology applies to the design of everyday things. Department of Psychology, Central Washington University. Ellensburg, Washington.
 61. **McGehee, D.V.** (1997). Principles of Clinical Research Using Driving Simulation and Instrumented Vehicles. Conference on Clinical Research. University of Iowa College of Medicine. Iowa City, Iowa.
 62. **McGehee, D.V.** (1997). Design Science: Application of the Human Factors Design Process to Civil and Environmental Engineering. Department of Civil and Environmental Engineering, University of Iowa. Iowa City, Iowa.

63. **McGehee, D.V.** (1997). Scenario Design Workshop: Human Factors Consideration in Driving Simulation Scenario Design. Department of Computer Science, University of Iowa.
64. **McGehee, D.V.**, M. Rizzo (1997). Driving and car crashes in old age and dementia. CDC Work-in-Progress Symposium, Colorado State University. Ft. Collins, Colorado.
65. **McGehee, D.V.** (1997). Designing Driving Simulator Scenarios, Protocols and Ruses to Examine True Unalerted Driver Reaction Time. Departments of Computers Science and Applied Psychology, University of Leeds. Leeds, England.
66. **McGehee, D.V.** (1996). Designing Driving Simulation Scenarios: A Human Factors Perspective. Workshop on Scenario and Traffic Generation for Driving Simulation. Sponsored by University of Iowa and Renault Research Center and Ford Research Laboratory. Orlando, Florida.
67. Rizzo, M., **D.V. McGehee** and R. Wallace (1996). Rational Decisions on Providing Drivers Licenses to Medically Impaired Drivers. Interdisciplinary Health Sciences Group Seminar. University of Iowa, Iowa City, Iowa.
68. Rizzo, M., **D.V. McGehee**, and S.R. Reinach, (1996). Driving Performance Measures using Simulation and Instrumented Vehicles. International Symposium on Alzheimer's Disease and Driving. St. Louis, Missouri.
69. **McGehee, D.V.** (1996). Automotive Technology and the Older Driver: Research in Enhancing the Mobility and Safety of Older Drivers. Invited speaker. Gerontology Colloquium. Iowa State University, Ames, Iowa.
70. **McGehee, D.V.** (1996). From driving simulation to instrumented vehicles: applying human factors engineering design to the design of advanced automotive technologies. Graduate Seminar in Mechanical Systems. Dept. of Mechanical Engineering, University of Iowa.
71. Rizzo, M., and **D.V. McGehee** (1995). Driving and car crashes in old age and dementia. CDC Work-in-Progress Symposium, UCLA School of Public Health, Southern California Injury Prevention Research Center. Los Angeles, California.

Patents

Baek, S., Chun, S., Ghalehjegh, NH, Heesu, K., **McGehee, D.V.**, Kahl, J.T., Gudarzi, M. (2021). System and method for monitoring at least one occupant within a vehicle using a plurality of convolutional neural networks.

Rundes, R.M. and **McGehee, D.V.** (2022). Using 'dynamic regenerative braking' to enhance crash avoidance.

Teaching

IE 6240 Cognitive Engineering (Originally developed course Spring 2024)

IE 3450 Ergonomics (Spring 2024 Substitute)

IE 5240 Industrial Engineering Design Project (fall 2023)

IE 5240 Industrial Engineering Design Project (fall 2022)

IE 5240 Industrial Engineering Design Project (fall 2021)

IE 4600 Industrial Engineering Design Project (fall 2020)

IE 5240 Automated Vehicle Systems (spring 2019)

IE 4600 Industrial Engineering Design Project (fall 2019)

IE 4600 Industrial Engineering Design Project (fall 2018)

IE 4600 Industrial Engineering Design Project (fall 2017)

IE 5995 Automated Vehicle Systems (fall 2016—originally developed course)

Media

National Public Radio, New York Times, Wall Street Journal, USA Today, ABC, CBS, NBC, Business insider, New Yorker, UK channel 4, PBS Nova, Huffington Post, Des Moines Register; regional television, local and nationally syndicated commercial radio, and print media.