



CURRICULUM VITAE

Thomas F. Fugger, Jr., P.E.
President / Senior Engineer

EDUCATION

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN, Urbana, Illinois

Master of Science, Theoretical and Applied Mechanics - 1985

Concentration: Applied mechanics, stress analysis, materials analysis, and fatigue analysis and fracture mechanics.

SOUTHERN ILLINOIS UNIVERSITY, Carbondale, Illinois

Bachelor of Science, Engineering Mechanics and Materials - 1982

Concentration: Design and Analysis of Structures.

UNIVERSITY OF CALIFORNIA, LOS ANGELES - Los Angeles, California

UCLA Department of Mechanical Engineering

Coursework: Introduction to composite materials technology, Metal and Ceramic Composites, Fracture of Structural Materials, Introduction to Artificial Intelligence.

UCLA Department of Kinesiology

Coursework: Human Anatomy and Physiology, Human Anatomy, Human Anatomy and Applied Biomechanics, Injury Recognition and Prevention, Evaluation of Sports Injuries.

Southwestern Association of Technical Accident Investigators

Forensic Pathology of Injury Mechanisms

The Technical Aspects of Accident Scene Photography

November 1989 - Tucson, Arizona

Engineering Dynamics Corporation

Computer Aided Accident Simulations

Northridge, California - January 1990

Southwestern Association of Technical Accident Investigators

Motorcycle Accident Reconstruction

Introduction to Occupant Kinematics

Phoenix, Arizona - April 1990

Engineering Dynamics Corporation

Computer Aided Accident Reconstruction

Houston, Texas - May 1990

Texas A&M University
Collision Trauma Biomechanics
College Station, Texas - Oct 1990

Association for the Advancement of Automotive Medicine
The Biomechanics of Impact and Its Relationship to Crash Performance Standards
Long Beach, California - Nov 1990

UCLA - Medical School
Anatomy and Injury Mechanisms
Westwood, California - Dec 1990

Society of Automotive Engineers
Motor Vehicle Accident Reconstruction
Detroit, Michigan - Feb 1991

Northwestern University Traffic Institute
Traffic Accident Reconstruction II
San Diego, California - Mar 1991

University Consortium for Continuing Education
Vehicle Dynamics and Active Control
Detroit, Michigan - June 1991

University of North Florida, IPTM
Tire Forensics for the Accident Investigator
Ontario, California - July 1991

University of California - San Diego
School of Medicine
Accidental Injury: Biomechanics and Prevention
San Diego, California - Nov 1991

University of California, Los Angeles
Scientific Aspects of Cycling
April 1992

Society of Automotive Engineers
Vehicle Rollover Toptec
September 1992

Society of Automotive Engineers
Heavy Truck Rollover
Atlanta, Georgia - April 1993

Society of Automotive Engineers
Head and Neck Injury Symposium
Denver, Colorado - December 1993

Society of Automotive Engineers
Sensor Design for Automotive Air Bag Systems
Irvine, California - January 1995

University of California, Los Angeles
Review Class for Traffic Engineering
Los Angeles, California - September 1997

Society of Automotive Engineers
Accident Reconstruction TopTec
Tempe, Arizona - May 2001

Collision Safety Institute
Crash Data Retrieval System Operator
San Diego, California – May 2005

Transportation Research Board
Human Factors Workshop
“New Frontiers in Visibility Technology” – January 2006

United Transportation Training
Commercial Vehicle Brakes
Alvin, Texas – September 2006

Valley Detroit Diesel Allison
Detroit Diesel Electronic Control DDC 8880
Training Class for DDEC Control Systems
Mira Loma, California – December 2006

Transportation Research Board
Human Factors Workshop
“Driver Vision and Behavior during Dusk and Dawn” – January 2007

National Transportation Safety Board
“Motorcoach, Bus and 15-Passenger Vans”
Washington, D.C. – July 2007

Society of Automotive Engineers
“Highway Event Data Recorder Symposium”
Washington, D.C. – September 2007

PROFESSIONAL EXPERIENCE

- Jan '95 - ACCIDENT RESEARCH & BIOMECHANICS, Inc - Valencia, CA
Present President / Senior Engineer
Accident reconstruction and biomechanics analysis of transportation and premises related incidents and crashes involving, but not limited to, automobiles, trucks, buses, trains, motorcycles, bicycles and pedestrians.
- Aug '89 - ACCIDENT RESEARCH & ANALYSIS - Newhall, CA
Jan '95 Accident Analyst
Investigation and analysis of accidents involving automobiles, trucks, severity and occupant kinematics.
- Sept '85 - LOCKHEED AERONAUTICAL SYSTEMS COMPANY - Burbank, CA
Dec '90 Senior Scientist
Structural stress analysis of advanced composite structures. Impact damage analysis, damage modeling, failure analysis, fatigue and fracture research and computer modeling.
- Jan '84 - UNIVERSITY OF ILLINOIS - Urbana, Illinois
Sept '85 Graduate Research Assistant- Dept. of Theoretical and Applied
Failure analysis and computer modeling of truck/tractor wheels.
Investigated failure mechanisms, causation, identification, and prediction of failure lifetime.
- Jan '83- UNIVERSITY OF ILLINOIS - Urbana, Illinois
Jan '84 Graduate Teaching Assistant - Dept. of Theoretical and Applied
Mechanics
Taught undergraduate statics and dynamics.
- June '83- FIRESTONE TIRE AND RUBBER COMPANY - Akron, Ohio
Sept '83 Research Engineer
Investigated mechanical and material behavior of various viscoelastic (tire) compounds. Also investigated truck wheel failures.

PROFESSIONAL ASSOCIATIONS

Society of Automotive Engineers
Society of Accident Reconstructionists
Southwestern Association of Technical Accident Investigators
Association for the Advancement of Automotive Medicine
Society of Forensic Engineers & Scientists
International Society of Biomechanics
Institute of Transportation Engineers
Tau Beta Pi National Engineering Honor Society

LICENSES AND CERTIFICATES

Registered Professional Mechanical Engineer - State of California
Registration Number: M028890

Certificate of Accreditation as a Traffic Accident Reconstructionist
The Accreditation Commission for Traffic Accident Reconstruction, Dec 1992

Certification as a Crash Data Retrieval System Operator
Vetronix Corporation, May 2005

AWARDS and PANEL ACTIVITIES

J.O. Smith Outstanding Young Teacher Award - Dept. of Theoretical and Applied Mechanics, 1984

Transportation Research Board – Award for Best Paper of Session, Pedestrian Committee, January 2000

Panel Member – National Academy of Sciences, TCRP Project A-28 regarding Fixed Route Bus and Pedestrian Collisions (Project completed).

PROFESSIONAL ACTIVITIES

Western Chapter American Association of Automotive Medicine
Meeting and Lecture Attendance:

"Reconstruction Animation Using Computers"
Los Angeles, CA - October 1989

"A Primer on Automobile Accident Reconstruction"
Los Angeles, CA - April 1990

Southwestern Association of Technical Accident Investigators

"Staged Motorcycle/Automobile Collision"

Phoenix, AZ - April 1990

"Staged Automobile Collision"

Phoenix, AZ - July 1990

Texas Association of Accident Reconstruction Specialists

Society of Accident Reconstructionists

Washington Association of Technical Accident Investigators

Combined Meeting

"Staged Collision - Two moving vehicles"

"Computer Animation"

"Staged Vehicle Rollover Testing"

"Tractor/Trailer Skid Testing"

"ABS v. Non-ABS Automobile Skid Testing"

"Traffic Engineering"

"Skidpad Testing of Truck/Tractor"
"Skidpad Testing of ABS and Non-ABS Automobiles"
College Station, TX - June 1990

Stapp Car Crash Conference
34th Annual Proceedings
Orlando, FL - November 1990

Thirteenth International Technical Conference on Experimental Safety Vehicles
Paris, France - November 1991

Southwestern Association of Technical Accident Investigators
"Low Speed Rearend Impacts"
"Fraud Investigation"
San Diego, CA - March 1992

Society of Forensic Engineers and Scientists
"Skid Tests"
CHP Academy
Sacramento, CA - July 1992

Society of Automobile Engineers
SAE Congress
Detroit, Michigan - February 1992 to present
Technical Papers Reviewer – 1995 to present

Society of Automobile Engineers
Future Transportation Technology Conference
Co-organizer and Co-chairman of the Safety session
Costa Mesa, CA - August 1992
BH2VK
"Staged Automobile Collisions"
San Bernadino, CA - August 1992

Fourteenth International Technical Conference on Experimental Safety Vehicles
Munich, Germany - May 1994

Fifteenth International Technical Conference on Enhanced Safety of Vehicles
Melbourne, Australia - May 1996

Crash 1997
Conference on Reconstruction and Safety on the Highway
College Station, Texas - March 1997

Association of Automotive Medicine
Conference
Orlando, Florida - 1997

Crash 1998
Conference on Reconstruction and Safety on the Highway
College Station, Texas – October 1998

Seventeenth International Technical Conference on Enhanced Safety of Vehicles
Amsterdam, Netherlands - May 2001

Crash Data Retrieval System Training
Vetronix Corporation
Santa Barbara, California – June 2001

Nineteenth International Technical Conference on Enhanced Safety of Vehicles
Washington, D.C., May 2005

Transportation Research Board, Annual Conference, 2000 to present

Twentieth International Technical Conference on Enhanced Safety of Vehicles
Lyon, France, May 2007

HVE Forum 2008, Engineering Dynamics Corporation, San Diego, CA, February 2008

PUBLICATIONS, PAPERS AND PRESENTATIONS

Fugger, Jr., T.F., "Service Histories Analyzed by the Local Strain Approach",
University of Illinois at Urbana-Champaign, Materials Engineering - Mechanical
Behavior, Report Number 120, May 1985.

Hight, P.V., **Fugger, Jr., T.F.** and Reust, T.J., "Automobile Damage Scales and Their
Correlation," Proceedings of the Canadian Multidisciplinary Road Safety Conference
VII, June 17-19, 1991, Vancouver, British Columbia.

Hight, P.V., **Fugger, Jr., T.F.** and Marcosky, J., "Automobile Damage Scales and the
Effect on Injury Analysis," SAE Congress, Detroit, Michigan, February 1992

Fugger, Jr., T.F., "The Art and Science of Accident Reconstruction," Annual Auto
Seminar, Los Angeles Trial Lawyers Association, March 1993
"Results and Findings of the Bald Tire Testing in Wet and Dry Conditions"
Presentation
Society of Forensic Engineers and Scientists
Sacramento, CA - August 1993

Hight, P.V., **Fugger, Jr., T.F.**, et al, "Asymmetric Water Drag on Vehicle Trajectory and
Human Response," I Mech E, Autotech '93, Birmingham, England, November 1993

“Accident Reconstruction Techniques Unique to Bicycle and Motorcycle Collisions”
Technical Editor of paper presented to Consumer Attorneys Association of Los Angeles,
Los Angeles, CA - March 1995

Fugger, Jr. T.F., Randles, B.C., Stein, PhD, A.C., Whiting, PhD, W.C., and Gallagher, B., “Analysis of Pedestrian Gait and Perception/Reaction at Signal-Controlled Crosswalk Intersections”, Presented at the 79th Annual Meeting, Transportation Research Board, Washington, D.C., January 2000

Fugger, Jr., T.F. and Randles, B.C., “Forensic Aspects of Pedestrian Accident Reconstruction”, Society of Forensic Engineers and Scientists, Big Sur, California, January 2000

Fugger, Jr. T.F., Randles, B.C. and Eubanks, J., “Comparison of Pedestrian Accident Reconstruction Models to Experiment Test Data for Wrap Trajectories”, *ImechE Conference Transactions 2000-2*, C567/031/2000, 2000.

Fugger, T., Randles, B., Wobrock, J., Stein, A., and Whiting, W., “Analysis of elderly pedestrian gait and perception/reaction at signal-controlled crosswalk intersections”, Transportation Research Board, TRB, National Research Council, Washington, D.C., 2001.

Randles, B., **Fugger, T.**, Eubanks, J., and Pasanen, E., “Investigation and analysis of real-life pedestrian collisions”, Society of Automotive Engineers, 2001-01-0171, 2001.

Fugger, T., Randles, B., Wobrock, J., Stein, A., and Whiting, W., “Pedestrian behavior at signal-controlled crosswalks”, Society of Automotive Engineers, 2001-01-0896, 2001.

Fugger, T., Wobrock, J., Randles, B., Stein, A., and Whiting, W., “Driver characteristics at signal-controlled intersections”, Society of Automotive Engineers, 2001-01-0045, 2001.

Fugger, T., “Pedestrian Accident Reconstruction”, Instructor for Society of Automotive Engineers Accident Reconstruction TopTec, Tempe, Arizona, May 2001

Fugger, T., Randles, B., Wobrock, J. and Eubanks, J., “Pedestrian throw kinematics in forward projection collisions”, Society of Automotive Engineers, 2002-01-0019, 2002.

Fugger, T., Randles, B., Wobrock, J., Welcher, J., Voss, D. and Eubanks, J. “Human occupant kinematics in low speed side impacts”, Society of Automotive Engineers, 2002-01-0020, 2002.

Wobrock, J., **Fugger, T.**, Randles, B. and Vrongistinos, K. “Vibrations Experienced by Wheelchair Users While Traversing Decorative Crosswalks”, World Congress of Biomechanics, 2002 Annual Conference Proceedings, 2002.

Fugger, T., Randles, B., Welcher, J. and Szabo, T. “Vehicle and Occupant Kinematic Response to Low-Speed Override/Underride Collisions”, Society of Automotive Engineers, 2003-01-0158, 2003

Fugger, T., “Evaluation of Personal Mobility Devices”, California Association of Accident Reconstructionists Meeting, Anaheim, California – October 2003

Fugger, T., Randles, B., and Eubanks, J. “The Efficacy of Event Data Recorders in Pedestrian Related Accidents”, Society of Automotive Engineers, 2004-01-1195

Long, T., **Fugger, T.**, and Randles, B., “Vehicle Performance Characteristics and Seat Belt Effectiveness in Low Speed Vehicles and Golf Cars”, Nineteenth Enhanced Safety of Vehicles Conference, 05-0431W, May 2005