

Dr. Morgan's experience includes research and practice in human factors and driver performance. As a research scientist he has conducted applied research and testing of issues related to human factors, including driver performance involving both passenger and commercial motor vehicles for government and industry clients. He has taught university courses on human performance and human factors, disseminated his research findings in peer-reviewed publications, and serves as a reviewer for professional journals. As a human factors and ergonomics consultant, he applies human performance principles to the forensic evaluation of traffic accidents, premises claims, and warnings.

Formal Education

- Doctor of Philosophy in Applied Experimental and Human Factors Psychology, University of Central Florida, 2008
- Master of Science in Human Systems in Modeling and Simulation, University of Central Florida, 2006
- Bachelor of Arts in Psychology, University of North Carolina at Asheville, 2002

Professional Development

- Symposium on Traffic Safety, Institute of Police Technology and Management, Orlando, FL, 2017
- World Reconstruction Exposition, 2016
- Accident Reconstruction and Investigation, 2016
- Crash Data Retrieval User's Summit, 2016
- English XL Variable Incidence Tribometer Certification Program, 2016
- Traffic Crash Investigation I – Online Course, Northwestern University Center for Public Safety, 2015

Certification

- ACTAR Accredited Traffic Accident Reconstructionist, #3051
- Certified XL Tribometrist, English XL Variable Incidence Tribometer

Professional Affiliations

- American Psychological Association, Member (2001 – present)
- American Society for Testing and Materials, Member (2016 – present)
 - E58 Forensic Engineering and F13 Pedestrian/Walkway Safety and Footwear committee membership
- Human Factors and Ergonomics Society, Member (2003 – present)
 - Cognitive Engineering and Decision Making, Safety, and Surface Transportation technical group membership
- International Code Council, Professional Member (2016 – present)
- National Association of Professional Accident Reconstruction Specialists, Member (2015 – present)
- National Fire Protection Association, Member (2016 – present)
- Society of Automotive Engineers, Member (2015 – present)
- Transportation Research Board, friend of Standing Committee on Bicycle Transportation (ANF20), Standing Committee on Pedestrians (ANF10), Standing Committee on Simulation and Measurement of Vehicle and Operator Performance (AND30), Standing Committee on Truck and Bus Safety (ANB70), Standing Committee on User Information Systems (AND20), Standing Committee on Vehicle User Characteristics (AND10), and Standing Committee on Vehicle-Highway Automation (AHB30)

Curriculum Vitae

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Professional Activities

- Committee Chairman: Safety Technical Group, Human Factors & Ergonomics Society (2012 – 2014)
- Host Committee: 2005 HFES Annual Meeting
- Reviewer:
 - Journals
 - Accident Analysis and Prevention
 - Applied Ergonomics
 - Human Factors
 - Traffic Injury Prevention
 - Transportation Research Part C: Emerging Technologies
 - Transportation Research Part F: Traffic Psychology and Behaviour
 - Conferences
 - International Driving Symposium on Human Factors in Driver Assessment, Training, and Vehicle Design
 - HFES Cognitive Engineering and Decision Making Technical Group
 - HFES Safety Technical Group
 - HFES Surface Transportation Technical Group
 - HFES Forensics Professional Group
 - International Conference on Managing Fatigue
 - SAE World Congress
 - Awards
 - American Psychological Society Student Research Grants
- Session Chair: 2011 HFES Annual Meeting
- Session Co-Chair: 2012 HFES Annual Meeting

Professional Experience

- Human Factors Scientist, Forensic Engineering Technologies, LLC, Lake Mary, FL 2015 – Present
- Research Scientist, Battelle Memorial Institute, 2014 – 2015
- Senior Research Associate, Virginia Tech Transportation Institute, 2013 – 2014
- Research Associate, Virginia Tech Transportation Institute, 2008 – 2013
- Graduate Teaching Associate, University of Central Florida, 2007 – 2008
- Graduate Research Associate, University of Central Florida, 2003 – 2007

Honors and Awards

- Provost's Graduate Research Fellowship (2003)
- Graduate Research Fellowship (2006)
- Federal Motor Carrier Safety Administration Commercial Vehicle Operations Young Researcher Award (2011)

Teaching and Curriculum Development

University of Central Florida, Department of Psychology

- Cognitive Psychology
- Physiological Psychology
- Principles of Human Factors

Publications

Peer Reviewed Papers

- “Injecting realistic human models into the optical display of a future Land Warrior system for embedded training purposes.” *Journal of Defense Modeling and Simulation*, 4(2), 97-126. DOI: 10.1177/154851290700400202., Marshall, L.D., Sottolare, R., Martins, R. & Morgan, J.F., 2007
- “Driver responses to differing urban work zone configurations.” *Accident Analysis and Prevention*, 42, 978-985. DOI: 10.1016/j.aap.2009.12.021, Morgan, J.F., Duley, A.D., & Hancock, P.A., 2010
- “The effect of in-vehicle warning systems on speed compliance in work zones.” *Transportation Research Part F: Psychology and Behaviour*, 14, 331-340. DOI: 10.1016/j.trf.2011.04.001. Whitmire, J., Morgan, J.F., Oron-Gilad, T., & Hancock, P.A., 2011
- “The effect of prior task loading on subjective mental workload and task performance: An example of hysteresis in driving.” *Human Factors*, 53(1), 75-86. DOI: 10.1177/0018720810393505, Morgan, J.F., & Hancock, P.A., 2011
- “On the training and testing of entry-level commercial motor vehicle drivers.” *Accident Analysis and Prevention*, 43(4), 1400-1407. DOI: 10.1016/j.aap.2011.02.015, Morgan, J.F., Tidwell, S.A., Medina, A., & Blanco, M., 2011
- “An analysis of driving and working hour on commercial motor vehicle driver safety using naturalistic data collection.” *Accident Analysis and Prevention*, 58, 249-258. DOI: 10.1016/j.aap.2012.06.024, Soccolich, S.A., Blanco, M.B., Hanowski, R.J., Olson, R.L., Morgan, J.F., Guo, F., Wu, S.C., 2013
- “Countdown Pedestrian Signals and Low-Vision Pedestrians.” *Transportation Research Record*, 2492, 57-60. DeLaere, G., Van Houten, R., Morgan, J.F., & Shurbutt, J., 2015
- “Countdown Pedestrian Signals.” *Transportation Research Record*, 2519, 10-16. Van Houten, R., DeLaere, G., Morgan, J.F., & Shurbutt, J., 2015

Chapters

- “Estimations in driving.” In Cándida Castro Ramírez (Ed.) *Human Factors of Visual and Cognitive Performance In Driving*, pp. 51-62. Boca Raton, FL: CRC Press. Morgan, J.F. & Hancock, P.A., 2008
- “The commercial driver.” In D. Fisher, J. Lee, J. Caird, and M. Rizzo (Eds.), *Handbook of Driving Simulation for Engineering, Medicine and Psychology*, pp. 417-427. Boca Raton, FL: CRC Press. Blanco, M. Hickman, J.S., Hanowski, R.J., & Morgan, J.F., 2011
- “Comparing truck driving performance in a simulator and instrumented vehicle.” In N. Stanton, S. Landry, G. Di Bucchianico, & A.Vallicelli (Eds.) *Advances in Human Factors and Transportation Part III*, pp. 376-387. Danvers, MA: AHFE Conference, Hanowski, R.J., Morgan, J., Soccolich, S., and Tidwell, S.S., 2014

Technical Reports

- “A human factors examination of driver response to a specific work zone design (Design Standard #613, Duration Note 2) and key moderating factors” (Report No. BD-548-18). Orlando: University of Central Florida Institute for Simulation and Training., Duley, A.R., Morgan, J.F., Conway, G., Wang, J.J., Abich, J., & Hancock, P.A., 2007
- “Assessment of a drowsy driver warning system for heavy-vehicle drivers” (Report No. DOT HS 811 117). Washington, DC: National Highway Traffic Safety Administration., Blanco, M., Bocanegra, J.L., Morgan, J.F., Fitch, G.M., Medina, A., Olson, R.L., et al., 2009
- “Human performance evaluation of light vehicle brake assist systems” (Report No. DOT HS 811 251). Washington, DC: National Highway Traffic Safety Administration., Fitch, G.M., Blanco, M., Morgan, J.F., Rice, J.C., Wharton, A., Wierwille, W.W., & Hanowski, R.J., 2010
- “Synthesis study of light vehicle non-planar mirror research” (Report No. DOT HS 811 328). Washington, DC: National Highway Traffic Safety Administration., Morgan, J.F., & Blanco, M., 2010

- “Commercial motor vehicle driving simulator validation study (SimVal): Phase II” (Report No. FMCSA-RRR-11-014). Washington, DC: Federal Motor Carrier Safety Administration., Morgan, J.F., Tidwell, S.A., Medina, A., Blanco, M., Hickman, J.S., & Hanowski, R.J., 2011
- “Driver distraction: An inattention-mitigation component for behavior-based safety programs in commercial vehicle operations (IM-BBS)” (Report No. U34). Knoxville, TN: National Transportation Research Center., Victor T., Hickman, J., Camden, M., Jarlengrip, J., Larsson, C., Morgan, J., Tidwell, S., & Toole, L., 2011
- “Field Demonstration of an Advanced Heavy Vehicle Indirect Visibility System” (Report No. DOT HS 811 475). Washington, DC: National Highway Traffic Safety Administration, Fitch, G. M., Blanco, M., Camden, M., Olson, R., McClafferty, J., Morgan, J. F., et al., 2011
- “The impact of driving, non-driving work, and rest breaks on driving performance in commercial vehicle operations” (Report No. FMCSA-RRR-11-017). Washington, DC: Federal Motor Carrier Safety Administration., Blanco, M., Hanowski, R.J., Olson, R.L., Morgan, J.F., Soccolich, S.A., Wu, S-C., & Guo, F., 2011
- “Synthesis of literature relating to cellular telephone/ personal data assistant use in commercial truck and bus operations” (Report No. FMCSA-RRR-11-015). Washington, DC: Federal Motor Carrier Safety Administration., Morgan, J.F., Trimble, T.E., Bowman, D.S., Baker, S., Pickett, R., Murray, D., & Bergoffen, G., 2011
- “Human factors evaluation of level 2 and level 3 automated driving concepts: Concepts of operation” (Report No. DOT HS 812 044). Washington, DC: National Highway Traffic Safety Administration., Marinik, A., Bishop, R., Fitchett, V., Morgan, J. F., Trimble, T. E., & Blanco, M., 2014
- “Human factors evaluation of level 2 and level 3 automated driving concepts: Past research, state of automation technology, and emerging system concepts” (Report No. DOT HS 812 043). Washington, DC: National Highway Traffic Safety Administration., Trimble, T. E., Bishop, R., Morgan, J. F., & Blanco, M., 2014
- “Human factors evaluation of level 2 and level 3 automated driving concepts” (Report No. DOT HS 812 182). Washington, DC: National Highway Traffic Safety Administration., Blanco, M., Atwood, J., Vasquez, H., Trimble, T. E., Fitchett, V.L., ..., Morgan, J.F., 2015
- “Multiple sources of safety information from V2V and V2I: Redundancy, decision-making, and trust” (Report No. FHWA-HRT-15-007). McLean, VA: Federal Highway Administration., Richard, C.M., Morgan, J.F., Bacon, L.P., Graving, J.S., Divekar, G., & Lichty, M.G., 2015
- “Supporting CMV Driver Distraction Outreach Efforts” (Report No. 15-UM-034). Blacksburg, VA: National Surface Transportation Safety Center for Excellence., Morgan, J.F., Medina, A., Blanco, M., Hanowski, R.J., Fitchett, V.L., Fitzgerald, H.E., & Radlbeck, J., 2015
- “Human factors design guidance for driver-vehicle interfaces” (Report No. DOT HS 812 360). Washington, DC: National Highway Traffic Safety Administration. Campbell, J.L., Brown, J.L., Graving, J.S., Richard, C.M., Lichty, M.G., Sanquist, T., ... & Morgan, J.F., 2016

Refereed Proceedings Papers

- “Mapping an objective state of the world to a subjective degree of signalness: An exercise in fuzzy signal detection theory analysis.” Paper presented at the 48th Annual Meeting of the Human Factors and Ergonomics Society, September 20-24, New Orleans, LA., Morgan, J.F., Oron-Gilad, T., Szalma, J.L., & Hancock, P.A., 2004
- “Mental rotation of objects in an airport security screening setting.” Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 48, 624-626., Morgan, J.F., Stafford, S.C., Nayeem, R., & Pepe, A., 2004
- “The driving simulator as a workload research tool.” Proceedings of the Driving Simulator Conference North America, USA, 121-127., Morgan, J.F., Oron-Gilad, T., & Hancock, P.A., 2005

Curriculum Vitae

Justin F. Morgan, Ph.D., ACTAR



- "Perception of morphed objects: Generating psychophysical functions for the evolution of a shape." Paper presented at the 2005 APA Division 19 and 21 Midyear Symposium, March 3-4, Fairfax, VA., Morgan, J.F., Oron-Gilad, T., Szalma, J.L., & Hancock, P.A., 2005
- "Psychology in the defense against terrorism." Paper presented at the 2005 APA Division 19 and 21 Midyear Symposium, March 3-4, Fairfax, VA., -Rivera, M.E., Ganey, H.C.N., Morgan, J.F., & Hancock, P.A., 2005
- "Dynamic frequencies and perceptual binding in a combined auditory-tactile task." Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 51, 1336-1340., Terrence, P.I., Morgan, J.F., & Gilson, R.D., 2007
- "Visual occlusion and temporary work zone incursions" [Abstract, CD-ROM]. The 4th International Conference on Traffic and Transport Psychology, Washington, D.C., Morgan, J.F., & Hancock, P.A., 2008
- "Workload transitions in driving." Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 52, 1508-1512., Morgan, J.F., Smoker, T.J., Garcia, A.J., & Hancock, P.A., 2008
- "Cueing to impending increases in driving task demand." Paper presented at the 53rd Annual Meeting of the Human Factors and Ergonomics Society, October 19-23, San Antonio, TX., Morgan, J.F., 2009
- "Enhancement of signal light stimuli may improve responses." Proceedings of the 21st Annual Meeting of the International Society for Occupational Ergonomics and Safety, USA, [CD-ROM], Stearman, E.J., Morgan, J.F., Leonard, S.D., Hancock, P.A., & Garcia, A.J., 2009
- "Creating a social networking health outreach program for commercial motor vehicle drivers." Proceedings of the Transportation Research Board's International Conference on Commercial Driver Health and Wellness, Paper No. 38458. November 8-10, 2010, Baltimore, MD., Morgan, J.F., Trimble, T.E., Blanco, M., & Hanowski, R.J., 2010
- "Driver braking performance to surprise and expected events." Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 54, 2076-2080., Fitch, G.M., Blanco, M., Morgan, J.F., & Wharton, A., 2010
- "The effect of in-vehicle warning systems on speed compliance in work zones." Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 54, 2023-2027., Whitmire, J., Morgan, J.F., Oron-Gilad, T., & Hancock, P.A., 2010
- "Human performance evaluation of light vehicle brake assist systems" (Paper No. 10-0470). Proceedings of the 89th Annual Meeting of the Transportation Research Board. Washington, DC., Fitch, G.M., Blanco, M., Morgan, J.F., Wierwille, W.W., & Hanowski, R.J., 2010
- "Driver opinions of simulator-based commercial driver training." Proceedings of the International Driving Symposium on Human Factors in Driver Assessment, Training and Vehicle Design, 6, 129-135., Morgan, J.F., Tidwell, S.A., Blanco, M., Medina, A., Hanowski, R.J., & Ajayi, O., 2011
- "Experienced CMV driver opinions of advanced driving simulator scenarios." Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 55, 1538-1542., Morgan, J.F., Tidwell, S.A., Blanco, M., Medina, A., Hanowski, R.J., & Ajayi, O., 2011
- "Comparing truck driving performance in a simulator and instrumented vehicle." Proceedings of the 5th International Conference on Applied Human Factors and Ergonomics (AHFE 2014). Hanowski, R.J., & Morgan, J.F., 2014
- "Countdown pedestrian signals and low vision pedestrians." Proceedings of the Transportation Research Board Annual Meeting, paper 15-1706., Van Houten, R., Morgan, J.F., & Shurbutt, J., 2015
- "Countdown pedestrian signals legibility and comprehension without flashing hand." Proceedings of the Transportation Research Board Annual Meeting, paper 15-1671., Van Houten, R., Morgan, J.F., & Shurbutt, J., 2015
- "Longitudinal effects of entry-level truck driver training methods." Proceedings of the 2015 International Conference on Modeling and Simulation: Techniques and Applications (MSTA 2015). Hanowski, R.J., & Morgan, J.F., 2015
- "Human Factors evaluation of Level 2 and Level 3 automated driving concepts." Poster presented at the 2015 Automated vehicles Symposium, Ann Arbor, MI., Blanco, M., Atwood, J., Vasquez, H., Trimble, T.E., Fitchett, V.L., Radlbeck, J., ... Morgan, J.F., 2015

Presentations

Refereed Presentations

- “The stress-performance relationship and performance mediators: Evidence from a meta-analysis of noise and memory.” Paper presented at the 47th Annual Meeting of the Human Factors and Ergonomics Society, October 13-17, Denver, CO., Ward, P., Szalma, J.L., Hancock, P.A., Terrence, P.I., Panganiban, A.R., & Morgan, J.F., 2003
- “Tactile cueing: A potential technology to combat a new type of enemy.” Paper presented at the 4th Annual Meeting of the Society for Human Performance in Extreme Environments. October 15th-16, San Francisco, CA., Stafford, S.C., Merlo, J.L., Brill, J.C., Morgan, J.F., Gilson, R.D., & Hancock, P.A., 2006
- “The effect of in-vehicle warning systems on speed compliance in work zones.” Paper presented at the European Conference on Human Centered Design for Intelligent Transport Systems (HUMANIST), April 29-30, 2010. Berlin, Germany., Whitmire, J.D. II, Morgan, J.F., Oron-Gilad, T., & Hancock, P.A., 2010
- “The use of social media to improve CMV drivers’ health literacy.” Paper presented at the 4th Annual NIH Conference on the Science of Dissemination and Implementation. March 21-22, 2011, Bethesda, MD., Trimble, T.E., Morgan, J.F., Blanco, M., Hanowski, R.J., 2011
- “The cognitive effects of long-range and rough-water transit on high-speed craft operators.” Paper presented at the 69th Meeting of the Dept. of Defense Human Factors Engineering Technical Advisory Group., Ganey, H.C.N., Hancock, P.A., & Morgan, J.F., 2015

Invited Presentations

- Invited Speaker, Blacksburg Lions Club. “Transportation Research at Virginia Tech.” July 21, 2010. Blacksburg, Virginia.
- Panelist, Human Factors and Ergonomics Society 54th Annual Meeting Student Career Day. September 27, 2010. San Francisco, California.
- Invited Speaker, Human Factors and Ergonomics Society Carolina Chapter. “Commercial Driver Training: Past Needs, Present Approaches, and Future Directions.” November 3, 2011. Raleigh, NC.

Media Appearances and Interviews

- “Helping truck drivers get healthy.” Interview appearance on WDBJ-7 TV Roanoke, April 1, 2011.
- “Truck driver health challenges.” Interview appearance on the Evan Lockridge Show, Sirius-XM radio, April 11, 2011.
- “The commercial driver wellness issue.” Interview appearance on the Extreme Truckers Show, June 16, 2011.
- “Battle of the Blind Spot.” Interview appearance in AAA Car & Travel Magazine (Vol. 17, No. 7), July 2011.

Sponsored Research

Battelle Memorial Institute

- Research for Industrial Human Augmentation Systems at Puget Sound Naval Shipyard and Intermediate Maintenance Facility, United States Naval Surface Warfare Center, 2015
- L32C Interdisciplinary Traffic Incident Management Training Post-Course Assessment Tool, Federal Highway Administration, 2014
- Human Factors for Connected Vehicles (HFCV) Modal and Application Gaps Research, National Highway Traffic Safety Administration, through subaward from Virginia Tech, 2014
- Validation of Integrated DVI Configurations and HFCV Principles 2.0, National Highway Traffic Safety Administration, through subaward from Virginia Tech, 2014
- Multiple Sources of Safety Information from V2V and V2I: Redundancy, Decision-Making, and Trust, National Highway Traffic Safety Administration, through subaward from Virginia Tech, 2012

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- Validation of Integrated DVI Configurations and HFCV Principles 2.0, National Highway Traffic Safety Administration, through subaward from Virginia Tech, 2014
- New Human Factors Guidelines for Road Systems Workshop Development, Federal Highway Administration, through subaward from Cambridge Systematics, 2013
- Countdown Pedestrian Signals Legibility and Comprehension without Flashing Hand, Federal Highway Administration, 2014

Virginia Tech Transportation Institute

- Human Factors Evaluation of Level 2 and Level 3 Automated Driving Concepts, National Highway Traffic Safety Administration, 2012
- Field Study of Heavy Vehicle Crash Avoidance Systems, National Highway Traffic Safety Administration, 2012
- Evaluation of Heavy Vehicle Crash Warning Interface Systems, National Highway Traffic Safety Administration, 2011
- Driving Healthy, National Surface Transportation Safety Center for Excellence, 2011
- Supporting CMV Driver Distraction Outreach Efforts, National Surface Transportation Safety Center for Excellence, 2010
- Hours of Service Support: Investigating Safety-Critical Events Recorded in VTTI's Naturalistic Truck Driving Study as a Function of Driving Hour and Work Hour (Driving and Non-Driving), Federal Motor Carrier Safety Administration, 2010
- Commercial Driver Health and Well-Being Outreach: Phase II, National Surface Transportation Safety Center for Excellence, 2009 – 2011
- Commercial Motor Vehicle Driving Simulator Validation Study: Phase II, Federal Motor Carrier Safety Administration, 2005 – 2010
- Synthesis of Literature and Operating Safety Practices Relating to Cell Phone/Personal Data Assistant Use in Commercial Truck and Bus Operations, Federal Motor Carrier Safety Administration, 2009
- Synthesis Study of Light Vehicle Non-Planar Mirror Research, National Highway Traffic Safety Administration, 2009
- Field Demonstration of an Advanced Heavy Vehicle Indirect Visibility System, National Highway Traffic Safety Administration, 2009 – 2010
- Human Performance Evaluation of Light Vehicle Brake Assist Systems, National Highway Traffic Safety Administration, 2008
- Assessment of a Drowsy Driver Warning System for Heavy-Vehicle Drivers, National Highway Traffic Safety Administration, 2008