



Résumé of
WILLIAM T. C. NEALE, M.Arch.

Kineticcorp™

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EXPERIENCE:

Vice President, Director of Visualization, Kineticcorp, LLC, Colorado, 2005 to Present
Accredited Traffic Accident Reconstructionist ACTAR#2571, 2013 to Present
Motorcycle Safety Instructor, National Certification MSF# 138364, 2010 to present
State of Colorado Motorcycle Operator Safety Advisory Board Member 2013 to 2015
Director of Animation, Knott Laboratory, Inc., Colorado, 2000 to 2005
Adjunct Instructor, Art Institute of Colorado, Denver, CO, 2001 to 2005

EDUCATION:

Washington University, Master of Architecture, 2000 (With Honors)
Washington University, Bachelor of Arts in Architecture, 1994
Northwestern University Center for Public Safety, Evanston Illinois:
Vehicle Dynamics, April 2007
Traffic Crash Reconstruction I, October 2011
Traffic Crash Reconstruction II, May 2012
Motorcycle Crash Reconstruction, September 2012
Advanced Crash Reconstruction Utilizing Human Factors Research, May 2017
University of Michigan College of Engineering, Human Factors Engineering Short Course, July 2008
The Center for Transportation Safety, Colorado
Motorcycle Accident Scene Management Level I January 2011
Motorcycle Accident Scene Management Level II March 2011
Motorcycle Safety Foundation (MSF) Basic Riders Course Instructor, National Certification #138364 May 2010
Motorcycle Safety Foundation (MSF) Advanced Riders Course Instructor, Certification #L196094 August 2014
Total Control Advanced Motorcycle Riding Clinic completed June, 2009

ACCREDITATION AND CERTIFICATION:

ACTAR Accredited Traffic Accident Reconstructionist, Registration Number 2571, Sept. 2013
Certified Motorcycle Instructor, Motorcycle Safety Foundation (MSF) of America, 2010, MSF #138364
Certified Advanced Rider Course Instructor, Motorcycle Safety Foundation (MSF) of America, 2014, MSF #L196094

APPOINTMENTS AND SELECTED MEMBERSHIPS:

Instructor Representative on Colorado's Motorcycle Operator Safety Advisory Board, 2013 to 2015
Chairman of the Animation Committee, Society of Automotive Engineers, 2009-2013
Member of the Illumination Engineering Society of North America (IESNA) 2007 to present
Member of the Roadway Illumination Devices Committee of Society of Automotive Engineers (2008 to present)
Member of the Society of Forensic Engineers and Scientists
Member of Acoustic Society of America

AWARDS AND RECOGNITION:

Motorcycle Operator Safety Training from State of Colorado in recognition of service to MOSAB, 2015
Excellence in Oral Presentation Award, Society of Automotive Engineers (SAE), 2013
Arch T. Colwell Merit Award, Society of Automotive Engineers (SAE), 2006
Newman Award for Acoustic Excellence (First Place Award), 2000
Pratt Institute Competition "Artificial Islands," design exhibited in Gallery, 1999
Graduate Scholarship, Washington University, 1999
Graduate Scholarship, Rice University, 1998
Van Allen Institute Competition "Pier 54," Top 50 Design, exhibited in Gallery, 1997
Olin Cup Finalist, Washington University, 1993

FORENSIC ENGINEERING AND VISUALIZATION: Mr. Neale is an accredited Traffic Accident Reconstructionist through the Accreditation Commission for Traffic Accident Reconstruction specializing in accident reconstruction, computer visualization and simulation, lighting and visibility, and photogrammetry. Mr. Neale is also a certified Motorcycle Safety Instructor by the

Motorcycle Safety Foundation. Mr. Neale is certified to train and license riders in the State of Colorado in the Basic Riders Course, and the Advanced Riders Course. Since 1993, Mr. Neale has worked in forensic engineering and accident reconstruction investigating and analyzing over one thousand accidents that include passenger vehicles, motorcycles, bicycles, trains, and airplanes. During his undergraduate and graduate program, Mr. Neale specializes in lighting and visualization, including photography, videography, and computer modeling and animation and has received awards, grants and other funding in recognition of his work in the field. For the past 18 years, Mr. Neale has development technology and methodologies in these areas and gained additional experience and recognition in the area of forensic engineering and visualization including:

- In 2017 Mr. Neale developed the nation's first ACTAR accredited course on photogrammetry in accident reconstruction
- In 2016 and 2017, Mr. Neale was invited to present at the NFL Combine in Indianapolis, Indiana. He presented to the Head, Neck, and Spine Injury Committee on concussion causing events from analysis of live NFL broadcast footage.
- In 2015, Mr. Neale produced the animations for investigation into the death of Benjamin Cooper. This animation work has been featured on TNT Cold Justice "Trajectory Ben Cooper Murder."
- In 2014, working in association with the Milwaukee Brewers, Mr. Neale help develop the funded project "Speak up to Slow Down". This campaign teaches teen drivers the principles of distracted driving, and promote safer driving behavior.
- In 2013, Mr. Neale was elected to the Motorcycle Operational Safety Advisory Board (MOSAB) in the State of Colorado in 2013 to represent the certified motorcycle instructors in Colorado. This board advises the Colorado government on the implementation of strategies to increase rider safety and reduce motorcycle accidents and fatalities.
- Since 2004, he has qualified as an expert in federal and state court in the areas of motion tracking, video analysis, computer modeling and animation, computer lighting, visibility, accident reconstruction and photogrammetry. These states include Colorado, California, Washington, Florida, Indiana, Nebraska, New York, Arizona, Tennessee, and New Jersey.
- Mr. Neale has 22 published, peer reviewed, technical papers on photogrammetry, video analysis, motion tracking, acoustics, and lighting and visibility. He has also lectured on these topics at several institutions including: Wayne State University in Detroit, MI, The University of Colorado Department of Engineering in Denver, CO and California State University in Los Angeles. He has been invited to present his work at the Society of Automotive Engineers World Congress, and the Acoustic Society of America Annual Conference.
- He has performed live testing in hundreds of visibility studies on accidents involving tractor-trailers, motorcycles and passenger cars.
- Ford Motor Company funded Mr. Neale's research to develop video analysis and motion tracking techniques for vehicle rollover crash test analysis.
- Mr. Neale produced the animations for the Princess Diana vehicle crash which have been featured on the Discovery Channel's "Unsolved History: The Death of Diana." Other animation work has appeared on ABC's 20/20 and on the local Denver news channels.

RESEARCH AND TEACHING: In the course of his professional work, Mr. Neale has taught and researched in these areas:

- Mr. Neale currently teaches the nation's first peer-reviewed, accredited course "Photogrammetry and Analysis of Digital Media", which is sponsored by the Society of Automotive Engineers.
- Mr. Neale is annually invited to review and approve the technical publications submitted to the Society of Automotive Engineers in the areas of photogrammetry, accident reconstruction, and lighting and visibility.
- Mr. Neale is a motorcycle safety instructor, certified to teach the Motorcycle Safety Foundation's *Basic Riders Course* and the *Advanced Riders Course*. In addition to teaching and instructing, Mr. Neale also administers the States licensing test to students seeking a motorcycle endorsement. Through this training, Mr. Neale researches motorcycle operations, perception reaction times, and beginner and experienced rider's capabilities.
- Mr. Neale has ongoing research in visibility and vehicle illumination, and presented at the 2009, 2010, 2013, and 2016 SAE World Congress in Detroit Michigan, on new techniques in visibility and headlamp simulation.
- His work in simulation, photogrammetry, video tracking, and visualization is central to the ongoing research by the NFL and has been featured at the William Van Allen Institute in New York, the Pratt Institute in New York City, "Animation World Magazine," "Visual Illustrator," and on national television.
- Mr. Neale has taught university level courses in Architecture Engineering and Advanced Animation at the Art Institute of Colorado, and has guest lectured at Wayne State University in Detroit, MI, and the University of Colorado Dept. of Engineering in Denver, CO.

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Vice President, Director of Visualization



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PROFESSIONAL AFFILIATIONS: Society of Forensic Engineers and Scientists (SFES), Society of Automotive Engineers (SAE) – Former Chairman of the Animation Committee in Accident Reconstruction and Member of the Roadway Illumination Devices Committee; National Association of Safety Professionals; Acoustical Society of America Full Member (ASA); IEEE Member of the Computer Society on Visualization; Member of IESNA (Illuminating Engineering Society North America).

Funded and Supported Research

1. "Video Analysis of Concussion Causing Events in Professional Football." Sponsored by the National Football League (NFL). Fall 2015 to present.
2. "Texting and Distracted Driving" Wisconsin State National Campaign Against Distracted Driving. 2015. Funding available through the Milwaukee Brewers et. al.
3. "Speak up to Slow Down" Wisconsin State National Campaign Against Speeding. 2013-2014. Ongoing funding through Score One Production.
4. "Analysis of the vehicle accelerometer data of the **DriveCam** Event Triggered Video System" - DriveCam - The Driver Science Company™
5. "A Method to Quantify Vehicle Dynamics and Deformation for Vehicle Rollover Tests Using Camera-Matching Video Analysis," funded in part by **Ford Motor Company**, 2007.
6. "Image Analysis of Rollover Crash Test Using Photogrammetry," funded in part by **Ford Motor Company**, 2005-2006.

Technical Peer Reviewed Publications

1. Bortles, William, David Hessel, **William T.C. Neale**, "Application of 3D Visualization in Modeling Wheel Stud Contact Patterns with Rotating and Stationary Surfaces." SAE Paper 2017-01-1414. Detroit, MI. (2017).
2. **Neale, William T.C.**, James Marr, David Hessel, "Nighttime Videographic Projection Mapping to Generate Photo-Realistic Simulation Environments." SAE Paper 2016-01-0415. Detroit, MI. (2016).
3. **Neale, William T.C.**, David Hessel, Daniel Koch, "Determining Position and Speed through Pixel Tracking and 2D Coordinate Transformation in a 3D Environment." SAE Paper 2016-010-1478. Detroit, MI. (2016).
4. **Neale, William T.C.**, David Danaher, Sean McDonough, Tomas Owens, "Data Acquisition using Smart Phone Applications." SAE Paper 2016-01-1461. Detroit, MI. (2016).
5. Rose, Nathan, Neal Carter, John Kreisher, Martin Randolph, **William Neale**, David Danaher, "How Accurate are Witness Distance Estimates Given in Car Lengths?," peer-reviewed and approved for publication by Collision: The International Compendium for Crash Research, forthcoming Spring 2016.
6. Carter, Neal, Alireza Hashemian, Nathan A. Rose, **William T.C. Neale**, "Evaluation of the Accuracy of Image Based Scanning as a Basis for Photogrammetric Reconstruction of Physical Evidence," SAE Paper 2016-01-1467. Detroit, MI. (2016).
7. Bortles, William, **William T.C. Neale**, "The Misunderstood Witness - Event Data Recorders for Heavy Vehicles." American Bar Association - Tort Trial & Insurance Practice Section, Automobile Law Committee News, Spring 2013.
8. **Neale, William T.C.**, James Marr, David Hessel, "3D Video Projection Mapping Photogrammetry of Physical Evidence through Video Tracking." SAE Paper 2013-01-0788B-400. Detroit, MI. (2013).

9. Bortles, William, **William T.C. Neale**, "Automotive Event Data Recorders: Ushering in a New Era of Accident Reconstruction." American Bar Association - Tort Trial & Insurance Practice Section, Automobile Law Committee News, Summer 2012.
10. Rose, Nathan A., **William T.C. Neale**, Neal Carter, "Using Data from a DriveCam Video Event Recorder to Reconstruct a Hard Braking Event." *Collision Magazine*. Spring 2012
11. **Neale, William T.C.**, David Hessel, Toby Terpstra, "Photogrammetric Measurement Error Associated with Lens Distortion." SAE Paper 2011-01-028611B-0043. Detroit, MI. (2011).
12. **Neale, William T.C.**, David Hessel, James P. Marr, "Evaluation of Photometric Data Files for Use in Headlamp Light Distribution." SAE Paper 2010-01-0292. Detroit, MI. (2010).
13. **Neale, William T.C.**, Toby Terpstra, "Comparison of Sound Pressure Levels of Mid-to-Large Size On-Road Motorcycles Through Volume Modeling." *The Journal of the Acoustical Society of America* 126:4 (Oct. 2009): 5aNS7.
14. **Neale, William T.C.**, David Hessel, "Simulating Headlamp Illumination Using Photometric Light Clusters." SAE Paper 2009-01-0110. Detroit, MI. (2009).
15. **Neale, William T.C.**, Toby Terpstra, William M. Bortles, "Evaluation of Discrete Vehicle Accident Sounds for use in Accident Reconstruction." *Proceedings of Meetings on Acoustics* Vol.5 (2008).
16. **Neale, William T.C.**, Toby Terpstra, William M. Bortles, "Analysis of Commonly Witnessed Vehicle Accident Sounds *in situ*." *The Journal of the Acoustical Society of America* 124:4 (Oct. 2008): 5aNS5.
17. Rose, Nathan A., **William T.C. Neale**, Stephen J. Fenton, David Hessel, R.W. McCoy, C.C. Chou, "A Method to Quantify Vehicle Dynamics and Deformation for Vehicle Rollover Tests Using Camera-Matching Video Analysis." SAE Paper 2008-01-0350. Warrendale, PA. (2008).
18. **Neale, William T.C.**, Toby Terpstra, "Methodology for Physics-Based Sound Composition in Forensic Visualization." *Proceedings of Meetings on Acoustics* Vol.1 (2007).
19. **Neale, William T.C.**, Toby Terpstra, "Methodology for Reconstruction of Vehicle Accident Acoustics for use in Forensic Visualization." *The Journal of the Acoustical Society of America* 121:5 (May 2007): 3pAA8.
20. Chou, C., R.W. McCoy, Stephen J. Fenton, **William T.C. Neale**, Nathan Rose, "Image Analysis of Rollover Crash Test Using Photogrammetry." SAE Paper 2006-01-0723. (2006).
21. **Neale, William T.C.**, Stephen J. Fenton, S. McFadden, Nathan Rose, "A Video Tracking Photogrammetry Technique to Survey Roadways for Accident Reconstruction." SAE Paper 2004-01-1221. Warrendale, PA. (2004).
22. Fenton, Stephen J., **William T.C. Neale**, Nathan Rose, C. Hughes, "Determining Crash Data Using Camera-Matching Photogrammetric Technique." SAE Paper 2001-01-3313. Warrendale, PA. (2001).

Other Articles

1. **Neale, William T.C.**, "Putting the Jury in the Driver's Seat", DriveCam Online News and Events – Legal Section, January, 2012.
2. **Neale, William T.C.**, "Photogrammetry Techniques in Accident Reconstruction", DriveCam Online News and Events – Legal Section, September, 2011.
3. **Neale, William T.C.**, "The Power of Physical Evidence in Accident Reconstruction", DriveCam Online News and Events – Legal Section, August, 2011.
4. **Neale, William T.C.**, Undergraduate Curriculum for Forensic Animation for the Art Institute of Colorado. (2004)
5. **Neale, William T.C.**, "Computer Visualization Section," contributed content. *Illustreret Videnskab (Visual Illustrator)* 2:2003 (Feb. 2003).
6. **Neale, William T.C.**, Contributed Content. *Animation World Magazine* (Jan. 2002).

Invited Lectures

1. "Application of 3D Visualization in Modeling Wheel Stud Contact Patterns with Rotating and Stationary Surfaces," Technical Paper Number 2017-01-1414, Society of Automotive Engineers Word Congress Experience, Detroit, MI, April 4, 2017.
2. "Video Reconstruction and Validation" NFL Head Neck and Spine Engineering Subcommittee, NFL Scouting Combine, Indianapolis, Indiana March 1, 2017.
3. "Video Analysis of Concussion Causing Events in Professional Football." NFL Head Neck and Spine Engineering Subcommittee, NFL Scouting Combine, Indianapolis, Indiana February 24, 2016.
4. "Nighttime Videographic Projection Mapping to Generate Photo-Realistic Simulation Environments." Human Factors in Driver Vision and Lighting, Society of Automotive Engineers 2016 World Congress. Detroit, MI. April 13, 2016.
5. "Data Acquisition Using Smart Phone Applications." Occupant Protection: Accident Reconstruction, Society of Automotive Engineers 2016 World Congress. Detroit, MI. April 13, 2016.
6. "Determining Position and Speed through Pixel Tracking and 2D Coordinate Transformation in a 3D Environment." Occupant Protection: Accident Reconstruction, Society of Automotive Engineers 2016 World Congress. Detroit, MI. April 13, 2016.
7. "Evaluation of the Accuracy of Image Based Scanning as a Basis for Photogrammetric Reconstruction of Physical Evidence." Occupant Protection: Accident Reconstruction, Society of Automotive Engineers 2016 World Congress. Detroit, MI. April 13, 2016.
8. "Nighttime Visibility Issues in Forensics." California State University, Los Angeles, CA. November 10, 2015.
9. "Liability Issues in Motorcycle Training and Instruction." T3RG Annual Meeting, Fay Meyers Motorcycle World. February 9, 2014.
10. "Revealing the Facts through Photogrammetric Analysis." Washington Defense Trial Lawyers, Seattle, WA. December 6, 2013.
11. "3D Video Projection Mapping Photogrammetry of Physical Evidence through Video Tracking." SAE Technical Paper Presentation, SAE World Congress. 2013.
12. "Demonstratives in Court." DRI 2012 Product Liability Conference, Las Vegas, NV. 2012.
13. "Computer Visualization in Daytime and Nighttime Visibility" Sentry Headquarters, Stevens Point, WI. Feb. 28 and 29, 2012.
14. "Perception, Reaction and Visualization in Motorcycle Operation." Society of Forensic Engineers & Scientists, Kauai, HI. Jan. 2012.
15. "Motorcycle Safety Training Effectiveness." Society of Forensic Engineers & Scientists, Nevada City, CA. July 2011.
16. "Computer Visualization in Accident and Injury Analysis." Wayne State University, Detroit, MI. April 2011.
17. "Photogrammetric Measurement Error Associated with Lens Distortion." Society of Automotive Engineers, Detroit, MI. 2011.
18. "Psychophysically Validated 3D Mapping in Computer Generated Visualization." Society of Forensic Engineers and Scientists, Berkeley, CA. Feb. 2011.
19. "Computer Visualization in the Courtroom." Williams Montgomery & John, Ltd., Chicago, IL. July 2010.
20. "Accident Reconstruction and Visualization." Wayne State University, School of Bioengineering, Detroit, MI. April 2010.
21. "Evaluation of Photometric Data Files for Use in Headlamp Light Distribution." SAE World Congress, Detroit, MI. 2010.
22. "Visualization and Visibility in Accident Reconstruction." Washington State Department of Transportation. Oct. 2009.
23. University of Colorado at Denver. Guest Lecturer in Accident Reconstruction. July 2009.
24. "Art Institute Portfolio Review." Graduating Class, Convention Center, Denver, CO. June 2009.
25. "Simulating Headlamp Illumination Using Photometric Light Clusters." SAE World Congress, Detroit, MI. 2009.

26. "Topics in Noise – Active Noise, Product Noise, and Community Noise." Acoustical Society of America 156th Annual Conference, Miami, FL. 2008.
27. "A Method to Qualify Vehicle Dynamics and Deformation for Vehicle Rollover Tests Using Camera-Matching Video Analysis." SAE Technical Paper Presentation, SAE World Congress. 2008.
28. "Use of Animation in Automotive Product Liability Cases." DRI 2008 Product Liability Conference, Phoenix, AZ. 2008.
29. "Topics in Architectural Acoustics: Acoustics in Rooms, Ducts, and Forensics." Acoustical Society of America 153rd Annual Conference, Salt Lake City, UT. 2007.
30. "The Art of Forensic Visualization." Art Institute of Colorado, Media Arts and Animation Dept., Denver, CO. 2003.
31. "Computer Modeling and Animation in Litigation." Presenter, Gorsuch and Kirgis, Denver, CO. 2002.
32. Art Institute Portfolio Review, Graduating Class, Convention Center, Denver, CO. June 2002.

Technical Conferences, Classes and Seminars

1. "Advanced Crash Reconstruction Utilizing Human Factors Research," Class-40 hours. Northwestern University Center for Public Safety. Evanston IL. May 15-19, 2017.
2. "NFL Head, Neck and Spine Engineering Subcommittee Meeting" NFL Scouting Combine, Indianapolis Indiana, February 2017.
3. "Vehicle Crash Reconstruction Methods," Class-20 hours. Society of Automotive Engineers. Scottsdale, AZ. September 28-30, 2016.
4. "NFL Head, Neck and Spine Engineering Subcommittee Meeting" NFL Scouting Combine, Indianapolis Indiana, March 2016.
5. "Human Factors in Driver Vision and Lighting" and "Occupant Protection: Accident Reconstruction" seminars. SAE World Congress. Detroit, MI. April 2016.
6. "Online Training Course." PC-Crash. November 2015.
7. "Photography and Light." IESRMS. Denver, CO. January 2015.
8. "Human Factors in Driver Vision and Lighting" and "Occupant Protection: Accident Reconstruction" seminars. SAE World Congress. Detroit, MI. April 2013.
9. Motorcycle Crash Reconstruction Class-40 hrs - Northwestern University Center for Public Safety. September, 2012.
10. Traffic Crash Reconstruction II Class-40 hrs - Northwestern University Center for Public Safety. May 2012.
11. Traffic Crash Reconstruction I Class-80 hrs - Northwestern University Center for Public Safety. October 2011.
12. "Animal Crashes Implications for Headlights." University of Michigan Transportation Research Institute. April 2010.
13. "Automotive Lighting: Design and Technology." Class-10 hrs SAE World Congress. Detroit, MI. April 2009.
14. "Computer Aided Exterior Lighting Design." Class-10 hrs Illuminating Engineering Society of North America. Oct. 2008.
15. "Automotive Lighting: LED Applications." Class-10 hrs -SAE International. April 2008.
16. "VBox Product Training." VBOX USA. April 2008.
17. Human Factors Course. Class – 40 hrs - University of Michigan College of Engineering. July 2008.
18. Fitzhorn, Patrick. "Tire Mechanics & Modeling." Colorado State University. March 2008.
19. Vehicle Dynamics Course. Class-40 hrs - Northwestern University Center for Public Safety. April 2007.
20. "Architectural Acoustics: Acoustics in Rooms, Ducts and Forensics." Acoustical Society of America 153rd Annual

Conference, Salt Lake City, UT. 2007.

21. "Accident Investigation." National Association of Safety Professionals. Nov. 2005.
22. "Computer Simulation Realism in Animation and Dynamic Motion." SIGGRAPH, Los Angeles, CA. 2004.
23. "Computer Simulation and Dynamic Motion." SIGGRAPH, San Diego, CA. 2003.
24. Field Investigation and Inspection Surveying. New York, NY. 1997.

Motorcycle Testing and Training

1. **2001 Suzuki SV650S.** (kcorp.3076) Handling, stability, cornering, and nighttime visibility, Los Angeles California, October 11, 2017.
2. **2007 Suzuki GSXR-750.** (kcorp.3063) Cornering, leaning braking, and acceleration testing, V-box data collection. Los Angeles, CA. August, 2017.
3. **2015 Harley Davidson FLSTC.** (kcorp.3036) Nighttime Visibility Testing. Longview, WA. May 29, 2017.
4. **2009 Can-Am Spyder.** Braking, swerving and cornering testing. Denver, CO. April 22, 2017.
5. **2016 Harley Davidson Tri-Glide-Ultra Classic.** Braking, swerving and cornering testing, Denver, CO. April 22, 2017.
6. **2016 Harley Davidson Free Wheeler.** Braking, swerving and cornering testing, Denver, CO. April 22, 2017.
7. **2005 Yamaha YZF-R1.** (kcorp.2976) Nighttime Visibility Testing. Gilbert, AZ. January 16, 2017.
8. **2003 Harley Davidson Roadking.** (kcorp.2513) Handling and stability testing. Lakewood, CO. May 3, 2016.
9. **2002 Honda VTX 1800S.** (kcorp.2532) Handling and stability testing with under inflated, and properly inflated tires. Denver, CO. March 14, 2016.
10. **2006 Honda CBR600RR.** (kcorp.2461) Acceleration, deceleration and visibility testing. Santa Fe, NM. January 28, 2016.
11. **2009 Kawasaki EX650.** (kcorp.2134) Acceleration, stability and handling testing. Washington, DC. November 20, 2015.
12. **2003 Suzuki GSX R600.** (kcorp.2525) Idle and acceleration testing. Lakewood, CO. September 15, 2015.
13. **BMW R1200.** Handling and stability testing. Portland, OR. May 26-28, 2015.
14. **2009 Kawasaki ZX1000.** Acceleration, deceleration and visibility testing. Tampa, FL. March 23, 2015.
15. **2008 Harley Davidson FXDL.** Acceleration, deceleration and visibility testing. Tampa, FL. March 23, 2015.
16. **2009 Kawasaki KL650.** Acceleration, deceleration and visibility testing. Tampa, FL. March 23, 2015.
17. **2005 Suzuki SV650.** (kcorp.2250) Passenger Stability and cornering testing. V-box data collection, Spokane Washington. May 6, 2014.
18. **2006 Triumph Bonneville.** Passenger Stability and cornering testing. Greenwood Village CO. April 23, 2014
19. **2003 Harley Davidson FXD Superglide.** Lean Angle and Compression Test. Frederick, CO. October 24, 2013.
20. **Harley Davidson Road Bike.** 50 mph crash test. Victorville, CA. August 7-8, 2013.
21. **Motorcycle Crash Reconstruction.** Northwestern University, Evanston, IL. September 2012
22. **Level I Motorcycle Accident Scene Management.** The Center for Transportation Safety, Commerce City, CO. Jan. 2011.
23. **Level II Advanced Motorcycle Accident Scene Management.** The Center for Transportation Safety, Commerce City, CO. March, 2011.

24. **2011 Suzuki GSXR-750.** (kcorp.1981) Braking and acceleration testing and V-box data collection. Colorado Springs, CO. October 2012.
25. **1996 Honda Shadow** Sabre American Classic Edition. Braking and acceleration testing and V-box data collection. Longmont, CO. September 2012.
26. **2000 Yamaha V-Star XVS-1100** Cruising Bike. Handling and cornering. Seattle, WA. February 2012.
27. **2006 Honda CBR 1000RR** Racing Bike. Deceleration Testing and V-box Data Collection. Denver, CO. October 2011.
28. **2006 Honda CBR 1000RR** Racing Bike. Daytime Visibility Testing. Tracy, CA. September 2011.
29. **2006 Honda CBR 1000RR** Racing Bike. Nighttime Visibility Testing. Aurora Airstrip. Denver, CO. June 2011.
30. **2006 Honda CBR 1000RR** Racing Bike. Highway Handling Testing. Ontario, CA. June 2011.
31. **2006 Harley Davidson FXST** (Softail). Nighttime Visibility Headlamp testing. Oroville, CA. June, 2011.
32. **1993 Harley Davidson Fatboy.** Daytime Visibility and Handling. Horton, AL. January, 2010.
33. **MSF Rider Coach Training Program.** May 2010.
34. **2007 Kawasaki ZX600.** Daytime Visibility and Handling Testing. Tulsa, OK. 16 March 2010.
35. **2006 Suzuki SV650.** Deceleration and Engine Brake Testing and Vbox Data Collection. Centennial, CO. Sept. 2009.
36. **2006 Yamaha YZF-R1.** Deceleration and Engine Brake Testing and Vbox Data Collection, Arvada, CO. June 2009.
37. **2007 Triumph Americana.** Vehicle Noise Testing. Denver, CO. Summer 2009.
38. **Total Control Advanced Rider's Course.** T3RG Motorcycle School, Aurora, CO. June 2009.
39. **2007 Honda CBR 1000** Sport Bike. Daytime Visibility Testing. Santa Barbara, CA. 8-9 June 2009.
40. **1998 Yamaha VMax** Headlamps. Nighttime Visibility Testing. California Department of Transportation, Monterey, CA. August 2008.
41. **2006 Triumph Bonneville.** Transient Braking on Different Friction Surfaces and VC3000 Data Collector. Bandimere Speedway, Morrison, CO. October 2007.
42. **2004 Harley Davidson "Fat Boy".** Locked Rear Wheel Braking Distance and VC3000 Data Collector. Hesperia, CA. October 2007.
43. **2004 Harley Davidson "Fat Boy".** Braking and Deceleration and VC3000 Data Collector. Motorcycles. Denver, CO. September 2007.
44. **Harley-Davidson's Rider's Edge Rider Course.** Motorcycle Safety Foundation, Harley Davidson Academy of Motorcycling, Littleton, CO. May 2007.