

Curriculum Vitae
RAYMOND P. PALADINO
ACCIDENT CAUSE ANALYST
BIO-MECHANICAL / HUMAN INJURY ANALYSIS

Mr. Paladino is a Accident Cause Analyst with specific fields of education and training which include, but are not limited to: Bio-mechanics, Human Injury Analysis, Reconstruction and cause analysis of collisions involving automobile, Heavy Trucks, Mass Transit Bus/Transit Rail, Grade Crossings, pedestrian, bicycle, motorcycles, skateboards, Occupant Kinematics, G-Force Analysis, Low-Speed Collisions, Vehicle Dynamics, Driver Fatigue Awareness, driver perception/human factors, reaction time, tire forensics, child restraint injury evaluations and crash testing involving live, instrumented human test subjects, as well as anthropomorphic dummies and serves as a member of VOSI-Voices of Safety International-Slip Resistance Standards Review Committee for slip/trip and fall investigations.

Formerly a Senior Associate Staff Instructor for the Federal Transit Administration, United States Department of Transportation, Transportation Safety Institute for approximately ten years, he is certified as an Investigator in Transit Bus and Rail Collisions. He is a Diplomate of the American Board of Forensic Examiners and a Fellow of the American College of Forensic Examiners and received specialized training, on campus, at Northwestern University, Engineering Extension School, The Traffic Institute.

As a Licensed Private Investigator, he has participated in SIU investigations of fraudulent injury and Auto Theft claims as well as Auto Repair Fraud. Mr. Paladino has many years of field and courtroom experience and has testified as an expert witness on approximately 200 occasions in Superior, Municipal and Criminal Courts. In addition, Mr. Paladino has been authorized by the California Bar Association to provide Continuing Legal Education in the fields of Collision Reconstruction and the Bio-mechanics of Injury. He currently serves on the Expert Panel for Los Angeles County Superior Court, criminal prosecution and defense.

TOPICS OF TECHNICAL EXPERTISE/TRAINING:

- Accident Reconstruction:
- Anti-lock Braking Systems
- Airbags
- Articulated Vehicles
- Biomechanics - Kinematics vs. Device and Vehicle Design
- Biomechanics
- Human Injury Analysis
- Driver Fatigue as Related to Traffic Collisions
- Energy in Reconstruction
- Fraudulent Staged Collisions
- Grade Crossing Collisions Investigations
- Heavy Vehicle Collisions Reconstruction (Bus, Truck & Exotic Equipment)
- Damage Analysis
- Injuries as Related to Restrained and Unrestrained Occupants
- Injury Scaling Systems and Disability

- Measurements
- Lamp Examinations
- Linear Momentum Facts & Myths
- Low-Speed Collision Dynamics
- Low-Speed Bumper Performance
- Perception/Reaction Time
- Seatbelt Effectiveness
- Occupant Kinematics
- Vehicle Dynamics
- Seatbelt Examination and Analysis for Collision Reconstruction
- Speed from Deformation of Metal
- Motorcycle Dynamics
- Pedestrian Collision Reconstruction
- Spinal Disorders Related to Collision Forces
- Stability/Child Restraint Injuries
- Tire Forensics
- T.M.J. Injuries
- Train & Light Rail Collisions Investigation

Crash Testing, including but not limited to:

- ▶ Bus vs. Automobile
- ▶ Motorcycle vs. Automobile
- ▶ Truck vs. Automobile
- ▶ Low Speed Rear-End Collisions
- ▶ Multi-Vehicle Rear-End Collisions
- ▶ Head-On Collisions
- ▶ Pedestrian Simulations
- ▶ Bicycle Simulations
- ▶ Pole/Tree Collisions
- ▶ Motorcycle vs. Automobile
- ▶ Van vs. Van
- ▶ Side Impact Collisions
- ▶ Metal to Pavement
- ▶ Coefficient Testing
- ▶ Roll-over Collisions
- ▶ Angular Collisions
- ▶ Offset Collisions

EXPERIENCE:

- 1989 to present Expert Technologies International, Thousand Oaks, California. *Supervising Collision Cause Analyst.* Specializing in comprehensive forensic consulting, technical and Bio-mechanical reconstructive services. Responsible for training and supervision of staff Collision Causation Analysis experts.
- 1995 to 2004 Federal Transit Administration, United States Department of Transportation, Transportation Safety Institute, Oklahoma City, Oklahoma. Senior *Associate Staff Instructor.* Responsible for instruction at all levels of Safety & Security, Anti-Terrorism and Bus Collision Investigations. Responsible for course review, update of syllabus materials and preparation and development of new course materials to be taught in Collision Analysis involving Bio-mechanics of Injury, Vehicle Dynamics, Occupant Kinematics, G-Forces and Delta-V.
- 1984 to 1989 Garrett Engineers, Inc., Los Angeles, California. *Vice-President and Director*

of Accident Reconstruction. Supervised all facets of Accident Reconstruction, including technical equipment analysis, crash calculations and case review. Presented introductory seminars regarding Accident reconstruction to clients.

Garrett Accident Reconstruction Training Center - A Division of Garrett Engineers, Inc., Los Angeles, California. *Director of Training, Consultant, Lecturer* and *Program Director* for Garrett's Accident Reconstruction Training Center. The Training Center provided Accident Reconstruction training to engineers, private investigators, adjustors and attorneys.

Garrett Engineers, Inc., Los Angeles, California. *Corporate Security Consultant.* Managed the security operations of the corporate offices for Garrett Engineers. Responsible for office personnel and the preservation and recordation of technical evidence.

- 1981 to 1984 Proficiency Investigations, *Special Services Investigator* assigned to Fraudulent Insurance Claims Unit. Investigated fraud rings in cooperation with the State Board of Medical Quality Assurance, State Fraud Bureau, U.S. Postal Inspector, State Bar Association, Insurance Crime Prevention Institute and local law enforcement agencies.
- 1979 to 1981 Licensed Polygraph Examiner with the State of California. Administered and evaluated tests including criminal, theft, dishonest employee and background verifications. Special Services Insurance Unit-Fraud Investigator, *Proficiency Investigation* (1981).
- Current Licensed Private Investigator with the State of California. *Collision Reconstructionist / Investigator / Polygraph Examiner* specializing in Insurance Fraud, Life and Disability Claims, Collision Reconstruction, General Investigations and Photographic Surveillance.
- 1979 to 1981 Supplemental Services and Technology. *General Manager* of the Los Angeles office. Private investigations and polygraph examinations involving criminal offenses.
- 1977 to 1981 Centurion Security, *Vice-President, General Manager* and *licensee*. Provided specialized executive security for major clientele during strikes and threats of sabotage. Infiltrated organized theft rings. Also responsible for video surveillance systems and security systems design.
- 1969 to 1977 Los Angeles Police Department, "*Policeman*". Assignments included Patrol Officer, Scientific Investigation Division (fingerprint and photograph crime scenes), Burglary Division, Undercover Organized Crime (infiltration of

operations), Divisional Special Weapons and Tactical Team (SWAT) and Accident Investigation Division (specialized training and designation as 'Traffic Officer').

1963 to 1978 United States Army Reserve, *Specialized Training-Staff Sergeant* assigned U.S. Army Intelligence. Honorable Discharge.

SCHOOLS, CREDENTIALS & CERTIFICATES:

- July 2003 U. S. Department of Transportation (FTA), Transportation Safety Institute, *Instructor's Course in Fatigue Awareness, teaching certification in this course.*
- June 2003 U. S. Department of Transportation (FTA), Transportation Safety Institute, *Fatigue Awareness for Managers, Supervisors and Employees and Instructors.*
- March 2003 U. S. Department of Transportation (FTA), Transportation Safety Institute, *Threat Management and Emergency Response to Bus Hijacking.*
- Jan. 2003 U. S. Department of Transportation (FTA), Transportation Safety Institute, *Transit System Security, teaching certification in this course.*
- Aug. 2002 U. S. Department of Transportation (FTA), Transportation Safety Institute, *Instructor Excellence, certification as an instructor for all FTA courses attended.*
- July 2001 Southwestern Association of Technical Accident Investigators - SATAI, *Staged Collision Sequence #20, Bio-mechanics in Rollover Collisions, Rollover Crash Dynamics, Crash Severity Analysis: The Use of BEV and Delta V.*
- March 2001 Southwestern Association of Technical Accident Investigators - SATAI, *Derivation and Application of Momentum Equations used in Traffic Accident Reconstruction, Investigation of Automobile Collisions with Wooden Utility Poles and Trees, Tire Forensics, Tire Safety and Reliability, Vehicle Crush Application: Do's and Don't's.*
- Nov. 2000 Southwestern Association of Technical Accident Investigators - SATAI, *No Math Reconstruction, Crash Dynamics - A case study, Bio-mechanics and Functional Anatomy, Modern Restraint Systems.*

- Sept. 2000 Texas Association of Accident Reconstruction Specialists -TAARS, *WREX 2000 - World Reconstruction Exposition; Collision Investigation and Reconstruction, on campus, Texas A & M.*
- July 2000 Southwestern Association of Technical Accident Investigators - SATAI, *Staged Collision Sequence #19, Frontal Crash Testing, Crash Data Retrieval Systems, Friction Testing Results.*
- Nov. 1999 Southwestern Association of Technical Accident Investigators - SATAI, *Accident Reconstruction and the Law, Low Speed Collisions, Pedestrian Collisions, Basic Signal Timing for the Investigator.*
- Aug. 1999 Society of Automotive Engineers - SAE, *Injuries, Anatomy Bio-mechanics and Federal Regulation.*
- July 1999 Southwestern Association of Technical Accident Investigators - SATAI, *Staged Collision Sequence / Sleep Apnea and Driving / Anti-Lock Brake Systems / Truck Collision Investigations.*
- March 1999 Southwestern Association of Technical Accident Investigators-SATAI, *Attitude, Perspective and Integrity in Accident Reconstruction / Linear Momentum: Facts and Myths / Energy in Reconstruction.*
- March 1999 California Trucking Association - CTA, *Commercial Motor Vehicle Inspection, Brake Adjustment, National Commercial Vehicle Safety Alliance Standards.*
- July 1998 Southwestern Association of Technical Accident Investigators-SATAI, *Motorcycle Dynamics.*
- March 1998 U.S. Department of Transportation (FTA), Transportation Safety Institute, *Instructor Excellence., certification for instruction by FTA for courses attended.*
- July 1997 Southwestern Association of Technical Accident Investigators-SATAI, *Staged Collision Sequence #16 / Damage Analysis - Barrier Impacts / Photogrammetry / Accident Reconstruction - The Lawyer's Perspective.*
- March 1997 Southwestern Association of Technical Accident Investigators-SATAI, *Traffic Engineering Concepts / Lamp Examinations / Motorcycle Dynamics.*
- Feb. 1997 U.S. Department of Transportation (FTA), Transportation Safety Institute, *Transit Rail Collision Investigation.*
- March 1996 Southwestern Association of Technical Accident Investigators-SATAI, *Human*

Factors, Low Speed Impact Dynamics.

- Nov. 1995 University of California, San Diego, School of Medicine, *Accidental Injury: Bio-mechanics & Prevention of Injury.*
- Sept. 1995 U.S. Department of Transportation, Transportation Safety Institute, *Advanced Problems in Bus Collision Investigation.*
- May 1995 U.S. Department of Transportation, Transportation Safety Institute, *Bus Collision Investigation.*
- March 1995 Association for the Advancement of Automotive Medicine, *Children in Traffic: As Occupants, Pedestrians & Bicyclists.*
- Palmer College of Chiropractic Medicine, *Cranio-Cervical-Mandibular Dysfunction.*
- Feb. 1995 Northwestern University Traffic Institute, *Heavy Vehicle Crash Reconstruction, Truck/Tractor, articulated vehicle combinations.*
- May 1992 Association for the Advancement of Automotive Medicine, completion of course, *Bio-mechanics of Impact Trauma.*
- July 1991 Southwestern Association of Technical Accident Investigators-SATAI, *Driver Fatigue*
- Nov. 1989 Southwestern Association of Technical Accident Investigators-SATAI, *Forensic Pathology and Accident Scene Photography.*
- July 1989 University of North Florida Institute of Police Technology & Management, completion of course, *Seatbelt/Child Restraint Injuries.*
- Feb. 1989 University of North Florida, Institute of Police Technology & Management, completion of course, *Tire Forensics for the Accident Investigator.*
- 1988 Northwestern University Traffic Institute, completion of course, *Traffic Accident Reconstruction II.*
- 1987 Northwestern University of Traffic Institute, completion of courses, *Traffic Accident Reconstruction, Vehicle Dynamics, Motorcycle Accident Reconstruction and Technical Accident Investigation.*
- 1986 Bates Academy of Arson Investigation, *Arson investigation course.*

- 1980 Dektor School of Voice Stress Analysis, *Psychological Stress Evaluation Course*.
- 1978 State of California Bureau of Collection and Investigative Services, *Private Investigators License #A-7335*.
- Polygraph Examiner's Board, *General License #301*.
- 1978 United States Army Intelligence Center & School, Fort Huachuca, Arizona. Completion of *Intelligence Analysis Course*.
- 1976 United States Army Intelligence Center & School, Fort Huachuca, Arizona. Completion of *Interrogator Course*.
- 1973 State of California Justice Department, Commission of Peace Officer Standards & Training (POST), *Advanced Accident Investigation Certificate*.
- Certificate of Completion for *Gas Chromatograph Intoximeter Training*, Los Angeles Police Department.
- 1971 POST, *Basic Certificate*, and certificates of completion for *Advanced Officer Course* and *High Speed Driver Training Course*.
- 1969 Los Angeles Police Department, LAPD Academy, *Diploma*.

COURT TESTIMONY AS AN EXPERT WITNESS:

- *Los Angeles County Municipal Court*
- *Los Angeles County Superior Court (Criminal/Fraud)*
- *Los Angeles County Superior Court (Civil)*
- *Santa Barbara Superior Court*
- *Santa Cruz County Municipal Court*
- *Ventura County Superior Court*
- *Orange County Superior Court*
- *San Diego County Federal Arbitration*
- *California Department of Motor Vehicles Hearings*

PROFESSIONAL AFFILIATIONS:

- *American Board of Forensic Examiners, Diplomate, Board Certified Forensic Examiner*
- *American College of Forensic Examiners, Fellow of the College*
- *American Society of Safety Engineers*
- *California Academy of Polygraph Science (Past President & Director),*
- *California Association of Licensed Investigators*
- *Northern California Fraud Investigators Association*
- *National Association of Professional Accident Reconstruction Specialists*

- *Society of Automotive Engineers-SAE*
- *Southwestern Association of Technical Accident Investigators-SATAI*
- *Southern California Fraud*
- *Investigators Association*
- *VOSI-Voices of Safety International-Slip Resistance Standards Review Committee*

- 5/07 U.S. House of Representatives-2006*
Businessman of The Year-Business Advisory Counsel California
- 2/06 U.S. House of Representatives-2005*
Businessman of The Year-Business Advisory Counsel- California
- 9/05 Honorary Chairman, NRCC -Business Advisory Counsel-California*

FORENSIC EXAMINER-SECURITY CONSULTANT-CRIME SCENE INVESTIGATOR
CURRICULUM VITAE: (Available upon Request)

Appendix I:

BIO-MECHANICAL / HUMAN FACTORS TRAINING:

Mr. Paladino attended the following seminar presented on November 11 and 12, 1995, sponsored by the University of California School of Medicine, La Jolla, California, in San Diego, California.

ACCIDENTAL INJURY: BIO-MECHANICS & PREVENTION

Reconstruction of Accident-Related Injuries, Alan Nahum, M.D. and Mark Gomez, Ph.D., Assistant Professor of Orthopaedics, U.C., San Diego, School of Medicine; Medi-Legal Consultants, Inc., San Diego, California.

Sports Injuries of the Spine, Barry Myers, M.D., Ph.D., Assistant Professor of Bio-medical Engineering, Division of Orthopaedic Surgery, Duke University, Durham, North Carolina.

Seat Performance in Injury Accidents, Andrew Levitt, P.E., Research Engineer, Collision Research & Analysis, Inc., Torrance, California.

Accidents Involving Air-bags, Donald Huelke, M.D., Ph.D., Research Scientist, Transportation Research Institute, Professor of Anatomy, University of Michigan Medical School, Ann Arbor, Michigan.

Motor-sport Injuries, John Melvin, Ph.D., General Motors Research Labs, Warren, Michigan.

Truck and Bus Accidents, Richard Fay, P.E., President of Fay Engineering Corporation, Denver, Colorado.

Industrial and Heavy Equipment Accidents, H. Frank Entwisle, P.E., Artifex Consulting, Inc., Lexington, Kentucky.

Roll-over Accidents, Edward Moffatt, Ph.D., P.E., President of Biomech, Inc., Orinda, California.

Aircraft Accident Reconstruction, Michael W. Dobbs, Ph.D.

Sports Accidents and Injuries, Jan Fronek, M.D., Orthopaedic Surgery, Scripps Clinic and Research Foundation; Team Physician, San Diego Padres; Clinical Faculty, U.C., San Diego, School of Medicine, La Jolla, California.

Bicycle Accidents, Gerald Bretting, P.E., Accident Reconstruction Associates, Inc., Consulting Engineer, Manhattan Beach, California.

Appendix I: Bio-Mechanical / Human Factors Training

Low Back Problems, Vert Mooney, M.D., Professor of Orthopaedic Surgery; Medical Director, Orthomed Center, U.C., San Diego, School of Medicine, La Jolla, California.

The Patient Who Exaggerates Symptoms, Joshua Golden, M.D., Clinical Professor of Psychiatry, U.C.L.A., School of Medicine, Medical-Legal Consultants, Inc., Pacific Palisades, California.

Minor Head Injury, Lawrence Marshall, M.D., Professor and Chief Neurological Services, U.C., San Diego, Medical Center, San Diego, California.

New Radiologic Techniques for the Diagnosis of Trauma, Mini Pathria, M.D., U.C., San Diego, Medical Center, Department of Radiology, San Diego, California.

Child Head Protection, Terry Smith, Research Associate, Head Protection Research Lab, University of Southern California, Los Angeles, California.

Forensic Examination of the Accident Scene, Ronald Barry, Manager, San Diego Sheriff's Crime Lab, San Diego, California.

Soft Tissue Injuries of the Neck, Mark Gomez, Ph.D. and Richard Lieber, M.D., Ph.D., Veteran's Administration Medical Center, San Diego, California.

Mr. Paladino attended the following seminar presented on March 23 and 24, 1995 by the Association for the Advancement of Automotive Medicine in Washington, D.C.

CHILDREN IN TRAFFIC: EXPLORING THEIR SPECIAL NEEDS AS VEHICLE OCCUPANTS, PEDESTRIANS AND BICYCLISTS.

Keynote Speaker, Adele Derby, Associate Administrator of National Highway Traffic Safety Administration (NHTSA).

Who is a Child? Describing the At-Risk Population, Phyllis F. Agran, M.D., University of California, Irvine, California.

Trends in Childhood Fatalities in Traffic, Sue Partyka, National Highway Traffic Safety Administration.

Epidemiology of Injuries to Children in Traffic.

- *Children as Vehicle Occupants*, Phyllis F. Agran, M.D.
- *Children as Pedestrians and Bicyclists*, Barry Pless, M.D., Montreal Children's Hospital, Montreal, Quebec, Canada.

Occupant Protection Needs of Children, Murray Mackay, Ph.D., D.Sc., Professor of Transport Safety; Accident Research Centre, University of Birmingham, England.

Treatment and Assessment of Pediatric Injuries, J. Alex Haller, Jr., M.D., Johns Hopkins Hospital, Baltimore, Maryland.

Bio-mechanical Research: What Do We Know About the Tolerance Limits of Children?
Murray Mackay.
Environmental Consideration in Protecting Child Pedestrians and Bicyclists, Barry Pless, M.D.

The Cost of Childhood Injuries in Traffic, Ted Miller, Ph.D., Director of Children's Safety Network, Washington, D.C.

Childhood Injury Prevention: The CDC's Perspective, Richard Schieber, Director of National Center for Injury Prevention and Control Centers for Disease Control & Prevention.

Reducing Traffic-Related Childhood Injuries: What Works? What Can We Do Better?
Discussion Leader: Richard Schieber. Panel: Phyllis F. Agran, M.D., J. Alex Haller, Jr., M.D., Barry Pless, M.D. and Ted Miller, Ph.D.

- *What are the Current Priorities in Traffic-Related Childhood Injury Reduction?*
- *What are the Current Barriers in Reducing Traffic Injuries to Children?*
- *Is the Research Base Adequate to Develop Appropriate Interventions?*
- *Is Current Policy Meeting the Needs?*
- *Where Does the Media Fit?*

Strategies for Childhood Injury Control in Traffic: Focusing on a Multi-Disciplinary Approach, Elaine Petrucelli, Executive Secretary, AAAM.

DIPLOMATE COURSE: CONSIDERATIONS IN THE CHIROPRACTIC MANAGEMENT OF CRANIO-CERVICAL-MANDIBULAR DYSFUNCTION IN A PEDIATRIC PATIENT, Gilbert Carney, D.M.D., D.C., 1995. Presented by the Palmer College of Chiropractic Medicine of Davenport, Iowa, at the Los Angeles Airport Hilton. Mr. Paladino also appeared as an unscheduled guest lecturer on the responsibilities of Chiropractic practitioners regarding Bio-mechanics and traffic accident injury claims.

Mr. Paladino attended the following seminar, presented in October of 1993 by the Maryland Association of Traffic Accident Investigators, the National Association of Professional Accident Reconstruction Specialists and the National Association of Traffic Accident Reconstructionists and Investigators.

BICYCLE & PEDESTRIAN TEST CRASHES USING ANTHROPOMORPHIC DUMMIES

Mr. Paladino attended the following seminars presented by the Association for the Advancement of Automotive Medicine and the American Trauma Society, Washington, DC in May, 1992.

BIO-MECHANICS - KINEMATICS VS. DEVICE AND VEHICLE DESIGN

Occupant Kinematics and Occupant Protection vs. Vehicle Design, Murray Mackay, Ph.D., D.Sc.

- *Occupant Crash Protection Devices and Restraints*
- *History Relating to Bio-mechanics - Federal Safety Standards*
- *Technical Design Issues Relevant to Pediatric and Elderly Populous*
- *Bio-mechanics and the Regulation of Vehicle Crash Performance*
- *Human Tolerances - Barrier Crash Analysis*
- *Effects on Cadavers and Dummies*
- *Pedestrian Collisions vs. Vehicle Design*
- *An International Review of Motorcycle Crash Worthiness*

INJURY SCALING HISTORY

Injury Scaling Systems and Disability Measurements - Evolution of the Abbreviated Injury Scale Since 1970, Elaine Petrucelli, Ph.B., Executive Director, Association for the Advancement of Automotive Medicine.

INJURY SCALING

Proposed Scales to Measure Injury - Related Impairment and Disability, David C. Viano, Ph.D., Principal Research Scientist, Bio-medical Science Laboratories, General Motors Research Laboratories and Elaine Petrucelli, Ph.B.

BIO-MECHANICS - THORACIC INJURIES

Blunt Impact Injury Assessment - Anatomy, Types and Mechanisms of Injury, Tolerance Criteria and Limits, Injury Factors, Alcohol and Injuries, David C. Viano, Ph.D.

BIO-MECHANICS OF HEAD INJURIES

Mechanical Analysis of Falls - Injuries to the Brain and Cervical Spine - Anatomy - Injury and Bio-mechanics of the Cervical Spine, Lawrence E. Thibault, Sc.D., Professor of Bio-engineering, University of Pennsylvania.

HUMAN ANATOMY

Skull, Cervical, Lumbar, Thorax, Extremities and Pelvic Injuries - Internal Organs and Injuries - Injuries as Related to Restrained and Unrestrained Occupants.

BIO-MECHANICS/KINEMATICS OF THE INJURY

Kinematics of Pedestrian Accidents, James V. Benedict, Ph.D. (Engineering), M.D., Chief Executive Officer, Bio-dynamics Research Corporation.

The following seminars, courses and demonstrations attended by Mr. Paladino were presented by the Southwestern Association of Technical Accident Investigators (SATAI), except where otherwise noted:

BIO-MECHANICS

Occupant Kinematics, Principle Direction of Force with the Use of Air-bags and Seatbelt Restraints, Obtaining Bio-mechanical Data via Accident Reconstruction, Alan Nahum, M.D.

BIO-MECHANICS OF INJURY, Peter A. Orner, M.D., Ph.D., (Engineering).

- *Bio-mechanical Injury Analysis Pertaining to Occupant Kinematics, Including T.M.J., Cervical, Soft Tissue, Low Back and Injury Mechanisms.*
- *Analysis of Extension and Flexation Injuries*
- *Injuries Resulting from Use and Non-Use of Seatbelt Restraints*
- *Determination of G-forces*

T.M.J. INJURIES

Discussion and Analysis of Extension - Flexation Injuries, T.M.J. (Temporal Mandibular Joint) and Whiplash Injuries, Gerald L. McCracken, D.D.S.

DRIVER FATIGUE

Fatigue as it Relates to Traffic Collisions, William Hewitt, 1991.

PERCEPTION - REACTION TIME

Seminar addressing the human visual system under night-time driving conditions, vehicle lighting systems, factors limiting lighting system performance and night-time driving visibility, Paul L. Olsen, Ph.D., University of Michigan Transportation Research Institute, 1991.

STABILITY/CHILD RESTRAINT INJURIES. Presented by The Institute of Police Technology and Management. Off-campus class - University of North Florida, Jacksonville, Florida; Attended in Tucson, Arizona, 1988.

PATTERN INJURY ANALYSIS

Forensic Evidence from an Autopsy: The Role of the Medical Examiner, Thomas E. Henry, M.D., Deputy Medical Examiner, Pima County, Arizona, Walter H. Birkby, Physical Anthropologist, University of Arizona and Bruce O. Parks, M.D., Forensic Pathologist, University of Arizona, 1987.

Appendix II:

TECHNICAL TRAINING:

Mr. Paladino attended the following seminars, courses and demonstrations. Except where otherwise noted, these were presented by The Southwestern Association of Technical Accident Investigators:

- 1997 MOTORCYCLE ACCIDENT RECONSTRUCTION, Instructor, Paul Olsen, IPTM, North Florida State University, Jacksonville, Florida.
- 1996 AIR-BAG RESTRAINT SYSTEMS
- 1996 LOW-SPEED IMPACT DYNAMICS/HUMAN FACTORS
- 1996 BIO-MECHANICS OF LOW-SPEED REAR-END COLLISIONS - STAGED CRASH TESTS #15, including test crashes using: California S10 Blazer (raised), Chevrolet Lumina 4-door, Ford Aerostar van, Ford Ranger pick-up EFI V-6, Ford Escort 4-door, GMC Sierra 15 & 20 van, Hyundai Excel CXL, Hyundai Stellar, Mercury Monarch 2-door, Mitsubishi Mirage 4-door, Nissan 300 ZX Turbo, Plymouth Voyager van, Pontiac Grand Am, Toyota Corolla 4-door, Toyota Previa and Toyota 4-Runner pick-up (with ball trailer hitch). Topics included Low-Speed Rear-End Collisions with and without selected occupants and selected collisions with instrumented occupants. Test crashes included various Low-Speed Rear-End Collisions, a low-speed 90 degree and a Low-Speed Side-Swipe Collision.

FUNDAMENTALS OF LOW-SPEED REAR-END COLLISIONS, *Review and Application of Low-Speed Rear-End Collision Test Data* by Mark Baily of Macinnis Engineering Associates.

BIO-MECHANICS OF LOW-SPEED REAR-END IMPACTS OCCUPANT MOTION, "*Whiplash*" by Jeff Wheeler of Bio-mechanics Research and Consulting.

Review of Test Data from Instrumented Occupant in a Low-Speed Rear-End Impact, Bio-mechanics of Occupant Motion, by Dr. Anil V. Khadilkar and Carly Ward of Biodynamics Engineering, Inc.

- 1995 BIO-MECHANICS OF LOW-SPEED REAR-END COLLISIONS - STAGED CRASH TESTS #14, including test crashes using Chevrolet Caprices and Camaros, Dodge and Toyota vans, Buick station wagons, Cadillacs and Mazdas. Topics included Low-Speed Rear-End Collisions with and without selected occupants and selected collisions with instrumented occupants. Test crashes included various low-speed rear-end collisions, a low-speed 90 degree collision and a Low-Speed Side-swipe Collision.

Review of Basic Fundamentals of Low-Speed Rear-End Collisions and Review and Application of Low-Speed Rear-End Collision Test Data, by Mark Baily of Macinnis Engineering Associates.

Review of Bio-mechanics of Low-Speed Rear-End Impacts, by Jeff Wheeler of Bio-mechanics Research and Consulting.

Review of Test Data from Instrumented Occupants in a Low-Speed Rear-End Impact, by Dr. Anil V. Khadilkar and Carly Ward of Biodynamics Engineering, Inc.

- 1995 ADVANCED PROBLEMS IN BUS COLLISION INVESTIGATION, Federal Transit Administration, U.S. D.O.T., Oklahoma City, Oklahoma.

BUS COLLISION INVESTIGATION, Federal Transit Administration, U.S. D.O.T., Oklahoma City, Oklahoma.

HEAVY VEHICLE CRASH RECONSTRUCTION (Northwestern University Traffic Institute).
Included heavy vehicle nomenclature, fundamentals of air brake systems, heavy vehicle tires, velocity determination, collision behavior/momentum/damage, tachographs, determining speed from gear position, off-tracking, computer analysis, field testing and analysis of results and case studies.

- 1994 LOW/HIGH SPEED CRASH TESTS
- *Staged Collision: School Bus vs. Automobile*
 - *Damage Analysis - Determining Thrust Direction From Collision Damage*
 - *Determining Speed Based Upon Crush Measurements*
 - *Staged Collision: Renault Alliance v. Chevrolet Cavalier*
 - *Seminar on Low-Speed Impacts and Impact Absorber (Isolator) Movements on Ford Escorts*

- 1993 ADVANCED ACCIDENT RECONSTRUCTION, presented by the Maryland Association of Traffic Accident Investigators, the National Association of Professional Accident Reconstruction Specialists and the National Association of Traffic Accident Reconstructionist and Investigators.

- *Staged Collision No. 11, Lamp Examinations and Commercial Vehicles*
- *Bicycle Collisions*
- *Pedestrian Accidents*
- *Traffic Homicide*
- *Driver Determination*
- *Physical Facts from which an Accident is Reconstructed*
- *Requirements for the Admission of Video Animation in Court*

CRASH TEST

- *Dump Truck vs. Toyota Celica*
- *Rear-end with stopped Toyota*
- *Light Filament Analysis Conducted in Association with Crash*

- 1992 BIO-MECHANICS OF LOW-SPEED COLLISIONS AND VEHICLE DYNAMICS, Jerry Eubanks and Philip Heidt, P.E. Vehicle dynamics during low-speed collisions including delta velocities, coefficient of restitution principle direction of force, use of air-bags and seatbelt restraints.

FRAUDULENT CLAIMS AND STAGED COLLISIONS

Determination of fraud and “Staged Collisions” with the use of Delta-V, Occupant Kinematics and principal direction of force (PDOF) studies.

LOW-SPEED BUMPER PERFORMANCE, Rusty Haight and Russ Malmsberry. Analysis of performance of bumpers during barrier impacts, as opposed to vehicle-to-vehicle contact, involving collisions occurring within a range of 2.5 to 5 miles per hour.

CRASH TESTING. BH2VK Engineering Crash Testing: Crush Analysis and Extrapolation Challenged - A series of hands-on crash tests of a single make & model (1982 - 1985 Ford Escort) performed at various speeds. Frontal barrier impacts, car-to-car impacts, front-to-rear impacts, low-speed tests with restrained dummies. Tests designed to address the following issues:

- *Crush Stiffness & Energy*
- *Validation of Repeated Barrier Test Technique*
- *Collision Phase Reconstruction*
- *Campbell Crush vs. Speed Model*

SEATBELT EFFECTIVENESS AND OCCUPANT KINEMATICS, Timothy A. Moebes, P.E., Trantech Corporation, British Columbia, Canada (SATAI).

KINETIC ENERGY ANALYSIS OF COLLISIONS, Gary Cooper, Director of The Traffic Institute, Northwestern University.

CONTROLLED CRASH #9

Motorcycle vs. Automobile Collisions

- *Rear-end Motorcycle Collision; Single operator only (dummy), human automobile driver.*
- *Head-on with Motorcycle; Operator and passenger (dummies), human automobile driver.*

GRADE CROSSING COLLISION INVESTIGATIONS, Patrick Samples, Safety Manager for Burlington-Northern Railroad, Springfield, Missouri. Sight and distance problems associated with Grade Crossing Collisions. Also, braking systems and operation of locomotives under emergency conditions. Investigation of Grade Crossing Collisions involving automobiles, trucks and pedestrians. Laws and regulations governing the operation of locomotives discussed.

VEHICLE WEIGHT SHIFT, Gary Cooper, Determination of Vehicle Center of Mass. Presented by the Northwestern University Traffic Institute. Participant/Observer in hands-on field problems regarding location and tracking vehicular center of mass.

- 1990 VECTOR SUM ANALYSIS/OCCUPANT KINEMATICS VS. VEHICLE DYNAMICS, Gary Stephens, Institute of Police Technology and Management (IPTM). Seminar addressing pre- and post-collision scene, data and trajectory analysis, vectors and vector analysis, post-impact analysis, changes in momentum, velocity and determining principal direction of force.

CONTROLLED CRASH #8. Rear-end collision.

COMMERCIAL VEHICLES, John Diricksons, Phoenix Police Department.

CONTROLLED CRASH #7. Motorcycle vs. Vehicle.

- 1989 TIRE FORENSICS, R.J. Grogan, Chief Engineer, Dunlop Tire Corporation (Retired). Presented by the Institute of Police Technology and Management. Off-campus class, University of North Florida, Jacksonville, Florida. Attended in Arroyo Grande, California.

- 1988 SKID TESTS ON VARIABLE SURFACES AND G-FORCE ANALYSIS

ACCIDENT CAUSATION & TRAFFIC ACCIDENT RECONSTRUCTION COURSE II, James L. Gallion, Attorney, Accident Reconstructionist, Consultant. Developer of the Physical Evidence Calculator.

- 1987 PRINCIPLES OF MOMENTUM, Thad Aycok, Northwestern University. Presented by the Northwestern University Traffic Institute.

MOTORCYCLE CO-EFFICIENT SLIDING TEST, Lynn Fricke, Director of The Traffic Institute. Presented by the Northwestern University Traffic Institute.

THREE-VEHICLE REAR-END COLLISION. Staged and recorded three-vehicle collision for analysis.

SEATBELT EXAMINATION AND ANALYSIS FOR ACCIDENT RECONSTRUCTION, Sgt. M.A. Seykoski, Accident Reconstructionist for the Arizona Department of Public Safety.

ADVANCED CASE STUDIES IN ACCIDENT RECONSTRUCTION.

TWO-VEHICLE HEAD-ON COLLISION. Observed and recorded a staged, two-vehicle head-on collision for analysis.

TECHNIQUES IN FORENSIC PHOTOGRAPHY.

PERSPECTIVE GRID DIAGRAMING AND PHOTOGRAPHIC EVIDENCE, W.R. Haight of Associated Professional Investigation.

ELEMENTS OF MOMENTUM, Thad Aycock. Conducted and certified by The Traffic Institute of Northwestern University.

ABS BRAKING SYSTEMS. Participant in skid test demonstrations of vehicles with ABS units and vehicles with the ABS units disconnected for comparative analysis.

OCCUPANT KINEMATICS.

DEMONSTRATIVE EVIDENCE IN ACCIDENT RECONSTRUCTION.

MOMENTUM/MATHEMATICAL APPLICATION, Lynn Fricke.

AIR-BAGS, DESIGN AND FUNCTION.

The following courses of study were completed by Mr. Paladino at The Traffic Institute, Northwestern University, Evanston., Illinois (1987)

TECHNICAL ACCIDENT INVESTIGATION

VEHICLE DYNAMICS

TRAFFIC ACCIDENT RECONSTRUCTION I & II

COMPUTER-AIDED ACCIDENT RECONSTRUCTION

MOTORCYCLE ACCIDENT RECONSTRUCTION

MOMENTUM ANALYSIS FOR ACCIDENT RECONSTRUCTION

Materials covered in Advanced Case Studies offered by The Traffic Institute, Northwestern University, included the following:

PEDESTRIAN ACCIDENT RECONSTRUCTION

VEHICLE OCCUPANT INJURIES AND KINEMATICS (RESTRAINT VS. NON-RESTRAINT)

MOTORCYCLE ACCIDENTS AND RECONSTRUCTION

CONSERVATION OF LINEAR MOMENTUM

DRIVER DETERMINATION

SPEED FROM DEFORMATION OF METAL

DAMAGE ANALYSIS

ARTICULATED VEHICLES

1987 ACCIDENT RECONSTRUCTION, J. Stannard Baker, The Traffic Institute, Northwestern University.

DEMONSTRATIVE EVIDENCE, Doug Filter, Litigraphics, Denver, Colorado. The recriminations of traffic accidents.

Appendix II: Technical Training

OCCUPANT KINEMATICS, Garth Snyder, San Diego Police Department and Collision Trauma Analysis Reconstruction in San Diego, California. Focused on roll-over sequences and collisions.

ACCIDENT RECONSTRUCTION, sponsored by The National Academy of Forensic Engineers.

1986 ACCIDENT CAUSATION & TRAFFIC ACCIDENT RECONSTRUCTION COURSE I, James L. Gallion.

BATES ACADEMY OF ARSON INVESTIGATION.

1981 TRANSAMERICA CORPORATION COURSE. Life Office Management Association Institute #1 and #2.

1980 DEKTOR SCHOOL OF VOICE STRESS ANALYSIS. Psychological Stress Evaluation Course.

Appendix III:

SPEAKING ENGAGEMENTS:

Mr. Paladino has been invited as a guest speaker for the following organizations. Topics of discussion have included Collision Reconstruction of serious collisions and fraudulent claims as pertaining to the insurance adjustor, plaintiff and/or defendant counsel, with demonstrations, photographic documentation and analysis. He has also addressed the topic of Occupant Kinematics and Damage Analysis.

6/04	Firearms Freedom Counsel of Ventura County	6/92	San Fernando Valley Adjustors Association (SFVAA)
6/02	California Insurance Group Bakersfield	3/92	Liberty Mutual Insurance - Regional Claims Office
7/01	Liberty Mutual Insurance Regional Claims Office	2/92	San Gabriel Valley Claims Association (SGVCA)
9/99	Qestral Claims Management	12/91	American Society of Safety Engineers (ASSE)
8/97	Twentieth Century Insurance - Branch Claims Office	8/91	Conejo Valley Bar Association
7/97	Law Offices of Tharpe & Howell	5/91	West Valley Claims Association (WVCA)
11/96	Blue Goose International-PMLG	5/91	Allstate Insurance - Regional Claims Office
9/96	National Insurance, Phoenix, AZ	4/91	Farmers Insurance - Regional Claims Office
5/96	Scottsdale Insurance, Phoenix, AZ	4/91	The Law Offices of Thomas Moore & Associates
2/96	UPS Risk Management Staff	4/91	Fireman's Fund Insurance - Regional Claims Office
3/95	Palmer College of Chiropractic Medicine, Los Angeles Airport Hilton	3/91	Southern California Gas Company Claims Division
3/93	Blue Goose International	5/86	West Valley Claims Association (WVCA)
1/93	Masonic High-12 of Conejo Valley		
8/92	San Fernando Valley Adjustors Association (SFVAA)		