DANIEL S. GIRVAN

Specialized Professional Competence

Biomechanics including analysis of human injury mechanism, causation, and tolerance. Occupant kinematics. Accident reconstruction. Vehicle and occupant dynamics. Analysis of mechanical systems. Rigid body dynamic analysis of complex three-dimensional systems. Computer simulation and analysis of vehicle and human dynamics. Finite element analysis of static and dynamic structural systems. Static and dynamic experimental test design and analysis.

Background and Professional Honors

B.S. (Mechanical Engineering), Colorado School of Mines
M.S. (Mechanical Engineering, Design), Stanford University

Principal,
Talas Engineering, Inc.
Managing Engineer,
Piziali and Associates, Inc.
Senior Engineer,
Failure Analysis Associates, Inc.
Senior Engineer,
Martin Marietta Astronautics

Registered Professional Mechanical Engineer, California, #M028304

Board of Trustees Tuition Scholarship, Colorado School of Mines
Outstanding Undergraduate in the Engineering Department, Colorado School of Mines
Stanford University Mechanical Engineering Department Fellowship/Research Assistantship
NIH Small Business Innovation Research/Small Business Technology Transfer,
Special Study Section, Safety Applications, Reviewer

Member, SAE International (Society of Automotive Engineers)

Selected Publications and Presentations

"A Review and Analysis of the Performance of Laminated Side Glazing in Rollover Accidents," Biomechanics 2007, SP-2068, Paper No. 2007-01-1166, 2007 Society of Automotive Engineers International Congress and Exposition, Detroit, Michigan, April 2007 (with R.L. Piziali, et al.).

"Biomechanical Analysis of Rollover Accidents." Car Crashes and Occupant Injuries: A Team Approach to Crash Investigation, Association for the Advancement of Automotive Medicine, Tempe, Arizona, April 2004.

"Biomechanics of Side Impacts," Car Crashes and Occupant Injuries: A Team Approach to Crash Investigation, Association for the Advancement of Automotive Medicine, Tempe, Arizona, April 2004.

"Biomechanical Analysis of Acute Lumbar Intervertebral Disc Loading," 4th World Congress of Biomechanics, Calgary, Canada, August 2002 (with E. Serina).

"Injury Causation in Rollover Accidents and the Biofidelity of Hybrid III Data in Rollover Tests," Paper No. 980362, Society of Automotive Engineers International Congress and Exposition, Detroit, Michigan, February 1998 (with R.L. Piziali, et al.).

"Heavy Truck Crashworthiness - Collision Accidents," 15th International Technical Conference on the Enhanced Safety of Vehicles (ESV), Melbourne, Australia, May 1996 (with L.Y. Cheng, et al.).

"Heavy Truck Crashworthiness - 90° Rollover Accidents," 15th International Technical Conference on the Enhanced Safety of Vehicles (ESV), Melbourne, Australia, May 1996 (with L.Y. Cheng, et al.).

"Heavy Truck Crashworthiness - Phase I, Task C - Occupant Dynamics Simulation," prepared for SAE International, December, 1994 (with L.Y. Cheng, et al.).

"Application of the MADYMO Program in Heavy Truck Crashworthiness," 5th International MADYMO Users' Meeting, Fort Lauderdale, Florida, November 1994 (with L.Y. Cheng and T.P. Khatua).

"Use of Computer Simulations in Support of Litigation," 5th International MADYMO Users' Meeting, Fort Lauderdale, Florida, November 1994 (with R.L. Piziali, et al.).

"U.S. Efforts to Improve Heavy Truck Occupant Crash Protection and Reduce Aggressivity in Frontal Truck/Car Collisions," Proceedings, Fourteenth International Technical Conference on Enhanced Safety of Vehicles, Munich, Germany, May 1994 (with R.M. Clarke, et al.).

"SAE Truck Crashworthiness Research - A Progress Report," Presentation, International Truck and Bus Meeting and Exposition, Detroit, Michigan, 1993 (with L. Y. Cheng, et al.).