



Failure Analysis Associates®

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Benjamin A. Frank **Senior Engineer**

Professional Profile

Mr. Benjamin A. Frank is a Senior Engineer in Exponent's Vehicle Engineering practice. He joined Exponent in 2007 and specializes in reconstructing motor vehicle accidents and evaluating the performance of vehicle structures in accidents. Mr. Frank has expertise in developing vehicle structures, occupant restraint systems, and other vehicle subsystems for crash performance in front, side, and rear impacts. His experience includes setting vehicle and subsystem crash performance targets and conducting Finite Element Analysis and testing to assess the performance relative to regulatory compliance and OEM requirements. Mr. Frank is trained in the procedures to download and analyze the data contained in vehicles' Event Data Recorders. He is familiar with the Federal Motor Vehicle Safety Standards (FMVSS) and the test protocols used to evaluate compliance with those standards.

Prior to joining Exponent, Mr. Frank was employed by Ford Motor Company for over 9 years in the area of Vehicle Crash Safety Engineering. Most recently in this position he was responsible for the planning, testing, analysis, issue resolution, and documentation of compliance to crash related Federal Motor Vehicle Safety Standards and Ford internal safety requirements for a full-size car platform. In this assignment, Mr. Frank also assisted in determining the appropriate airbag sensor threshold levels and developing unique test procedures to evaluate the crash performance for specialty variants of the platform. Previously, Mr. Frank was responsible for the CAE analysis and development of the front structure for this vehicle platform.

Academic Credentials and Professional Honors

M.S.E., Aerospace Engineering, University of Michigan, 1995

B.S., Mechanical Engineering Aerospace Concentration, Worcester Polytechnic Institute (with high distinction), 1993

Tau Beta Pi; Pi Tau Sigma

Licenses and Certifications

Registered Professional Mechanical Engineer, Massachusetts, #49265

Collision Data Retrieval Technician and Data Analyst Certification, 2007

Northwestern University Center for Public Safety Traffic Accident Reconstruction Course, 2007

Additional Training

Highway Vehicle Event Data Recorder Symposium, 2007
CDR Summit, 2011

Publications

Croteau J, Frank B, Peterson D, Bare C, Kyanka G. Timber utility pole fracture mechanics due to non-deformable and deformable moving barrier impacts. SAE Technical Paper Series, 2011-01-0288, 2011.

Presentations

Frank B. Zolock J. Event data from automobile Electronic Control Modules (ECM's).
Massachusetts Defense Lawyers Association Annual Meeting, May 2011.

Frank B. Timber utility pole fracture mechanics due to non-deformable and deformable moving barrier impacts. SAE World Congress, April 2011.

Professional Affiliations

- Society of Automotive Engineers (member)
- American Society of Mechanical Engineers (member)