Exponent®
Engineering & Scientific Consulting

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Professional Profile

Dr. Taylor specializes in the investigation and analysis of products and systems in the consumer, transportation, and industrial environments. His practice focuses on the investigation of accidents involving consumer products, vehicles, or industrial equipment, and concerns relating to the mechanical design of parts or systems, such as automotive components. Dr. Taylor's practice areas include fire cause and origin, liquid and gas flow, heat transfer, and vibration and mechanics. He regularly performs analyses of warranty and accident databases during his evaluations of the real world performance of products, particularly in automotive applications. His engineering work includes laboratory investigations and experiments, such as accident reconstruction and vehicle testing. Prior to joining Exponent, Dr. Taylor was an independent consultant.

Academic Credentials & Professional Honors

Ph.D., Mechanical Engineering, Stanford University, 1986

M.S., Mechanical Engineering, Stanford University, 1979

B.S., Mechanical Engineering, Rensselaer Polytechnic Institute, 1978

Stanford University Fellowship

Tau Beta Pi; Pi Tau Sigma

Licenses and Certifications

Professional Engineer Mechanical, California, #31069

Professional Affiliations

American Society of Mechanical Engineers (member)

National Fire Protection Association (member)

Society of Automotive Engineers (SAE)

Patents

Patent 5,651,810: Apparatus and method for filtering and sampling airborne respiratory contaminants.

Publications

Ray R, Zhao K, Taylor PM, Saraf V. Evaluation of the Robustness of Statistical Software for Warranty Analysis, 2019 Annual Reliability and Maintainability Symposium (RAMS), 978-1-5386-6554-1/19.

Mikolajczak CJ, Taylor PM. A method for assessing the potential for a dermal burn hazard from malfunctioning consumer electronic devices. J Burn Care Res 2008; 29(2):338-345.

Flaherty DK, Taylor PM, Hopkins WE, Holland ME, Schlueter DP. A new mask filter cartridge used to determine applicator inhalation exposure to an alachlor herbicide (Lasso®) during normal spraying operations. J Occupat Env Med 1995; 37(9).

McCarthy GE, Taylor PM. The effect of sample width on burn rate in Federal Motor Vehicle Safety Standard 302 testing. Proceedings, American Society of Mechanical Engineers Winter Annual Meeting, SERA-Vol. 2, Safety Engineering and Risk Analysis, November 1994.

Taylor P, Dudek R, Flaherty D, Kaempfe. Evaluation of two instruments for the measurement of aerosols. J Aerosol Sci 1994; 25(2):419-423.

McCarthy GE, Taylor PM, Kendall GR, Aboba BD, Subbaiah MV. Review of selected computational programs for atmospheric dispersion. Proceedings, 5th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers Thermophysics and Heat Transfer Conf., Seattle, WA, June 1990.

Taylor PM. The dynamics and damping of formed metal bellows. Ph.D. Thesis, Stanford University, June 1986.

Presentations

Adler D, Taylor PM. A procedure for obtaining velocity vector from two high response impact pressure probes. 14th Israel Conference on Mechanical Engineering, Technion—Israel Institute of Technology, Haifa, Israel, 1980.

Reports

Mikolajczak CJ, Taylor P, Heberer C. Cell phone usage at gasoline stations. Exponent Failure Analysis Associates, Inc., December 1999.

McCarthy G, Marble F, Taylor P, Malladi S. Flow and water quality computations in a canal with closed ends. Exponent Failure Analysis Associates, Inc., March 1996.

Taylor PM, Lee J, et al. Final report, TWT reliability improvement study. TMEC-152, December 1984.

Taylor PM, Shitzer A, Cohen Y, Stotter A. Cooling methods for inland power stations, Part I. Energy Engineering Center, Technion, Report EEC-102, June 1980.