

John M. Tobias, Ph.D., P.E.
Electrical Engineering Consultant

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Curriculum Vitae

Profile

- ◆ Electrical engineer and scientist specializing in electrical power, lightning, electromagnetic radiation, grounding, electrocution/electrical accidents, electrical/battery fires, lighting/illumination and safety.
- ◆ Provides consultation services for design, intellectual property, and litigation.
- ◆ Experienced expert witness, serving on many cases with court/government committee testimony and depositions.
- ◆ Qualified and credible as expert, with terminal degrees in field and professional licensure.
- ◆ Operates ElectroQuest, LLC, an engineering consultancy, since October 1998.

Professional Certification

Licensed Professional Engineer - State of New Jersey, 1997

Academic Credentials

B. Sc. Physics - Seton Hall University, 1987
M. Sc. Electrical Engineering - University of Maryland, 1992
Ph.D. Electrical Engineering - New Jersey Institute of Technology, 2002

Awards and Honors

- Listed in Who's Who in the World & Who's Who in Engineering as engineer and inventor.
- Department of the Army System Safety Professional of the Year 1994.
- United States Army Materiel Command Federal Engineer of the Year 1994 & 2000, awarded by National Society of Professional Engineers.
- United States Army Materiel Command System Safety Engineer of the Year 1993 & 1999.
- Commander's Civilian Service Award, U.S. Army 1993.
- Department of the Army Superior Civilian Service Award, 2000.

Patents

- Grounding Device and Use Thereof, U.S. Patent No. 6,288, 327 (inventor)
- Radial Surface Ground Electrode, U.S. Patent No. 5,801,327 (inventor)
- Resonant Transformer Systems and Methods of Use, U.S. Patent 7,940,534 (co-inventor)
- Methods and Systems for Wireless Energy and Data Transmission, U.S. Patent 7,960,867 (co-inventor)

Employment History

1998 – Present: **ElectroQuest, LLC** - Toms River, New Jersey
Principal Consulting Engineer

- Performs various electrical engineering services. Specialization includes electrical and electromagnetic radiation safety, electrical fires, electrocutions, lightning protection and grounding.

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Employment History (continued)

- Services include lightning risk assessments, design review of equipment and lightning protection systems, transient protection, grounding system design, electromagnetic safety assessments and electrical safety audits.
- Provides expert witness and litigation support services.
- Conducts training on lightning protection and electrical safety topics.
- Conducts patent and product evaluations for intellectual property case support.
- Provides product safety evaluations and coordinates product listings.
- Conducts electrical testing on products and systems.
- Performs forensic investigations of product, device and systems failures, electrical mishaps and electrical fires.
- Evaluates lighting and illumination conditions for mishap contribution.

2004-Present: **U.S. Army Communications Electronics Command** - Fort Monmouth, New Jersey
Directorate for Safety – Staff Engineer

- Senior engineer in organization, technical advisor to senior management, mentor to junior engineers.
- Responsible for electrical/electromagnetic design safety of electrical and electronic systems.
- Army consultant and expert in electrical safety and lightning protection.
- Formulates lightning protection and electrical safety engineering safety guidance for Army-wide application.
- Investigates electrical accidents and formulates protective measures.
- Responsible for formulation and conduct of research programs in the area of lightning protection and grounding.
- Represents Army at industry, government and consensus forums in specialty area.

2003 – 2004: **U.S. Army Research, Development and Engineering Command** – Fort Monmouth, New Jersey, Senior Antenna Research Engineer

- Responsible for antenna research and development efforts.
- Identifies candidate technologies for advanced development through industry and government forums.
- Expert on electromagnetic radiation safety.

1992-2003: **U.S. Army Communications Electronics Command** - Fort Monmouth, New Jersey
Directorate for Safety - Electrical Engineer

- Responsible for electrical/electromagnetic design safety of electrical and electronic systems.
- Army expert in electrical safety and lightning protection.
- Formulates lightning protection and electrical safety engineering safety guidance for Army-wide application.
- Investigates electrical accidents and formulates protective measures.
- Responsible for formulation and conduct of research programs in the area of lightning protection and grounding.

Professional Affiliations

- ◆ Institute of Electrical and Electronic Engineers – Member
- ◆ National Fire Protection Association (NFPA) – Principal Member and Chair of NFPA Technical Committee 780 on Lightning Protection
- ◆ Federal Lightning Protection Group, Chairperson - 2001
- ◆ U.S. National Committee of the International Electrotechnical Commission, Deputy Technical Advisor, Committee 81 on Lightning Protection
- ◆ International Association of Electrical Inspectors – Inspector Member
- ◆ Lightning Protection Institute – Member, Professional Division.