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***Educational and Employment History:***

2015-Present	Business Owner Red Scientific Inc.
2024	Research Scientists MEA Forensic
2011-2020	Associate Research Professor University of Utah
2011-2015	Business Owner Precision Driving Research
2010-2011	Assistant Research Scientist Texas Transportation Institute
2010	Ph.D., University of Utah Major: Cognitive Psychology
2007	M.S. University of Utah Major: Cognitive Psychology
2003	B.A. University of Utah Major: Psychology

Dr. Joel Cooper is an expert in Human Factors and Cognitive Psychology, specializing in the application of behavioral science and data analytics to enhance safety and human–system performance. He brings extensive experience in experimental design, quantitative analysis, and human–machine interaction, with a focus on optimizing attention and decision-making in complex environments.

As the Founder of Red Scientific, Dr. Cooper has led research and consulting initiatives advancing driver attention assessment and the practical use of ISO-standardized methods such as the Detection Response Task (ISO 17488) and Visual Occlusion Technique (ISO 16673). His work integrates rigorous cognitive theory with applied system design to improve safety outcomes and inform evidence-based policy and forensic evaluation.

***Google Scholar:***

Total Citations: 3,380, h-index: 25, i10-index: 49

### ***Current and past professional affiliations***

The Human Factors and Ergonomics Society, Transportation Research Board, American Society of Safety Engineers, Institute of Transportation Engineers, Society for Chaos Theory in Psychology and the Life Sciences

### ***Research Support***

\$100,000.00 - Consultation on the Distractibility of In-Vehicle Information Systems with the University of Newcastle and the ABMARC testing facility. - AAA Australia ACN 008 526 369

\$45,454.00 - Analysis of Detection Response Task (DRT), Testing Data and Update of Visual Occlusion Test (VOG) Information – Q44359 VicRoads Australia

\$197,444.44 - Evaluation of Rider Trust in Autonomous Shuttles - UDOT 2086-42

\$668,748,00 – Workload in Level-2 Partially Automated Vehicles. AAAFTS 2020-2022

\$3,864,000 -- The Establishment of a Comprehensive Program to Evaluate Cognitive, Visual, and Manual Workload in New Vehicles. AAAFTS 2016-2018

\$689,500 – Measuring Cognitive Distraction in the Vehicle. AAAFTS 2014-2015

\$245,629 – Examining speech-based interactions with in-vehicle technology. AAAFTS 2013-2014.

\$187,280 - Reducing Roadway departure crashes at horizontal curve sections on two-lane rural highways. Funded by the Federal Highways Administration (FHWA), 2012-2014.

\$123,028 – HFCV Mobile device vehicle integration assessment. National Highway Safety Transportation Administration (NHTSA). 2012-2013.

\$20,000 – Crash warning interface metrics (CWIM) – phase 3. Subcontract to Westat consulting. Funded by the National Highway Safety Administration (NHTSA). 2012-2013.

\$522,916 – Measuring Cognitive Distraction In the Vehicle. AAAFTS 2011-2012.

\$63,587 – Measuring Cognitive Distraction in the Vehicle. AAAFTS 2011-2012

\$60,000 – Applications of Dynamical Systems Theory to Evaluating Cost Overruns. National Aeronautical and Space Administration (NASA), 2011-2012.

\$120,000 – Test Procedures for Evaluating Distraction Potential in CV systems, Phase II. Funded by the National Highway Safety Transportation Administration (NHTSA). 2011-2012.

\$332,964 – Test Procedures for Evaluating Distraction Potential in Connected-Vehicle Systems. Phase I. Funded by the National Highway Safety Transportation Administration (NHTSA). 2010-2011.

\$60,000 – Dissociating the visual and manual impairments associated with texting while driving: A test track study. Funded by the Southwest University Transportation Center (SWUTC). 2010-2011

### **Publications and Book Chapters**

- Cooper, J. M., & Strayer, D. L. (2025). Multitasking Induced Contextual Blindness. *Human Factors* 67 (3), 225-245.
- Lohani, M., Cooper, J. M., McDonnell, A. S., Erickson, G. G., Simmons, T. G., Carriero, A. E., ... & Strayer, D. L. (2024). Reliable but multi-dimensional cognitive demand in operating partially automated vehicles: implications for real-world automation research. *Cognitive Research: Principles and Implications*, 9(1), 60.
- Biondi, F. N., McDonnell, A., Cooper, J., & Strayer, D. L. (2024). Using the ISO Detection response task to measure the cognitive load of driving four separate vehicles on two distinct highways. *Transportation Research Part F: Traffic Psychology and Behaviour*, 102, 260-269.
- Sanbonmatsu, D. M., Crabtree, K. W., McDonnell, A. S., Cooper, J. M., & Strayer, D. L. (2024). Automated driving experiences, attention, and intentions following extensive on-road usage of a level 2 automation vehicle. *Journal of Safety Research*.
- McDonnell, A. S., Crabtree, K. W., Cooper, J. M., & Strayer, D. L. (2024). This is your brain on Autopilot 2.0: The influence of practice on driver workload and engagement during on-road, partially automated driving. *Human factors*, 66(8), 2025-2040.
- Cooper, J. M., Crabtree, K. W., McDonnell, A. S., May, D., Strayer, S. C., Tsogtbaatar, T., ... & Strayer, D. L. (2023). Driver behavior while using Level 2 vehicle automation: a hybrid naturalistic study. *Cognitive research: principles and implications*, 8(1), 71.
- McDonnell, A. S., Simmons, T. G., Erickson, G. G., Lohani, M., Cooper, J. M., & Strayer, D. L. (2023). This is your brain on autopilot: Neural indices of driver workload and engagement during partial vehicle automation. *Human factors*, 65(7), 1435-1450.
- McDonnell, A. S., Crabtree, K. W., Cooper, J. M., & Strayer, D. L. (2023). This is your brain on Autopilot 2.0: the influence of practice on driver workload and engagement during on-road, partially automated driving. *Human factors*, 00187208231201054.
- Castro, S. C., Heathcote, A., Cooper, J. M., & Strayer, D. L. (2022). Dynamic workload measurement and modeling: Driving and conversing. *Journal of experimental psychology: applied*.
- Cooley, Emily H., David M. Sanbonmatsu, David L. Strayer, Paul H. White, and Joel M. Cooper. "On-Road vehicle study of the experience of automated driving." *Transportation research part F: traffic psychology and behaviour* 87 (2022): 444-453.
- McDonnell, A., Crabtree, K., Cooper, J., & Strayer, D. (2022). *The influence of trust on driver cognitive states during automated driving*. In *Psychophysiology* (Vol. 59, pp. S104–S105). Wiley.

- Strayer, D. L., Castro, S. C., Turrill, J., & Cooper, J. M. (2022). The persistence of distraction: The hidden costs of intermittent multitasking. *Journal of experimental psychology: applied*.
- Biondi, F. N., Strayer, D. L., Horrey, W. J., Cooper, J. M., & Cort, J. A. (2021). Preface to the special section on measuring cognitive workload in human factors (vol 63, pg 1121, 2021). *HUMAN FACTORS*, 63(6), 1125-1125.
- Boehm, U., Matzke, D., Gretton, M., Castro, S., Cooper, J., Skinner, M., ... & Heathcote, A. (2021). Real-time prediction of short-timescale fluctuations in cognitive workload. *Cognitive Research: Principles and Implications*, 6(1), 1-29.
- Lohani, M., Cooper, J. M., Erickson, G. G., Simmons, T. G., McDonnell, A. S., Carriero, A. E., ... & Strayer, D. L. (2021). No difference in arousal or cognitive demands between manual and partially automated driving: a multi-method on-road study. *Frontiers in Neuroscience*, 15, 627.
- McDonnell, A. S., Imberger, K., Poulter, C., & Cooper, J. M. (2021). The power and sensitivity of four core driver workload measures for benchmarking the distraction potential of new driver vehicle interfaces. *Transportation research part F: traffic psychology and behaviour*, 83, 99-117.
- Lohani, M., Cooper, J., Erickson, G., Simmons, T., McDonnell, A., Carriero, A., ... & Strayer, D. (2020, October). Application of heart rate variability to assess arousal in semi-automated vehicles. In *Psychophysiology* (Vol. 57, pp. S45-S45). 111 River St, Hoboken 07030-5774, NJ USA: WILEY.
- Cooper J. M., Wheatley, C. L., McCarty, M. M., Motzkus, C. J... (2020). Age-Related Differences in the Cognitive, Visual, and Temporal Demands of In-Vehicle Information Systems. *Frontiers in Psychology*, 11.
- Strayer, D. L., Cooper, J. M., Goethe, R. M., McCarty, M. M., Getty, D. J., Biondi, F. (2019). Assessing the visual and cognitive demands of in-vehicle information systems. *Cognitive Research Principles and Implications* 4 (1), 5.
- Biondi, F. N., Getty, D., Cooper, J. M., Strayer, D. L. (2019). Examining the effect of infotainment auditory-vocal systems' design components on workload and usability. *Transportation Research part F: traffic psychology and behaviour* 62, 520-528.
- Lohani, M., Cooper, J. M., Erickson, G. G., Simmons, T. G....(Under Review). On the use of heart rate variability in the on-road assessment of partial vehicle automation. *Frontiers*
- Strayer, D. L., Cooper, J. M., Turrill, J., Coleman, J. R., & Hopman, R. J. (In Press). Smartphones and driver's cognitive workload: A comparison of Apple, Google, and Microsoft's intelligent personal assistants. *Canadian Journal of Experimental Psychology*.
- Biondi, F., Getty, D. J., McCarty, M. M., Goethe, R., Cooper, J. M., & Stayer, D. L. (2018). The Challenge of advanced driver assistance systems assessment: A Scale for the Assessment of the HMI of Advanced Driver Assistance Technology. *Transportation Research Record: Journal of the Transportation Research Board* (2018)

- Getty, D. J., Biondi, F., Morgan, S., Cooper, J. M., & Strayer, D. L. (2018). The effects of voice system design components on driver workload. *Transportation Research Record (TRR)*.
- Sanbonmatsu, D., Stayer, D. L., Yu, Z., Biondi, F., & Cooper, J. M. (2018). Cognitive Underpinnings of Beliefs and Confidence in Beliefs about Fully Autonomous Vehicles. *Transportation Research: Part F*.
- Strayer, D. L., Getty, D., Biondi, F., & Cooper, J. S. (In Press). The multitasking motorist and the attention economy. In S. M. Lane and P. Atchley (Eds). *The Attention Economy*. APA Press.
- Strayer, D. L., Cooper, J. M., McCarty, M. M., Getty, D. J., Wheatley, C. L., Campos, A., Motzkus, C., McKenzie, K., Loveless, S. M., Esplin, J., Goethe, R. M., & Biondi, F. (2018). Visual and cognitive demands of using Apple's CarPlay, Google's Android Auto, and five different OEM infotainment systems. *AAA Foundation for Traffic Safety*.
- Biondi, F., Coleman, J., Cooper, J. M., & Strayer, D. L. (2017). Average Heart Rate for Driver Monitoring Systems. *International Journal of Human Factors and Ergonomics – 2017*.
- Goethe, R. M., McCarty, M. M., Cooper, J. M. (2017). Examining potential confounds in the use of the detection response task (DRT) for in-vehicle system evaluations. *Transportation Research Record: Journal of the Transportation Research Board*. National Academy Press, Washington, DC.
- Strayer, D. L., Cooper, J. M., Turrill, J., Coleman, J. R., & Hopman, R. J. (2016). Talking to your car can drive you to distraction. *Cognitive Research: Principles & Implications*, 1, 1-16. doi: 10.1186/s41235-016-0018-3
- Chrysler, S.T., Cooper, J., and Marshall, D.C. (2015) The Cost of Warning of Unseen Threats: Unintended Consequences of Connected Vehicle Alerts. *Transportation Research Record: Journal of the Transportation Research Board*. National Academy Press, Washington, DC
- Strayer, D. L., & Cooper, J. M. (2015). Driven to Distraction. *Human Factors*, 57, 1343-1347.
- Strayer, D. L., Cooper, J. M., Turrill, J., Coleman, J. R., & Hopman, R. J. (2015). Measuring Cognitive Distraction in the Automobile III: A Comparison of Ten 2015 In-Vehicle Information Systems. *AAA Foundation for Traffic Safety*.
- Strayer, D. L., Cooper, J. M., Turrill, J., Coleman, J. R., & Hopman, R. J. (2015). The Smartphone and the Driver's Cognitive Workload: A Comparison of Apple, Google, and Microsoft's Intelligent Personal Assistants. *AAA Foundation for Traffic Safety*.
- Strayer, D. L., Turrill, J., Cooper, J. M., Coleman, J., Medeiros-Ward, N., & Biondi, F. (2015). Assessing cognitive distraction in the automobile. *Human Factors*, 53, 1300-1324.
- Cooper, J. M., Ingebretsen, H., & Strayer, D. L. (2014). Mental Workload of Common Voice-Based Vehicle Interactions. *AAA Foundation for Traffic Safety*.
- Strayer, D. L., Turrill, J., Coleman, J., Ortiz, E. V., & Cooper, J. M. (2014) Measuring Cognitive Distraction in the Automobile: II. Assessing In-Vehicle Voice Based Interactive Technologies. *AAA Foundation for Traffic Safety*.
- Cooper, J. M., Ingebretsen, H., Turrill, J., & Coleman, J. R. (2013). Driver Responses to Unintended Acceleration Events on a Closed Driving Course. *Technical report prepared for Applied Cognitive Sciences*.

- Cooper, J. M., Medeiros-Ward, N., & Strayer, D. L. (2013). The impact of eye movements and cognitive workload on lateral position variability in driving. *Human Factors: The Journal of the Human Factors and Ergonomics Society*, 55(5), 1001-1014.
- Medeiros-Ward, N., Cooper, J. M., & Strayer, D.L. (2013). Hierarchical Control in Driving. *Journal of Experimental Psychology: General*, 143(3).
- Strayer, D.L., Cooper, J. M., Turrill, J., Coleman, J., Medeiros-Ward, N., & Biondi, F. (2013). Measuring Cognitive Distraction in the Vehicle. *AAA Foundation for Traffic Safety*.
- Watson, J. M., Lambert, A. E., Cooper, J. M., Boyle, I. V., & Strayer, D. L. (2013). On attentional control and the aging driver, in M. Garner, R. Zheng, & R. Hill (Eds.) *Engaging Older Adults with Modern Technology: Internet Use and Information Access Needs*. IGI Global Publishing, Hershey, PA (pp. 20-32).
- Angell L, McGehee DV, Chrysler ST, Cooper J.M. (2011) Test Procedures for Evaluating Distraction Potential in Connected Vehicle Systems – Task 5 Performance Metrics DTNH22-05-D01002 TO20, May 2011, *Unpublished report National Highway Traffic Safety Administration*.
- Cooper J. M., Angell L., McGehee D. V., Chrysler S. T., & Yager C., (2011). Best Practices for Connected Vehicle Interfaces: Task 4 – Execute Test Plan. DTNH22-05-D01002 TO20, May 2011, *Unpublished report National Highway Traffic Safety Administration*.
- Cooper, J.M., Yager, C., & Chrysler, S.T. (2011). An investigation of the effects of reading and writing text-based messages while driving. Report SWUTC/11/476660-00024-1. Texas Transportation Institute. The Texas A&M University System, College Station, Texas 77843-3135.
- Fitzpatrick, K., Chrysler, S., Sunkari, S., Cooper, J.M., & Park, B. (2011). Modern traffic control devices to improve safety at rural intersections. Report 0-6462-1. Texas Transportation Institute. The Texas A&M University System, College Station, Texas 77843-3135.
- Malloy, T. E., Butner, J., Dickerson, C., & Cooper, J. M. & (2010). Fearless-Evolution on Boolean Landscapes: Boolean Phase Portraits Reveal a New Navigational Strategy Based on Fearful Symmetry. *Emergence: Complexity and Organization*, 12(3), 62-93.
- Strayer, D. L. & Cooper, J. M. (2010). Cell phones and driver distraction. In B. Goldstein (Ed.) *The SAGE Encyclopedia of Perception*.
- Strayer, D. L., Medeiros-Ward, N., & Cooper, J. M. (2010). Multi-tasking and human performance. In H. Pashler (Ed.) *The SAGE Encyclopedia of Mind*.
- Cooper, J. M., Vladisavljevic, I., Medeiros-Ward, N., Martin, P.T., & Strayer, D.L. (2009). An investigation of driver distraction near the tipping point of traffic flow stability. *Human Factors*, 51, 261-268.
- Drews, F.A., Yazdani, H., Godfrey, C., Cooper, J.M., Strayer, D.L. (2009). Text messaging while driving. *Human Factors*, 51, 762.
- Strayer, D. L. & Cooper, J. M. (2009). Aging and skill acquisition. In J. E. Birren (Ed.) *Encyclopedia of Gerontology: Age, Aging, and the Aged*, Academic Press, Orlando FL.

Cooper, J. M. & Strayer, D. L. (2008). Effects of simulator practice and real-world experience on cell-phone-related driver distraction. *Human Factors*, 50, 893-902.

Strayer, D. L., Cooper, J. M., & Drews, F. A. (2008). Profiles in cell-phone induced driver distraction. In D. Fisher, J. Lee, J. Caird, & M. Rizzo (Eds) *Handbook of Driving Simulation for Engineering, Medicine, and Psychology*.

### **Conference abstracts and proceedings**

Cooper, J. M. (2024). Driver attention insights using hybrid naturalistic-controlled research. 9th International Conference on Driver Distraction and Inattention. Dearborn Michigan

Carriero, A. E., Crabtree, K. W., Cooper, J. M., & Leonard, B. (2020, December). Rider Trust and the Role of the Operator in Automated Shuttles. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 64, No. 1, pp. 1160-1164). Sage CA: Los Angeles, CA: SAGE Publications.

Lohani, M., Cooper, J. M., Erickson, G. G., Simmons, T. G., McDonnell, A. S., Carriero, A. E., ... & Strayer, D. L. (2020, December). Driver Arousal and Workload Under Partial Vehicle Automation: A Pilot Study. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 64, No. 1, pp. 1955-1959). Sage CA: Los Angeles, CA: SAGE Publications.

Lopes, C. L., Erickson, G. C., Cooper, J. M., Wheatley, C. L., Strayer, D. L. (2019). Driven to comment: Learning from older drivers impressions of in-vehicle technologies. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 63.

Boehm, U., Matzke, D., Gretton, M., Castro S., Cooper J., Strayer, D. L. (2019). Real-time Predictions of Fluctuations in Cognitive Workload. *PsyArXiv*

Biondi, F., Lohani, M., Hopman, R. J., Mills, S., Cooper, J. M., & Strayer, D. L. (2018). 80 MPH and out of the loop: Effects of real-world semi-automated driving on driver workload and arousal. *Proceedings of the 62<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*, 62.

Motzkus, C. J., Getty, D. J., Campos, A., Cooper, J. M., & Strayer, D. L. (2018). Reevaluating the DRT for concurrent measures of cognitive and visual demand. *Proceedings of the 62<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*, 62.

Wheatley, C. L., Esplin, J., Loveless, S. M., Cooper, J. M., Biondi, F., & Strayer, D. L. (2018). Performance and workload trends: The effects of repeated exposure to “High” demand tasks. *Proceedings of the 62<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*, 62.

Biondi, F., Cooper, J. M., & Strayer, D. L. (2017). Using a user-independent approach for automotive human-machine interface assessment. *SAGE Research Methods: Psychology*.

Biondi, F., Goethe, R. M., Cooper, J. M., & Strayer, D. L. (2017). Partial-autonomous frenzy: driving a level-2 vehicle on the open road. *Engineering Psychology and Cognitive Ergonomics: Cognition and Design*.

Cooper, J. M., Castro, S. C., & Strayer, D. L. (2016). Extending the Detection Response Task to Simultaneously Measure Cognitive and Visual Task Demands. In *Proceedings of the*

- Human Factors and Ergonomics Society Annual Meeting*, 60(1), 1962-1966. Sage CA: Los Angeles, CA: SAGE Publications.
- Cooper, J. M., & Strayer, D. L. (2017). Using the DRT to Measure Visual and Cognitive Task Loads. *5<sup>th</sup> International conference on Driver Distraction and Inattention. March 23, Paris, France.*
- Strayer, D. L., Biondi, F., & Cooper, J. M. (2017). Dynamic workload fluctuations in driver/non-driver conversational dyads. In D. V. McGehee, J. D. Lee, & M. Rizzo (Eds.) *Driving Assessment 2017: International Symposium on Human Factors in Driver Assessment*.
- Strayer, D. L., Cooper, J. M., Goethe, R. M., McCarty, M. M., Getty, D., & Biondi, F. (2017). Visual and cognitive demands of using in-vehicle information systems. *AAA Foundation for Traffic Safety*.
- Castro, S. C., Copper, J. M., & Strayer, D. L. (2016). Validating two assessment strategies for visual and cognitive load in a simulated driving task. *Proceedings of the 60th Annual Meeting of the Human Factors and Ergonomics Society*, 60, 1899-1903.
- Coleman, J. R., Turrill, J., Cooper, J. M., & Strayer, D. L. (2016). Cognitive workload using interactive voice messaging systems. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 60(1), 1894-1898. Sage CA: Los Angeles, CA: SAGE Publications.
- Turrill, J., Coleman, J. R., Hopman, R. J., Cooper, J. M., & Strayer, D. L. (2016). The Residual Costs of Multitasking: Causing Trouble down the Road. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 60(1), 1967-1970. Sage CA: Los Angeles, CA: SAGE Publications.
- Biondi, F., Turrill, J. M., Coleman, J. R., Cooper, J. C., & Strayer, D. L. (2015). Cognitive Distraction Impairs Driver's Anticipatory Glances: An On-Road Study. *Proceedings of the 8<sup>th</sup> International Driving Symposium on Human Factors in Driver Assessment, Training and Vehicle Design*.
- Coleman, J. R., Turrill, J. M., Hopman, R. J., Cooper, J. M., & Strayer, D. L. (2015). Assessing cognitive distraction using event-related potentials. In D. V. McGehee, J. D. Lee, & M. Rizzo (Eds.) *Driving Assessment 2015: International Symposium on Human Factors in Driver Assessment, Training, and Vehicle Design* (pp. 296-301). Published by the Public Policy Center, University of Iowa.
- Cooper, J. M., Ingebreston, H., & Strayer, D. L. (2015). Mental workload of voice interactions with six real-world driver interfaces. In D. V. McGehee, J. D. Lee, & M. Rizzo (Eds.) *Driving Assessment 2015: International Symposium on Human Factors in Driver Assessment, Training, and Vehicle Design* (pp. 1-8). Published by the Public Policy Center, University of Iowa.
- Cooper, J. M., Angell, L. S., Green, P., McGehee, D. V., & Harbluk, J. L. (2013). New developments in standards for assessing driver performance and workload. *Panel Discussion held at the 57<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*.
- Chrysler, S. T., Cooper, J. M., McGehee, D. V., & Yager, C. (2013). Comparison of Driver Distraction Evaluations across two Simulator Platforms and an Instrumented Vehicle. *Proceedings of the 7<sup>th</sup> International Driving Symposium on Human Factors in Driver Assessment, Training, and Vehicle Design*.

- Lerner, N., Chrysler, S. T., Cooper, J. M., Jenness, J., Manser, M., & Reimer, B. (2013). On-the-road driver behavior experimentation: Issues and approaches. *Panel Discussion held at the 57<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*.
- Yager, C. E., Cooper J. M., & Chrysler, S. T. (2012). The effects of reading and writing text-based messages while driving. *Proceedings of the 56<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*.
- Cooper, J. M. & Medeiros-Ward, N. (2010). Conversation Impairs the Expression of Learned Sequence Information in a Simulated Driving Environment. *Proceedings of the 54<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*.
- Lambert, A. E., Watson J. M., Cooper, J. C., & Strayer, D. L. (2010). The roles of working memory capacity, visual attention and age in driving performance. *Proceedings of the 54<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*.
- Medeiros-Ward, N., Cooper, J. M., Doxon, A. J., Strayer, D. L., & Provancher, W. R. (2010). Bypassing the bottleneck: The advantage of fingertip shear feedback for navigational cues. *Proceedings of the 51<sup>st</sup> Annual Meeting of the Psychonomics Society, San Francisco, CA*.
- Medeiros-Ward, N., Seegmiller, J. A., & Cooper, J. M. (2010). Dissociating Eye Movements and Workload on Lateral Lane Position Variability. *Proceedings of the 54<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*.
- Cooper, J. M., Medeiros-Ward, N., Seegmiller, J. A., & Strayer, D. L. (2009). Shifting eyes and thinking hard keep us in our lanes. *Proceedings of the 53<sup>rd</sup> Annual Meeting of the Human Factors and Ergonomics Society*.
- Medeiros-Ward, N. & Cooper, J. M. (2009). When words collide: The impact of verbal coding on driver distraction. *Proceedings of the Annual Meeting of the Rocky Mountain Psychological Association, Albuquerque, NM*.
- Vladisavljevic, I., Cooper, J. M., Martin, P.T. & Strayer, D. L. (2009). Compensatory impact of lane changes when distracted; slower moving, cell-phone-using drivers impede traffic flow efficiency. *Proceedings of the 88<sup>th</sup> Annual Meeting of the Transportation Research Board of the National Academies*.
- Vladisavljevic, I., Cooper, J. M., Martin, P.T. & Strayer, D. L. (2009). The importance of integrating driving and traffic simulations; illustrated through a case study that examines the impact of cell phone drivers on traffic flow. *Proceedings of the 88<sup>th</sup> Annual Meeting of the Transportation Research Board of the National Academies*.
- Cooper, J. M., & Strayer, D. L. (2008). New insights into driving using recurrence quantification analysis. *Proceedings of the 52<sup>nd</sup> Annual Meeting of the Human Factors and Ergonomics Society*.
- Cooper, J. M., Vladisavljevic, I., Strayer, D. L., & Martin, P. T. (2008). Drivers' lane changing behavior while conversing on a cell phone in a variable density simulated highway environment. *Proceedings of the 87<sup>th</sup> Annual Meeting of the Transportation Research Board of the National Academies*.
- Strayer D. L., Cooper J. M., & Drews, F. A. (2008). Part-task and variable- priority simulator-based training for snowplow operators. *Proceedings of the 52<sup>nd</sup> Annual Meeting of the Human Factors and Ergonomics Society*.

- Butner, J., Cooper, J. M., Malloy, T. E. & Smith, T. (2007). The knowable unknowns: Winding and unwinding meta-TAO under broken symmetries. *The Society for Chaos Theory in Psychology and the Life Sciences Annual International Conference, Orange, CA*.
- Cooper, J. M., Butner, J., Malloy, T. E., & Smith, T. (2007). Folding sierpinski gaskets: The structure of boolean derivatives and meta-derivatives. *The Society for Chaos Theory in Psychology and the Life Sciences Annual International Conference, Orange, CA*.
- Cooper, J. M. & Strayer, D. L. (2007). The role of practice on cell-phone induced driving impairment. *Proceedings of the 51<sup>st</sup> Annual Meeting of the Human Factors and Ergonomics Society*.
- Malloy, T. E., Butner, J., Cooper, J. M., & Smith, T. (2007). The puzzling powers of two: A brief introduction to epistemology and to Boolean systems simulation methodology. *The Society for Chaos Theory in Psychology and the Life Sciences Annual International Conference, Orange, CA*.
- Malloy, T. E., Butner, J., Cooper, J. M., Smith, T., & Dickerson, C. (2007). Knowing begets knowing: Derivatives and meta-derivatives reveal the topology of basin landscapes in Boolean XOR rings. *The Society for Chaos Theory in Psychology and the Life Sciences Annual International Conference, Orange, CA*.
- Strayer, D. L., Martines, M., Cooper, J. M., & Drews F. A. (2006). Brain waves suppressed by cell phone conversations. *Proceedings of the 50<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*.
- Strayer, D. L., Cooper, J. M. & Drews, F. A. (2004). What do drivers fail to see when conversing on a cell phone? *Proceedings of the 48<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*.

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