

Credentials

**Professional Engineer**  
Pennsylvania

Education

**Bachelor of Science in Electrical Engineering**  
Gannon University

**Graduate Studies in Control Engineering**  
Case Western Reserve

Professional Associations

Institute of Electrical and Electronic Engineers (IEEE)  
Pennsylvania Society of Professional Engineers  
National Institute of Standards & Technology (NIST)  
Association of Iron & Steel Engineers (AISE)  
American National Standards Institute (ANSI)

Patents

4 Patents in Electric Vehicle and Automated Drilling Computer Control System Technology.

Relevant Information

Received Recognition of Achievement from United States Steel Research  
Received the 1987 IR-100 Award from Research & Development Magazine

Public Service Positions

Service Corps of Retired Executives, Chapter 193, Co-chairman

Teaching Experience

Instructor in electrical and electronic engineering courses at Pennsylvania State University.

Areas of Concentration

Electrical engineering  
Electronic engineering  
Mechanical engineering  
Chemical engineering  
Process engineering  
Computer engineering  
Project management

Analytical testing  
Steel manufacturing  
Plastics manufacturing  
Non-destructive testing  
Coal mining  
Computer programming  
Training

Specific Experience & Interest

Temperature control  
U.S. postal facilities  
Voltage regulation  
Batteries  
Circuit breakers  
CPM scheduling  
Drilling equipment  
Electric motors  
Electric vehicles  
Electrical devices & equipment  
Electrocution and shock  
Fire causation

Grounding  
Integrated steel plants  
Material analysis & testing  
Emf shielding  
Mining equipment  
Metal cleaning  
Electric arc furnaces  
Sensors  
Computer workstations  
Ultrasonic testing  
Security systems

Papers and Presentations

"Multipurpose Self-guided Robot for Surface Cleaning and Surface/NDI Quality Inspection for Use on Ships and Storage Equipment," American Society of Naval Engineers Technical Innovation Symposium.  
"Advanced Process Control For Electric Arc Furnaces - Research For The Nineties," ABB International Summit on Process Automation.  
"Advanced Sensors - Future Opportunities," Instrument Society of America.  
"The Application of Advanced Workstations for Process Control Systems," The Control Engineering Conference.  
"In-Line Detection of Primary Pipe and Gross Porosity in Hot Slabs, Blooms and Billets", American Society of Metals MI, also to American Iron and Steel Institute.  
"Development of Quality Control Information Through Use of an Off-line Computer-Based Ultrasonic System," Society of Non-Destructive Testing.

Professional Experience

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**Institute for Products, Engineering & Construction** **2000 to Present**

Provide forensic consulting and expert witness services to attorneys and insurance companies. Services involve the disciplines of electrical, mechanical, chemical and process engineering. Projects address electrical and electronic design, telecommunications, controls and instrumentation as well as safety and accident prevention.

**Consulting Engineer** **1995 to Present**

Founder and Principal Consultant with Pennsylvania State University - Erie Electrical Design Center. Teach courses in electrical and electronic engineering and telecommunications at Pennsylvania State University. Provide consulting engineering services to government and corporations for projects dealing with communications, computer software systems, operator training, metal processing and facilities management.

**Carnegie Mellon Research Institute** **1988 - 1995**

Senior Fellow. Lead research engineers and scientists in the development of process, controls, computer and business systems for federal government agencies, the steel industry and other businesses.

**United States Steel** **1964 - 1988**

Senior Systems Engineer. Responsible for the design, implementation and training of computer, instrumentation, process and controls systems used in iron and coal mining and steel production. Served as Program Manager for the American Iron and Steel Institute (AISI) Sensor Development Programs at the National Institute of Standards and Technology (NIST) for four years. Chairman of AISI Collaborative Technology Unit involving NIST and Argonne National Laboratory.

**Republic Steel Corp. - Electromechanical Research Laboratory** **1960 - 1964**

Systems Engineer - Measurement and Process Control. Conducted integrated system design for a hot steel strip rolling facilities. Derived, programmed and implemented results from digital simulations of mill equipment. Also conducted laboratory studies of the use of microwaves for non-contact measurement of hot steel product dimensions.