

Condensed Curricula Vitae of the Principals

Mark E. Podany
President
PGM Diversified Industries, Inc.
Parma Heights, Ohio

Expert witness and consulting scientist involved in industrial, commercial, and consumer product liability cases. This work includes evaluation, testing (both electrical and functional), and photographic examination of the products or product components. Experience includes familiarity with the National Electric Code (NEC) and various Underwriters' Laboratory (UL) standards, experience with transformer, motor, HVAC compressor analysis, electronic systems, and programmable logic system analysis as well as their respective failure modes. Other investigative areas include accidental electrocution and failures of circuit protection devices and electrical contacts. Experienced with surface analysis techniques such as scanning electron microscopy (SEM), Auger electron spectroscopy (AES), energy dispersive x-ray analysis (EDAX), and electron spectroscopy for chemical analysis (ESCA) which are employed in the evaluation and testing of product components. Power quality analysis with regards to the effects of power quality and grounding on electrical and electronic equipment also represents a significant portion of this work. Mr. Podany also has experience with embedded microcontroller design, implementation and production, multi-system communications and database design.

James M. Galm, Ph.D., P.E.
Chief Executive Officer
PGM Diversified Industries, Inc.
Parma Heights, Ohio

Registered professional engineer in the state of Ohio, specializing in electronic systems and circuits. He has extensive experience in embedded microcontrollers, analog and digital signal processing, software system design, motion control and power electronics, automatic control system analysis and design, stochastic process analysis and real-time computation. His broad technical background includes antennas and radio wave propagation, RF circuit design, lasers and optics, robotics and computer vision, projection reconstruction imaging, intelligent systems, applied electromagnetics and system simulation.

Francis L Merat, Ph.D.
Vice President, Advanced Engineering
PGM Diversified Industries, Inc.
Parma Heights, Ohio
Associate Professor and Interim Chairman of Electrical Engineering
Department of Electrical Engineering and Applied Physics
Case Western Reserve University, Cleveland, Ohio.

Provides consulting engineering and expert witness services for the general area of analog and digital electronics (especially RF. electronics and microcontroller and microprocessor applications) and electrical systems as they apply to the failure analysis of electrical products, including consumer, commercial and industrial equipment. He has served as an expert witness and consultant for the interpretation and implementation of the National Electrical Code (NEC) as well as Underwriters' Laboratory (UL) and NEMA standards. He is an expert in concurrent engineering with particular emphasis on computer-aided design and computer-aided process planning; industrial inspection systems; industrial applications of expert systems, AI techniques, and neural networks; and image processing and computer vision.

Dukki Chung, Ph.D.
Senior Software Engineer
PGM Diversified Industries, Inc.
Parma Heights, Ohio

Areas of expertise include software design, pattern recognition, computer vision, neural networks, sensor fusion and target tracking. Other research areas have included neuro-MEMS sensors for aircraft deicing and complex domain neural networks applied to pattern recognition utilizing phase and magnitude information. Dr. Chung has authored books on systems programming and published articles on computer languages and operating systems.

Paul C. Claspy, Ph.D.
Consultant
PGM Diversified Industries, Inc.
Parma Heights, Ohio

Consults on issues related to electrical engineering, including fires and electrocution. Specific areas include electrically related vehicle fires, high voltage shock hazard analysis with respect to industrial equipment, and component failure analysis. Research activities have been in the area of laser applications in communications, industry, atmospheric propagation, thermal imaging, and in applications of high temperature superconductors to microwave systems.

John D. Mathews, Ph.D.
Consultant
PGM Diversified Industries, Inc.
Parma Heights, Ohio
Professor of Electrical Engineering
Director, Communications and Space Sciences Laboratory
The Pennsylvania State University

Expert witness and consulting engineer in failure analysis and accident reconstruction in fires of electrical origin, accidental electrocution, and other areas including lighting failure, railroad crossing protection and control, and electrical heating systems. Expertise also includes electrical safety planning, failure anticipation, protective systems, and interpretation and application of the National Electrical Code, the National Electrical Safety Code, Underwriter's Laboratory (UL) and other standards etc. Additional areas include radar, signal processing, lightning protection, electrical grounding, and natural plasmas.

Detailed curricula vitae are available upon request.