

**William E. Gest, P.E.**  
Senior Consulting Engineer  
Augspurger Komm Engineering, Inc.  
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## **EDUCATION**

B.M.E. Mechanical Engineering, General Motors Institute, Flint, Michigan  
MBA Marketing/Finance, Wayne State University, Detroit, Michigan

## **PRINCIPAL AREAS OF RESEARCH, DEVELOPMENT AND INDUSTRIAL MANAGEMENT**

Automotive-Chassis, brakes, body structure, sun roofs, interior, bumper systems, power train, restraint systems design and development. Vehicle crash analysis, regulatory compliance. Emissions including California Air Resource Board (CARB). Consumer products-outdoor products, including string trimmers and blower/vacuums. Small engine design expertise. Mobility and limousine industry vehicle conversions. Lift devices manned and unmanned. Human factors and occupant sensing systems. Laboratory safety, including handling of Class 1.1 explosives. Quality systems for manufacturing. Lean manufacturing

## **ENGINEERING EXPERIENCE**

2004- Senior Engineering Consultant, AKE/BTI Consultants, Phoenix, Arizona  
2004-2008 Vice President, Business Development, ESG Engineering, Phoenix, Arizona  
2000-2003 Vice President, Engineering and Quality, Vantage Mobility International, Phoenix, Arizona  
1999-2000 Vice President, of Engineering, MTD Ryobi Outdoor Products, Incorporated, Chandler, Arizona  
1995-1998 Director of Engineering Services, Vehicle Safety Systems, Inc., Mesa, Arizona/Washington, Michigan  
1992-1995 Director of Passenger Inflator and Module Engineering, Vehicle Safety Systems, Inc., Mesa, Arizona/Washington, Michigan  
1989-1992 General Manager and Director, CDI Corporation/Modern Engineering, Warren, Michigan  
1969-1989 Engineer to Manager, General Motors Corporation, CPC Car Group and Chevrolet Division, Warren, Michigan

## **PROFESSIONAL REGISTRATION**

State of Arizona, Mechanical Engineer #49972

## **SPECIFIC AUTOMOTIVE EXPERIENCE**

General Motors Corporation –Chevrolet Division/CPC  
Automatic transmissions & driveshaft

**SPECIFIC AUTOMOTIVE EXPERIENCE (Continued)**

Brake system validation for disk brake systems.  
Value engineering of transmission, engines, seats and other components  
Responsible for pilot line and launch activities  
Chassis design for luxury cars for General Motors  
Bumper & Exterior sheet metal design responsibly  
Interior design responsibly including seats, instrument panel, interior trim and restraints  
Vehicle development of chassis systems for ride and handling  
Body structure design  
HVAC & Engine Cooling

Modern Engineering

Responsible design and manufacturing engineering of a complete mid size vehicle  
Limousine design and validation  
Chassis Design for CPC of General Motors

TRW

Responsible design and development of vehicle inflatable restraint systems for both frontal and side impact systems for car companies worldwide  
Responsible for low volume production facilities and laboratories for division

MTD/Ryobi

Responsible for design and development of two and four cycle engines and complete line of outdoor products including trimmers, blowers, cultivators and chain saws.

Vantage Mobility International

Design, crash and emission validation of drop floor mini and full size vans for handicap  
Auto reverse & slide out ramp system  
Design of complete line of lifts for power wheel chairs

ESG Engineering

Seat design and analysis for major car supplier  
Motorcycle design and analysis  
Design of GM full size conversion van  
Infant safety seat system  
Alternative energy- Solar and wind  
Defense and aerospace products  
Consumer products  
Design of occupant sensing systems for wheelchair lifts

**CONSULTING AND TEACHING EXPERIENCE**

Consultant to mobility industry on crash worthiness, structure and regulations  
Consultant to limousine manufactures on design and safety.

**CONSULTING AND TEACHING EXPERIENCE (Continued)**

Guest lecturer at Arizona State University  
Senior Engineering Profession Capstone course  
Senior Engineering Project Course

Typical Cases

Electric transport cart  
RV parking brake  
Go Kart engine malfunction  
Semi Trailer cargo shift  
Taxi car fires  
Semi Truck Steering malfunction  
CNG Bus Fires  
Unrestraint child in van collision  
Electric pallet truck – accident reconstruction  
Truck airbrakes  
Engine Failure  
Restraints in van rollover  
Low speed impacts

**SEMINARS AND TRAINING**

International Association of Arson Investigators, Inc., “Investing Motor Vehicle Fires,” October 31, 2009  
The TASA Group Presents: “The Life of a Lawsuit,” Web Seminar, April 21, 2009  
Forensic Photography Techniques, Michael Wilson, Phoenix, AZ, December 18, 2008  
Arizona National Safety Council, Machine Guarding Class, September 22, 2008  
Trucking Litigation and D.O.T Regulations seminar May 30, 2008

**PRINCIPAL PROFESSIONAL PUBLICATIONS AND PRESENTATIONS**

“Spotting an Airbag Claim,” North Carolina Advocates for Justice, Raleigh, North Carolina  
“Integrated Engineering for Increased Productivity,” Body Engineering Journal  
“Camaro and Preparing it as an Indy Pace Car,” Society of Automotive Engineers, Indianapolis, Indiana  
“Design and Development of the New Camaro, Society of Automotive Engineers, Tampa, Florida  
“Computer Aided Design and Analysis Trends,” DataTech Conference, Chicago, Illinois  
“Inflatable Restraint Technology Design and Development,” Society of Automotive Engineers, Washington, DC  
“Mobility Products Design and Development,” Shopper’s Home National Conference, Toronto, Canada  
“New Generation of Automated Ramp Systems,” National Sales Conference for VMI, Phoenix, Arizona

**MEMBERSHIP IN SCIENTIFIC AND PROFESSIONAL SOCIETIES**

Society of Automotive Engineers-

- SAE Restraint Systems Standards Steering Committee, TEVBESF
- Board member and Past Chair of Arizona-Nevada SAE Section
- Past Member of Lift Standard Committee
- Past Member of the Handicapped Vehicle Standard Group

American Society of Mechanical Engineers

The Accident Reconstruction Network, Member #1439

**PATENTS**

- U.S. Patent 4,548,166 - All Plastic Air Cleaner
- U.S. Patent 4,830,418 - Bumper Energy Absorber
- U.S. Patent 5,531,475 - Curled end Airbag Inflator
- U.S. Patent 5,527,065 - Shear Tab Mechanism for Airbag Module Door
- U.S. Patent 5,562,304 - Corrugated Filter for Air Bag Inflator
- U.S. Patent 6,273,035 - Carburetor Heat Sink for Small Gas Engine
- U.S. Patent 6,547,507 - Wheelchair Lift
- U.S. Patent 6,887,027 - Scooter Lift Load Detection Device
- U.S. Patent 7,033,127 - Folding Ramp for mini-van

**AWARDS, HONORS AND SCHOLARSHIPS**

Chairman's Award for Innovation from TRW

President's Recognition for New Products Launch at VMI

Speaker's awards from Washington DC and Indianapolis SAE groups