2024
MATAI CONFERENCE

September 16th — 18th

ATV/UTV TOPICS

MIDWEST ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

IOWA Speedway

CONFERENCE AGENDA

Sunday September 15th, 2024

8:00am—5:00pm

ACTAR Test (DMACC Center, Newton, IA)

6:00pm—7:00pm

Early Registration—Packet Pickup (DMACC Center, Newton, IA)

7:00pm—8:30pm

MATAI Board Meeting

6:00pm to 9:00pm

Hospitality Room (Everyone Welcome) - Room announced at Registration

Monday September 16th, 2024:

7:30am to 8:30am

Registration-Packet Pickup (Iowa Speedway)

8:30am to 9:00am

Opening Ceremonies (Newton Club)

- Jasper County Honor Guard

- MATAI President

9:15am to 12:00pm

Crash Testing—UTV Collisions

12:00pm to 1:00pm

Lunch Break (provided by Smokey D's BBQ)

1:00pm to 2:30pm

Daniel McGehee — Vehicle Technology Update

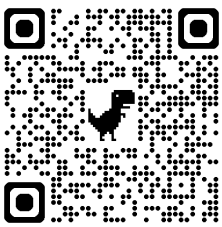
2:30pm to 5:00pm

(Continued) Crash Testing

Monday Evening September 16th, 2024:

7:00pm to 9:00pm

Hospitality Room (Everyone Welcome)



Tuesday September 17th, 2024:

8:00am to 9:30am

John Zeirke—UTV / ATV Overview

9:30am to 9:45am—Morning Break

9:45am to 11:00am

Trooper Brian Meeker—UTV Identification

11:00am to 12:00pm

Chris Mannel—Momentum Study

12:00pm to 1:00pm—Lunch Break (Grinnell College)

1:00pm to 2:00pm

Chris Mannel—Momentum Study (Continued)

2:00pm to 3:00pm—Mark Wright—UTV & ATV Collision Analysis (Video)

3:00pm to 3:15pm—Afternoon Break

3:15pm to 5:00pm—Mark Wright—UTV & ATV Collision Analysis (Video) - (Continued)

Tuesday Evening September 17th, 2024:

6:00 to ????? - Tailgate Party

Wednesday September 18th, 2024:

7:30am to 8:00am

MATAI All Organizational Meeting (Voting)

8:00am to 9:00am

Karl Boehm—UTV Collision Case Study

9:00am to 10:30am—David Hallman—Berla, ACM & Toyota Update

10:30am to 10:45am—Morning Break

10:45am to 12:00pm

Billy Cox—Review of Testing at the Speedway

12:00pm to 12:15pm—Conclusion

Closing Remarks—2024 Conference Update

THANK YOU FOR COMING !!!

Presenter Biographies

Daniel V. McGehee

- Director, National Advanced Driving Simulator
- Associate professor, Mechanical and Industrial Engineering
- Associate professor, Emergency Medicine

Daniel V. McGehee has been obsessed with car crashes for over 20 years. He is interested in every aspect of them - from how, when and why they occur, to technologies for avoiding them altogether. His driver performance, distraction, and technology development research has led to innovative, interdisciplinary collaborations involving engineering, medicine, and public health. Results from his research have helped policy makers to improve government safety standards, as well as state and federal laws. While the first generation of safety systems were designed to help protect occupants in cars, his research deals with preventing or reducing the severity of crashes. Such technologies will ultimately lead to higher levels of automation on our roads.

McGehee is the Director of the Transportation and Vehicle Safety Policy Research Program at the University of Iowa Public Policy Center. He is also the Director of the National Advanced Driving Simulator (NADS) and an associate professor of mechanical and industrial engineering, emergency medicine, and public health.

RESEARCH INTERESTS

- Driver behavior and performance
- Distracted driving
- Teen driving
- Traumatology
- Naturalistic driving

EDUCATIONAL BACKGROUND

- Ph.D., University of Leeds, England

Presenter Biographies

John Zeirke

John is a licensed P.E. with 20 years of design and forensic engineering experience. His design responsibilities included rear axle final drives for CAT mining trucks, and multiple systems on the Polaris Slingshot 3-wheeled vehicle. John investigated many accidents and mechanical failures while at Polaris, which led to his interest in forensic engineering. John graduated with a Bachelor's Degree in Mechanical Engineering from Marquette University, and holds certifications for accident reconstruction from ACTAR, and vehicle fire investigation from NAFI.

David Hallman

David Hallman is a Forensic Mechanical and Metallurgical Engineer (forensic engineering consultant) with over twenty years combined experience in materials analysis and research, mechanical engineering, automotive mechanics and forensic failure analysis. He has significant, hands-on automotive repair experience coupled with degrees in mechanical engineering from the University of Saint Thomas (BS) and materials science and engineering from the University of Minnesota (MS). David spent ten years working as a professional automotive mechanic prior to earning his two degrees. He is a Licensed Professional Engineer in Minnesota, Wisconsin, Iowa, North Dakota, South Dakota and Illinois, a Certified Vehicle Fire Investigator and an ASE Certified Master Automobile Technician.

David's significant automotive background coupled with his two degrees makes him ideally suited for all aspects of crash investigation. He performs crash reconstruction and also has been called upon to investigate potential mechanical causes for vehicle crashes. David has an excellent understanding of vehicle mechanical systems including automotive, light truck, medium truck and heavy truck systems. He has also been trained in vehicle crash data (CDR) collection and interpretation. Some of the cases David has investigated include a vehicle tie rod failure that triggered a cross over crash, several unintended vehicle acceleration cases and cases involving alleged heavy truck brake failure. David has also been involved in multiple cases involving tire failure analysis. Since 2011, David has been involved with several different crash teams around the country and has been deeply involved in planning and executing crash tests.

A skilled forensic engineering consultant, David works with Lawyers, Paralegals, Insurance Investigators, Claims Adjusters and other Subject Matter Experts on a wide variety of forensic mechanical, forensic materials and forensic metallurgical investigations. These investigations have included but are not limited to an elevator failure involving materials and design issues, a personal injury involving a paper shredder, multiple cases involving farm equipment and personal injuries, machine guarding cases, chair collapse cases, bolted joint failures, patient lifter failures, vehicle hand control issues, trip and fall cases, tipped telehandler and boom crane cases.

Presenter Biographies

Mark Wright

Mark is the owner of Wright Reconstruction Inc., a company focused on collision reconstruction training and investigations. He retired from the Ontario Provincial Police in 2022 with 38 years of policing, and more than 30 years of collision reconstruction experience. The last 25 years of Mark's career was devoted to full time collision reconstruction investigations and training.

Mark retired from the position of Collision Reconstruction Provincial Coordinator, a position he held for more than 20 years. In this position, he was responsible for standardizing collision reconstruction training, investigative practices and report writing. In 2012 he received the IACP's J. Stannard Baker award for enhancing the OPP's Collision Reconstruction program.
Mark has been ACTAR accredited since 2002 and served as a member of the governing board of directors from 2003 to 2022. In addition to serving as the Chair for 4 years, he also served on the crash testing committee for almost 20 years.
He serves as the Ontario Chair of CATAIR (Canadian Association of Technical Accident Investigators and Reconstructionists), a position he has held since 2013.
Mark obtained his Bachelor of Arts Degree at the University of Toronto in 1993 and continues to enhance his knowledge through regular collision course attendance, crash testing and investigative research.
He has combined his passion for collision reconstruction with his interest in recreational vehicles, conducting hundreds of tests with ATV's, Snowmobiles, Motorcycles, Bicycles, Pedestrians, Boats and PWC's.
He has been conducting research into ATV collision investigation techniques for more than 20 years and authored one research paper on this subject. Additionally, Mark has conducted hundreds of critical speed yaw tests on vehicles with and without electronic stability control and authored a research paper on the accuracy of measuring techniques related to ESC Critical Speed Yaw.
Mark regularly instructs collision reconstruction related courses throughout Canada.

Chris Mannel

Chris is an original founding partner of NAR, LLC and was in law enforcement for 15 years. He lives in the Omaha area has an extensive background in everything that has to do with technology. He specializes in software, photography, mapping, analysis and the production of any electronic media for our clients or the business. He is experienced in video analysis as well as chip swaps and data extractions on damaged EDR modules due to fire or physical damage. He is a FAA licensed sUAV pilot for scene mapping and video overviews. Chris handles both criminal and civil proceedings for the company and has experience in the courtroom for either type of case. Chris is certified in the extraction and preservation of heavy truck ECM modules and their data. He also teaches the reconstruction curriculum at the Nebraska Law Enforcement Training Center and has been their primary instructor in this program since 2017.

Presenter Biographies

Karl Boehm

Sergeant Boehm has been with the Cass Country Sheriff's Office in Nebraska since 1999. He has been on Road Patrol his entire career and has investigated hundreds of crashes during that time. Karl went through the progression of classes through Nebraska Law Enforcement Training Center (Intermediate 2001, Advanced 2002, Technical 2003). He received his reconstruction certification through IPTM in 2007 (Bellevue, NE), and was part of the Fatal Incident Reconstruction and Support Team (Douglas, Sarpy, Washington, Dodge, and Cass Counties when it first formed). He was promoted to Sergeant in 2014 and has maintained his ACTAR accreditation since 2015.

Billy Cox

Mr. Cox founded Billy Cox Group in 2008 and is a nationally recognized expert in the field of crash reconstruction and impact biomechanics. He has more than 35 years experience, training and education as an analyst, consultant and testifying expert in the field of transportation crash reconstruction, crash testing and impact biomechanics.

Mr. Cox has authored articles on crash reconstruction and related subjects for national publications. He holds crash reconstruction accreditation #983 from the Accreditation Commission for Traffic Accident Reconstruction (ACTAR).

Since 1995, he has conducted hundreds of crash tests with human subjects and anthropomorphic devices. In 1996, Mr. Cox designed and built a mobile crash laboratory called the Low Velocity Impact Simulator (LVIS). This device is still used today to study low speed impact biomechanics, vehicle seat properties and occupant kinematic responses. In 2001, he conducted a 300-hour study, sponsored by the National Highway Traffic Safety Administration (NHTSA), at Johns Hopkins University Applied Physics Lab, which focused on the correlation between seat geometry and neck injury.

Collision Testing

Directions to the Iowa Speedway:

- Exit Interstate 80 at the 168 mile marker
- Go South (right) from the Interstate on Iowa Speedway Dr
- Take a right (West) on Rusty Wallace Dr
- Travel approximately 1 mile on Rusty Wallace Dr
- Turn Left (south), just past the track.
- Go approximately 1100 feet south on the road from Rusty Wallace Dr.
- Take a left (East) and go through the gate
- Park on the North side of the grand stands.

SPONSORSHIPS

THANK YOU

- SEILER Geospatial (Donated for cookout and is conference vendor)

- Smokey D's BBQ (Donated a deal on Lunch)

- Donated ATV/UTVs for testing as well as transportation of same to and from the conference site — Norfolk, NE

- Donated automobiles and transportation to conference site — Newton, IA