

PROFESSIONAL PROFILE

Mr. Toby L. Gloekler holds a M.S. in Mechanical Engineering and a B.S. in civil engineering and is a Registered Professional Engineer (P.E.) and Disaster Services Worker in the State of California. He is a retired police officer of fifteen years during which time he concentrated on automobile accident and crime scene investigation and testified as an expert in criminal courts. He has investigated more than 5,000 traffic accidents as a law enforcement officer and forensic engineer combined. Mr. Gloekler is the founder of COLLISION RECONSTRUCTION ENGINEERS INC., where he specializes in traffic collision reconstruction for clients throughout the United States. He has presented “Motorcycle Crash Reconstruction & Case Studies,” for the California Association of Accident Reconstruction Specialists. He has instructed “Low-Speed Impacts: Investigation, Reconstruction and Determination of Injury Mechanisms,” “Speed Determination from Collision Damage,” and “Computer Assisted Traffic Accident Reconstruction” and continues to teach Mechanical Engineering at the undergraduate/graduate levels. Mr. Gloekler has qualified and testified as an expert more than 300 times in cases involving automobiles, motorcycles, bicycles, pedestrians, and commercial vehicles in State and Federal Courts. He has written or contributed to numerous articles and papers focusing on motorcycle accident investigation, traffic collision investigation, commercial vehicle trailer under-ride collisions and low-speed collision investigation. Mr. Gloekler conducts ongoing research in his field, including full-scale motorcycle crash testing, instrumented high-speed crash testing, and instrumented human volunteer low-speed crash testing. Mr. Gloekler has provided volunteer technical support to law enforcement agencies, including the California Highway Patrol MAIT Golden Gate Division, the Arizona Department of Public Safety, the Oakland Police Department Traffic Division, the Walnut Creek Police Department, and the Davis Police Department. Mr. Gloekler is accredited by the Accreditation Commission for Traffic Accident Reconstruction (ACTAR). He is a member of numerous professional organizations, including National Academy of Forensic Engineers (NAFE), the American Academy of Forensic Scientists (AAFS) the Society of Automotive Engineers (SAE), the American Society of Civil Engineers (ASCE), the National Society of Professional Engineers (NSPE), the Structural Engineers Association of Northern California (SEAONC), California Association of Accident Reconstruction Specialists (CA²RS), the American Motorcyclist Association (AMA), and is a life member of the University of California at Berkeley Alumni Association.

SPECIALIZED PROFESSIONAL COMPETENCE

On-road and off-road motorcycle and ATV operation, handling, and reasonable care expertise, motorcycle speed determination, motorcycle collision dynamics and motorcycle accident reconstruction; Low-speed impact investigation and reconstruction including: delta-v and “g-force” calculations; Speed determination using forensic evidence including: skid marks, collision damage (CRUSH); demonstrative presentations using 2D and 3D computer simulations and visibility studies using vehicle-mounted high definition video monitors; Auto versus pedestrian impact dynamics, area-of-impact (AOI) determination and vehicle speed determination; Human Perception-response and collision avoidance assessment, Commercial and recreational vehicle collisions and rollover speed determination, Crash data retrieval (CDR) imaging and interpretation of “black box” data, Commercial vehicle engine control module (ECM) data download and interpretation, Seatbelt use examination and determination, Tire failure cause analysis, Brake failure cause analysis, Headlamp filament on/off determination, Roadway defect investigations, Instrumented full-scale crash testing, Low-speed human volunteer crash testing, Scaled diagramming and 3D electronic field surveying; Crime scene investigation and evidence preservation, and demonstrative bullet trajectory recreations.

ACADEMIC CREDENTIALS

Master of Science (M.S.), Mechanical Engineering, California State University, Sacramento, 2022

Bachelor of Science Degree (B.S.), Engineering (Civil/Structural), University of California Berkeley, 1996

PROFESSIONAL REGISTRATIONS

Remote Pilot (sUAS), Federal Aviation Administration, Certificate No. 4412738
Registered Professional Engineer (P.E.), License 60623, California
Accreditation Commission for Traffic Accident Reconstruction (ACTAR), #986
Registered Disaster Service Worker, Structural Engineering Associate, State of California #SA970852
California Commission on Peace Officer Standards and Training (POST) Basic, Intermediate, Advanced Certificates

SPECIALIZED TRAINING AND EDUCATION

Safety Belt Examinations, one hour, Institute of Police Technology and Management (IPTM), December 2023
Event Data Recorder Use in Traffic Crash Reconstruction – Level 1, 40 hours, Institute of Police Technology and Management (IPTM), August 2023
Seatbelts, Pre-Tensioners, and Airbags: How they work and their effect on occupant safety, eight hours, California Associations of Accident Reconstruction Specialists (CA²RS), May 2023
Traffic Engineering: How it Influences Accident Reconstruction, two hours, California Association of Accident Reconstruction Specialists (CA²RS), March 2023
Night Accident Scene Reconstruction Using Small Unmanned Aerial Systems (sUAS), two hours, California Association of Accident Reconstruction Specialists (CA²RS), May 2021
Computerized vehicle body and frame measurement using The Genesis Workstation, ASE certified Chief Training, Automotive Collision Equipment, Inc., Burlingame, CA, July 2016
Safety Assessment Program (SAP) Evaluator Training, eight-hours, California Governor's Offices of Emergency Services, Mather, CA, March 2016
Crash Data Retrieval (CDR) Analyst Course, forty hours, Collision Safety Institute, Sacramento, CA, November 2015
Vision, Perception, and Attention and Pedestrian Accident Reconstruction Methods, four and four hours, California Association of Accident Reconstruction Specialists (CA²RS), Vallejo, CA, May 2015
Low Speed Impact Analysis using IIHS & CDR Data, eight hours, California Association of Accident Reconstruction Specialists (CA²RS), Vallejo, CA, February 2015
Crash Data Retrieval (CDR) Technician Level 1 & 2, sixteen hours, Collision Safety Institute, Sacramento, CA, October 2014
Forensic Mapping with Total Stations, eight hours, California Association of Accident Reconstruction Specialists (CA²RS), Vallejo, CA, August 2014
Civilian Motorcycle Rider Training Program (Intermediate Skills Course), eight-hour course in police motorcycle operation for civilians, Alameda County Sheriff's Department, Regional Training Center, Dublin, CA, November 2013
Civilian Motorcycle Rider Training Program (Basic Skills Course), eight-hour course in police motorcycle operation for civilians, Alameda County Sheriff's Department, Regional Training Center, Dublin, CA, November 2013

Auto-Pedestrian Crash Reconstruction: Determining AOI and Pedestrian Equations, 8-hour course with practical exercise, California Association of Accident Reconstruction Specialists (CA²RS), 3rd Quarter Training, San Ramon, CA, August 2012

Crash Data Retrieval (CDR) System Technician Certification Course, eight hours, Bosch and Collision Safety Institute (CSI), April 2009

Motorcycle Crash Investigation, 40-hour course, Institute of Police Technology and Management (IPTM), University of North Florida (UNF), March 2009

Human Factors for Traffic Crash Reconstruction, 40-hour course, Accident Dynamics Research Center, January 2009

Comparing Methods of Measuring Drag Factor, Narrow Object Impacts, Critical Speed/Yaw Situations, Investigating Roll-Over Collisions, Human Factors & Visibility, Court Testimony Tips – Surviving Cross Examination, 20-hours of training, CA²RS 10th Anniversary Conference, SOAR 25th Anniversary Conference, October 2008

Vehicle Factors for Crash Reconstruction, 8-hour course, California Association of Accident Reconstruction Specialists (CA²RS), Sacramento, CA, August 2008

Motorcycle controls and handling, cornering and racing school including classroom and on-track coached riding sessions, Level Four, California Superbike School, Laguna Seca Raceway, March 2007

Motorcycle controls and handling, cornering and racing school including classroom and on-track coached riding sessions, Level Three, California Superbike School, Infineon Raceway, October 2006

Motorcycle controls and handling, cornering and racing school including classroom and on-track coached riding sessions, Level Two, California Superbike School, Streets of Willow Springs Raceway, June 2006

Motorcycle controls and handling, cornering and racing school including classroom and on-track coached riding sessions, Level One, California Superbike School, Infineon Raceway, December 2005

Occupant Kinematics and Injury Mechanisms during Motor Vehicle Collisions, University of California Riverside Extension, September 2004

Theoretical and Applied Vehicle Dynamics, Part I and Part II, L. Daniel Metz, Ph.D., 2004 HVE Forum, San Francisco, CA, May 2004

Biomechanics of Human Injury, University of California Berkeley Extension, San Francisco, CA, February 2003

ANSI A-1264 and the Determination of Walkway Safety, Status of Neck Injury Biomechanics Related to Rollover Accidents, and Total Station Laser Scanning Redux, Society of Forensic Engineers and Scientists, 2002

Vehicle Accident Documentation, Occupant Kinematics and Biomechanics of Injury, National Institute of Forensic Studies, February 2002

Evaluation of E/M Coding: The Potential for Abuse; Michael J. Stahl, D.C, State Farm SIU Awareness Training, October 2001

Crash Data Retrieval System Training Seminar (downloading and interpreting automobile “black box” data recorders) Vetronix Corporation, Santa Barbara, CA, 2001

Kinematics of Air Bag Deployments and Crush Relations for Vehicle Collision Analysis, Society of Forensic Engineers and Scientists, 2001

Biomechanics of Human Motion, San Diego State University, February 2000

Tire Forensics, University of California Riverside Extension and Michelin Tire Corporation, 2000

Motor Vehicle Collision Injuries: Emphasis on Low-Speed Crashes, Life Chiropractic College West, 2000

Theory and Application of the New Vehicle “Black Box” Technology (Crash Event Data Retrieval), CA²RS Conference, 1999

Speed from Crush Damage, CA²RS Annual Conference, 1999

Traffic Accident Reconstruction, Los Medanos College, 1999

Advanced Traffic Accident Investigation, Los Medanos College, 1999

Intermediate Traffic Accident Investigation, Los Medanos College, 1998

Principles of Investigating Low-Speed Impacts, University of California Riverside Extension, 1998

Accident Reconstruction Using Conservation of Momentum and Energy, Society of Automotive Engineers (SAE), 1997

Post Earthquake Safety Evaluation of Buildings Program, Disaster Emergency Services Committee, Structural Engineers Association of Northern California, 1997

Mock Trial Program, Thelen, Marrin, Johnson & Bridges, San Rafael, CA, 1997

Intermediate/Advanced Criminal Investigators Courses, Oakland Police Dept., Oakland, CA

Field Evidence Technician Course, California State University, Long Beach, Center for Criminal Justice Research and Training, November 1989

Oakland Police Academy, Oakland, CA, August 1986

Sacramento County Sheriff’s Academy, Sacramento, CA, 1984

RESEARCH AND DEVELOPMENT

Force Deflection and Energy Dissipation Characteristics of Motorcycle Wheels, California State University, Sacramento, December 2022

Motorcycle versus automobile instrumented full-scale crash testing, sponsored by California Association of Accident Reconstruction Specialists (CA²RS), Vallejo, June 2017

Motorcycle speed versus drop/slide distance research, sponsored by California Association of Accident Reconstruction Specialists (CA²RS), Roseville, April 2013

Passenger vehicle semi-trailer instrumented under-ride crash testing, sponsored by Collision Reconstruction Engineers, Mr. Truck Traffic Accident Reconstruction, Kinetic Engineering, Castaneda Engineering, and TSR Corporation, Vallejo, May 2009 and Fresno, February 2011

Low-Speed Human Volunteer Crash Testing, sponsored by Collision Reconstruction Engineers, Mr. Truck Traffic Accident Reconstruction, and Kinetic Engineering, April 2004

Low-Speed Human Volunteer Crash Testing, sponsored by the University of California Riverside Extension and Collision Reconstruction Engineers, Inc., July 2003

Low-Speed Human Volunteer Crash Testing, sponsored by Collision Reconstruction Engineers, Inc., Kinetic Engineering, and Mr. Truck Traffic Accident Reconstruction, July 2003

Commercial Vehicle Acceleration and Skid Testing, sponsored by Collision Reconstruction Engineers, Inc., Mr. Truck Traffic Accident Reconstruction, and Accident Science, 2002

Automobile/Pedestrian Impact Crash Testing – Forward Projection, sponsored by CA²RS, 2001

Low-Speed Rear-Impact Human Volunteer Crash Testing, sponsored by the University of California Riverside Extension and Collision Reconstruction Engineers, Inc., 2001

Low-Speed Rear-Impact Crash Testing, sponsored by Collision Reconstruction Engineers, Inc. and presented to the Society of Forensic Engineers & Scientists, 2001

Automobile Idle Acceleration Velocity Testing, sponsored by Collision Reconstruction Engineers, et al., 2000

Low-Speed Rear-Impact and Broadside Human Volunteer Crash Testing, sponsored by RDA, Inc., June 2000

Automobile, Motorcycle, and Commercial Vehicle Acceleration and Skid Testing, CA²RS, 2000

Full-Frontal Barrier, Pole, and Bumper Over-ride Crash Testing, CA²RS, 1999 Conference

Low-Speed Rear-Impact Human Volunteer Crash Testing, NCFIA, 1999

High-Speed Crash Testing, CA²RS, 1999

Low-Speed Rear-Impact Human Volunteer Crash Testing, University of California Riverside, 1998

LECTURES AND PRESENTATIONS

Forensic Engineering: Aerial Mapping with Drones (sUAS), one hour, Forensic Engineering Club, California State University, Sacramento, November 2023

Case Study: Hyatt Regency Walkway Collapse, Kansas City, 1980, Engineering Analysis, one hour, Forensic Engineering Club, California State University, Sacramento, November 2023

Engineering Statics & Dynamics Laboratory, STEM Jam 2019, Los Medanos College, Pittsburg, CA, August 2019

Forensic Investigations using 3D laser scanning technology, Alameda County Public Defender's Office, Oakland, CA, October 2018

Traffic Accident Reconstruction Techniques, one hour MCLE approved presentation to Law Offices of Yempuku, Wetters & McNamara, Sacramento, CA, April 2018

Automobile versus Pedestrian Impacts and Injury Mechanism Determination, one-hour guest lecture, ME 296W Accident Biomechanics, California State University of Sacramento, Department of Mechanical Engineering, Sacramento, CA, April 2018

Technical Aspects of Traffic Accident Reconstruction, one-hour guest lecture, ME 196E Vehicle Safety and Crash Reconstruction, California State University of Sacramento, Department of Mechanical Engineering, Sacramento, CA, April 2016, April 2017, and April 2018

Damage Energy Methods, eight-hour seminar presented to the California Association of Accident Reconstruction Specialists, Glendora, CA, February 2016 and Vacaville, CA, March 2016

Speed Determination from Collision Damage (CRUSH); 40-hour course presented to the Arizona Department of Public Safety, Pinal County Sheriff's Office, Chandler Police Department, Gilbert Police Department, Phoenix Police Department, Glendale Police Department, Maricopa County Sheriff's Office, Scottsdale Police Department, Tempe Police Department, and Flagstaff Police Department, Phoenix, Arizona, October 2015

Advanced Trial Techniques: Expert Witnesses, LAW 592HB, John F. Kennedy University, College of Law, Pleasant Hill, November 2014, 2013

Commercial Vehicle Rollover Case Study, one hour presentation at the California Association of Accident Reconstruction Specialists, 2013 Fall Conference, Long Beach, October 2013

Examining Motorcycle Collisions, one hour MCLE approved presentation to Stratman, Patterson & Hunter, Oakland, CA, May 2013

Event Data Recorders and Crash Data Retrieval, one hour MCLE approved presentation to Tiza Serrano Thompson & Associates and State Farm Insurance Company, Roseville, September 2012

Technical Aspects of Traffic Collision Reconstruction, Investigating Low-Speed Impacts and Injury Mechanism Determination, and Event Data Recorders and Crash Data Retrieval Case Studies, two MCLE approved presentations to the Law Offices of John A. Biard, Rancho Cordova, February 2012

Investigating Low-Speed Impacts and Injury Mechanism Determination, one hour MCLE approved presentation to the Association of Defense Counsel of Northern California and Nevada, San Francisco, December 2011

Event Data Recorders and Crash Data Retrieval, one hour MCLE approved presentation to McNamara, Ney, Beatty, Slattery, Borges & Ambacher, LLP, Walnut Creek, November 2011

Technical Issues of Traffic Collision Reconstruction, one hour MCLE approved presentation to Toschi, Sidran, Collins, & Doyle, Oakland, February 2011

Crash Data Retrieval Overview, one hour MCLE approved presentation to Matheny, Sears, Linkert & Jaime, LLP, Sacramento, September 2009

Motorcycle Crash Reconstruction and Case Studies, two six-hour presentations to the California Association of Accident Reconstruction Specialists, Orange, CA, July 2009 and Vallejo, CA, August 2009

Traffic Accident Investigation Techniques, a two-hour presentation/demonstration to the California Association of Licensed Investigators, at the 2009 CALI Annual Conference, Burlingame, June 2009

Technical Issues Surrounding Traffic Accidents, a two-hour presentation/demonstration to The United States Attorney's Office, District of Arizona, Phoenix (live) and Tucson (by video feed), Arizona, May 2009

Scene and Vehicle Inspections: Identifying Critical Evidence, a two-hour presentation/demonstration to the members of the California Association of Licensed Investigators (CALI), Santa Rosa District, January 2009

Examining Common Myths in Low Speed and Motorcycle Collisions, a 1-hour presentation to the members of the State Bar of California Litigation Section, Insurance Staff Counsel Standing Committee, May 2008

Applications in Crush Force Analysis, a 5-hours presentation to the members of the Southwestern Association of Technical Accident Investigators (SATAI), March 2008

Advanced Collision/Homicide Investigation, an 80-hour course for the members of the Arizona Department of Public Safety (Highway Patrol), January 2008

Crash Data Retrieval System (CDR), a two-hour presentation/demonstration to the members of the California Association of Licensed Investigators (CALI), Santa Rosa District, November 2007

Practical Techniques for Measuring the Crush Damage to Vehicles, a four-hour presentation/demonstration to the members of the Davis Police Department Traffic Division, May 2007

Motorcycle Accident Reconstruction and Deposition Tips for Motorcycle Cases, Toby L. Gloekler and Deborah T. Bjonerud, Esq., an MCLE approved presentation to Philip M. Andersen & Associates, May 2007

Low-Impact Collision Demonstration and Low-Impact Collision Data Review and Crash Data Retrieval Systems; Collision Reconstruction Engineers, Mr. Truck Traffic Accident Reconstruction and Kinetic Engineering, presented at the California District Attorney's Association Insurance Fraud Seminar, October 2006

Investigating Low-Speed Impacts and Assessing Injury Potential; presented to Western United Insurance Company, June 2006

Technical Issues Surrounding Traffic Accidents; 90-minute MCLE approved course for the Alameda Contra Costa Trial Lawyers' Association, October 2005

Speed Determination from Collision Damage (CRUSH); 40-hour course presented to the Arizona Department of Public Safety (Highway Patrol), June 2005

Technical Issues Surrounding Traffic Accidents; 90-minute MCLE approved course for Valerian, Patterson & Stratman, May 2005

Motorcycle Safety and Accident Reconstruction; guest expert on the RiderRadio live talk show (a motorcycle enthusiast talk radio program) aired on KNBR/San Francisco, WWZN/Boston, WCCP/Greenville-Spartanburg, KDOB/North Hills-Los Angeles, and CFGO/Ottawa, April and May 2005

Technical Issues Surrounding Traffic Accidents; Collision Reconstruction Engineers, Inc., 90-minute MCLE approved course for The Law Offices of Catherine A. Walsh, December 2004

Technical Issues Surrounding Traffic Accidents; Collision Reconstruction Engineers, Inc., 90-minute MCLE approved course for Philip M. Andersen & Associates, November 2004

Advanced Technical Collision Investigation (ATCI); Collision Reconstruction Engineers, Inc., 40-hour course presented to the Arizona Department of Public Safety (Highway Patrol), October 2004

Speed Determination from Collision Damage (CRUSH); Collision Reconstruction Engineers, Inc., 40-hour course presented for the University of California Riverside Extension, June 2004

Traffic Safety, Collisions and Liability; a training session presented at the Institute of Transportation Engineers (ITE) 2004 District 6 Annual Meeting, June 2004

Low-Speed Collision Investigation: Reconstruction and Assessment of Injury Potential and Reading the "Black Box" (Crash Data Retrieval); presented at the NCFIA 15th Annual Training Conference by Collision Reconstruction Engineers, Mr. Truck Traffic Accident Reconstruction, and Kinetic Engineering, April 2004

Traffic Collision Reconstruction, Law 885.4; 40-hour course presented for the University of California Riverside Extension, March 2004

Accident Investigation: Fitting It All Together for Trial; presented to 21st Century Insurance Company, Needham, Davis, Kirwan & Young, LLP, and Collision Reconstruction Engineers, Inc., January 2004

The Low-Speed Collision: Investigation, Reconstruction, and Assessment of Injury Potential; presented to GEICO Insurance by Collision Reconstruction Engineers, Inc., Kinetic Engineering, and Mr. Truck Traffic Accident Reconstruction, July 2003

Low-Speed Impacts: Investigation, Reconstruction and Determination of Injury Mechanisms; 40-hour course presented for the University of California Riverside Extension, July 2003

Speed Determination from Collision Damage (CRUSH); Collision Reconstruction Engineers, Inc., 40-hour course presented to the Arizona Department of Public Safety (Highway Patrol), June 2003

Traffic Collision Reconstruction, Law 885.4; 40-hour course presented for the University of California Riverside Extension, October 2002

"Making the Pieces Make Sense," presented to State Farm Insurance Company OAU Monthly Meeting, May 2002

CURRICULUM VITAE OF

TOBY L. GLOEKLER, P.E., M.S., ACTAR

COLLISION RECONSTRUCTION ENGINEERS INCORPORATED

PO Box 129, Clayton, CA 94517 Δ Voice/Fax: (925) 672-7500

- Investigating Low-Speed Impacts and Assessing Injury Potential; presented to State Farm Insurance Company SIU Awareness Training, March 2002
- Forensic Photography and Crash Data Retrieval; presented to State Farm Insurance Company SIU Awareness Training, five presentations in 2001
- The Low-Speed Impact: Reconstruction and Assessment of Injury Potential; presented to The Law Offices of Valerian, Patterson, Field & McGraw, October 2001
- Speed Determination from Collision Damage (CRUSH); presented for the University of California Riverside Extension, August 2002
- Computer-Assisted Traffic Accident Reconstruction using Mathcad; presented for the University of California Riverside Extension, 2001
- Low-Speed Impacts: Investigation, Reconstruction and Determination of Injury Mechanisms; presented for the University of California Riverside Extension, April 2002
- Data Collection Systems for Low-speed Crash Testing; presented to the Society of Forensic Engineers & Scientists, 2001
- Principles of Investigating and Reconstructing Traffic Accidents; presented to the California Association of Licensed Investigators (CALI), November 2000
- Principles of Traffic Accident Reconstruction – Role of the Expert Witness; presented to Tau Beta Pi, University of California Berkeley, 2000
- Motorcycle Accident Investigation and Reconstruction; presented for the University of California Riverside Extension, 2000
- Forensic Photography, Advanced Traffic Accident Investigation; presented for Los Medanos Community College, 2000
- Vehicle Factors Analysis, Advanced Accident Investigation; presented for the University of California Riverside Extension, 2000
- Scale Diagramming, Advanced Accident Investigation; presented for the University of California Riverside Extension, 2000
- Speed Determination from Skidmark Computations, Intermediate Accident Investigation; presented for the University of California Riverside Extension, 2000
- Computer-Assisted Traffic Accident Reconstruction using Mathcad; presented for the University of California Riverside Extension, 2000
- Auto-Pedestrian Accident Investigation and Reconstruction; presented for Los Medanos Community College, 2000
- Heavy Duty and Articulated Vehicle Accident Investigation and Reconstruction; presented for Los Medanos Community College, 2000
- Motorcycle Accident Investigation and Reconstruction; presented for Los Medanos Community College, 2000
- Computer Assisted Diagramming using AutoSketch; presented for Los Medanos Community College, 2000
- Tire Mark Identification and Speed from Skid; presented for American River Community College, 1999, 2000
- ACTAR Exam Review Course; presented for CA²RS, 1999, 2000



Accident Reconstruction: The Low-Speed Accident; presented for the Northern California Fraud Investigators Association (NCFIA), 1999

Forensic Photography, Advanced Traffic Accident Investigation; presented for Los Medanos Community College, September 1999

The Law Enforcement Profession; 8-hour course presented for the Oakland Police Academy, 1998

History and Principles of Law Enforcement; 8-hour course presented for the Oakland Police Academy, 1998

Administration of Justice Components; 8-hour course presented for the Oakland Police Academy, 1998

Juvenile Law and Procedure; 12-hour course presented for the Oakland Police Academy, 1997

Principles of Interpreting Firearms Evidence; Presentation, presented to Failure Analysis Associates, Inc. (Exponent-Failure Analysis), 1997

Juvenile Law and Procedure; presented to the Oakland Police Department Field Training Officers School, 1996

Community-Oriented Policing; presented to the Oakland Police Explorer Academy, 1996

Principles of Reconstructing Traffic Accidents; presented to the University of California Berkeley, 1995

Traffic Accident Investigation; presented for the Oakland Police Academy, 1987

SELECTED PUBLICATIONS AND PAPERS

“Bond Graph Models for Reconstruction of Motorcycle Barrier Equivalent Speeds,” 13th International Conference on Bond Graph Modeling and Simulation, Professor José J. Granda, California State University, Sacramento, CA, and Toby L. Gloekler, Bordeaux, France, July 2018

“Bond Graph Models for Reconstruction of Vehicle Barrier Equivalent Speeds,” 12th International Conference on Bond Graph Modeling and Simulation, Professor José J. Granda, California State University, Sacramento, CA, and Toby L. Gloekler, Montreal, Quebec, Canada, July 2016

“Motorcycle Sliding Friction for Accident Investigation,” Proceedings of the 10th International Motorcycle Conference, Institute for Motorcycle Safety, Louis R. Peck, Bill Focha, Toby L. Gloekler, Essen, Germany, pp. 62-78, 2014

“Trailer Side Underride Crash Testing: Relating Collision Damage to Impact Speed,” Society of Automotive Engineers (SAE) Technical Paper 2012-01-0614, Castaneda, R., Jones, W., Shattuck, M., Mills, D., Gloekler, T., Ravani, B., Presented by Rene Castaneda at SAE 2012 World Congress & Exhibition, Detroit Michigan, April 2012

“Test Your Skill,” *Skidmarks*, Volume Nos. 18, 19, and 20, California Association of Accident Reconstruction Specialists, San Jose

“Acceleration Factors and Maximum Speeds under Conditions of Idle Acceleration,” *Accident Investigation Quarterly*, Peter Rast, Robert Stearns, Michael Allison, Toby L. Gloekler, David Beals

“Validation of a Motor Vehicle Accelerometry System,” *Medical Engineering and Physics Journal*, Shimada, SD; Robertson, RN; Gloekler, TL; and Cooper, RA

“Acceleration Testing: April 19, 2000, CA²RS Training,” *Skidmarks*, No. 11, fall 2000, California Association of Accident Reconstruction Specialists, Lafayette

“The Path of a Bullet,” *The Oregonian, Science and Health*, Victoria Bruce, June 25, 1997

“Principles of Reconstructing Traffic Accidents,” *California Engineer*, Berkeley, 1996

“Cohesion and Police Brutality: A Correlation?” Oakland Police Department, 1996

“Engineering Economics,” University of California at Berkeley, 1995

“Corrosion Resistant Steel for Reinforced Concrete,” University of California at Berkeley, 1995

SPECIAL AWARDS AND SCHOLARSHIPS

University of California, Riverside Extension, Instructor and Advisor Recognition for Dedicated Service to the University and Community, 2001

California Alumni Leadership Scholarship, University of California, Berkeley, 1993

EMPLOYMENT EXPERIENCE

Adjunct Lecturer (undergraduate/graduate)

Sierra College, Department of Engineering, Rocklin, CA, 2022

California State University, Sacramento, Department of Mechanical Engineering, 2019

Diablo Valley College, Department of Engineering, Pleasant Hill, CA, 2019

Los Medanos College, Department of Engineering, Pittsburg, CA, 2018

Diablo Valley College, Administration of Justice Department, Pleasant Hill, CA, 2016

Adjunct Professor, College of Law, John F. Kennedy University, Pleasant Hill, CA, 2013

Principal Engineer, COLLISION RECONSTRUCTION ENGINEERS INC., Clayton, CA, 2000

Traffic Safety Evaluator (TSE), Institute of Transportation Studies, University of California Berkeley, Berkeley, CA

Rudy Degger & Associates, Inc., Lafayette, CA

Hinman Consulting Engineers, Inc., San Francisco, CA

Oakland Police Department, Oakland, CA

Exponent Failure Analysis Associates, Inc., Menlo Park, CA

Signet Testing Laboratories, Hayward, CA

Dixon Police Department, Dixon, CA

Sacramento County Sheriff’s Department, Sacramento, CA

PROFESSIONAL AFFILIATIONS

American Academy of Forensic Scientists (AAFS), Associate Member, American Society of Civil Engineers (ASCE), Society of Automotive Engineers (SAE), National Society of Professional Engineers (NSPE), National Academy of Forensic Engineers (NAFE), Senior Member, Accreditation Commission for Traffic Accident Reconstructionists (ACTAR), Structural Engineers Association of Northern California (SEAONC), Southwestern Association of Technical Accident Investigators (SATAI), California Association of Accident Reconstruction Specialists (CA²RS), International Association of Bloodstain Pattern Analysts (IABPA), California Alumni Association, University of California Berkeley, Golden Bear Life Member, American Motorcyclist Association (AMA), Tau Beta Pi, Engineering Honor Society, (Faculty Advisor 2022)