

**Graeme F. Fowler, Ph.D., P.E.**  
**Vice President and Principal Engineer**

**Professional Profile**

Dr. Graeme Fowler is a Vice President and Principal Engineer specializing in accident reconstruction, vehicle handling, mechanical and vehicle design, and risk analysis. He has directed instrumented vehicle handling test programs for both passenger and off-road recreational vehicles. Dr. Fowler has performed engineering evaluations of numerous proposed design modifications for off-road vehicles. His experience also includes testing vehicle components and the development of custom instrumentation.

Prior to his work with Exponent, Dr. Fowler was a Junior Lecturer at the University of Auckland, New Zealand.

**Academic Credentials and Professional Honors**

Ph.D., Applied Mechanics, California Institute of Technology, 1982  
M.E., Engineering Science, University of Auckland, New Zealand (with Distinction), 1978  
B.E., Engineering Science, University of Auckland, New Zealand (First Class Honors), 1976

**Licenses and Registrations**

Registered Professional Mechanical Engineer, California, #22865

## **Publications**

“Vehicle Rollover Testing, Methodologies in Recreating Rollover Collisions,” SAE Technical Paper Series, 2000-01-1641, SAE Automotive Dynamics & Stability Conference, Troy, MI, May 15–17, 2000 (with R.E. Larson, J.W. Smith, and S.M. Werner).

“Slope Perception and Slope Warnings,” Proceedings of the Silicon Valley Ergonomics Conference and Exposition, pp. 156–159, 1997 (with T.J. Ayres, V.M. Bjelajac, and D.E. Young).

“Reaction Time for ATV Operation,” presented at Cyberg, The First International Cyberspace Conference on Ergonomics, <http://www.curtin.edu.au/conference.cyberg>, 1996 (with D.E. Young, T.J. Ayres, and V.M. Bjelajac).

“Foot Injuries and Foot Protection on All-Terrain Vehicles,” Proceedings, American Society of Mechanical Engineers Winter Annual Meeting, SERA-Vol. 2, Safety Engineering and Risk Analysis, November 1994 (with T.J. Ayres, R.L. McCarthy, and R. Merala).

“Steady-State and Transient Response of Selected All-Terrain Vehicles (ATVs),” SAE 940277, Society of Automotive Engineers International Congress and Exposition, Detroit, MI, February 1994 (with R.H. Fries et al.).

“Evaluation of a Proposed ATV Design Modification,” SAE 940276, Society of Automotive Engineers International Congress and Exposition, Detroit, MI, February 1994 (with R.L. Piziali et al.).

“An Examination of the Consent Decree and Its Impact on All-Terrain Vehicle Risk,” Proceedings, American Society of Mechanical Engineers Winter Annual Meeting, New Orleans, LA, Safety Engineering and Risk Analysis, Vol. 1, p. 155–161, November 1993 (with R.L. McCarthy, T.J. Ayres, and M.M. Gross).

“A Comparative Analysis of the Annual Injury Risk for Motorized Vehicular Recreation,” American Society of Mechanical Engineers Winter Annual Meeting, New Orleans, LA, November 1993 (with C.T. Wood, R.L. McCarthy, and J.N. Robinson).

“Investigation of the Net Safety Impact of an Occupant Protection System for All-Terrain Vehicles,” SAE 930208, Society of Automotive Engineers International Congress and Exposition, Detroit, MI, March 1993 (with R.L. Piziali et al.).

“Evaluation of an Occupant Protection System for All-Terrain Vehicles,” Society of Mechanical Engineers Winter Annual Meeting, Anaheim, CA, November 1992 (with R.L. Piziali et al.).

“Evaluation of Potential Safety Modifications by Review of Accident Reports,” 35th Annual Meeting of the Human Factors Society, San Francisco, CA, Sept. 1991 (with T.J. Ayres et al.).

“Three-Dimensional Finite Element Analysis of a Scale Model Nuclear Containment Vessel,” *Journal of Pressure Vessel Technology, Transactions of the ASME*, Vol. 108, p. 320, August 1986 (with G. Derbalian and J.M. Thomas).

“Finite Plane and Anti-Plane Elastostatic Fields with Discontinuous Deformation Gradients Near the Tip of a Crack,” *Journal of Elasticity*, Vol. 14, 1984.

“A Review of Fracture Mechanics Life Technology,” Failure Analysis Associates Report to National Aeronautics and Space Administration, September 1983 (with P.M. Besuner, D.O. Harris, and J.M. Thomas).

“Average Operator Inaction Characteristics with Lever Controls--Study of the Column Mounted Gear Selector Lever,” 26th Annual Meeting of the Human Factors Society, Seattle, WA, October 1982 (with R.L. McCarthy, J.P. Finnegan, and S.B. Brown).

“The Harmonic Excitation of a Cylindrical Bar Embedded in an Elastic Half-Space,” Abstract from Modern Problems in Elastic Wave Propagation, Wiley Interscience, 1978 (with G.B. Sinclair).

“The Longitudinal Harmonic Excitation of a Circular Bar Embedded in an Elastic Half-Space,” *International Journal of Solids and Structures*, Vol. 14, No. 12, 1978 (with G.B. Sinclair).

“The Dynamic Response of Embedded Piles Under Vertical Loading,” Proceedings, 6th Australian Conference on Mechanics of Structures and Materials, Christchurch, New Zealand, 1977 (with G.B. Sinclair).

### **Presentations and Published Abstracts**

“Characteristics and Dynamics of Light Truck “First-Event, On-Road” Rollovers,” Presentation, SAE International Congress and Exposition, February 1998.

### **Reports**

“Driver Crash Behavior in an Intersection Incursion Scenario, Analysis of Experimental Data Developed as Part of NHTSA's Light Vehicle Antilock Brake System (ABS) Research Program,” Exponent Report #PH07264.000/A0T0/1102/R451, November 2002 (with R. Larson and L. Wojcik).

### **Professional Affiliations**

- American Academy of Mechanics (member)
- Society of Automotive Engineers (member)
- Society for Risk Analysis (member)
- American Society of Mechanical Engineers (member)