

# FORCON INTERNATIONAL

**STEVEN R. MUSIAL, II, PE**

## **EDUCATION**

Bachelor of Science - Electrical Engineering, Carnegie Mellon University, 1974

## **REGISTRATIONS & CERTIFICATIONS**

Registered Professional Engineer in the following States:

- California #E17470 (**active**)
- Delaware #13786 (inactive)
- District of Columbia #PE90128 (inactive)
- Florida #62186 (**active**)
- Kentucky #24344 (inactive)
- Maryland #30178 (**active**)
- Michigan # 6201051283 (inactive)
- Minnesota # 44907 (inactive)
- Missouri #2004011828 (inactive)
- New York #082266 (inactive)
- New Jersey #24GE04537500 (**active**)
- Ohio #PE68976 (**active**)
- Pennsylvania #PE027678E (**active**)
- Rhode Island #8362 (inactive)
- Virginia #0402039876 (**active**)
- West Virginia #015933 (inactive)

## **PROFESSIONAL ASSOCIATIONS**

Institute of Electrical and Electronics Engineers (IEEE)

- Member 1971-1983
- Senior Member 1983-2017
- Life Senior Member 2018 to Present

## **SPECIALIZED AREAS OF EXPERTISE**

Medium voltage and high voltage transmission circuits – underground and overhead power systems

Electrical Grounding

Electrical Substation Grounding per IEEE Standard 80 (2013)

Surge Protection

ARC Flash

Short Circuit

Capacitors

Motors

Transformers

Electrical Shock

Stray Voltage

Expert Witness

National Electric Code

National Electric Safety Code

NFPA 70E Safety in Workplace

Commercial, Industrial and residential Building Wiring

Extensive understanding of electrical theory due to teaching more than 50 engineering courses since 1986

Website <http://www.The-PE-Electrical-Professor.com>

## **CAREER HISTORY**

# FORCON INTERNATIONAL

## **FORCON International** – Independent Forensic Electrical Engineer / Fire Investigator Consultant

Conduct forensic engineering investigations and provide expert witness services for power system investigations, arc flash & NFPA 70E related issues, commercial and industrial equipment (SPD's, capacitors, motors, transformers), short circuit, electrical code related issues, electrical safety code issues.

## **LLI Engineering** – Department Manager, Electrical Engineering

Conducting a variety of low and medium voltage power system studies and electrical forensic studies, assign electrical design and study projects to appropriate engineers and designers in the department; review and stamp projects, drawing and specs prior to construction, keep staff informed about critical issues and projects, initiate staff promotions. Increased staff size by 100% to maintain resources needed to meet growing project demand. Bring in new electrical projects and oversee management of these projects.

## **CJL Engineering** – Electrical Principal

Conducting power system and power quality investigations, diagnostic monitoring of power systems, arc flash investigations, single line diagrams, commercial and industrial electrical design, review design work of others. Conducting forensic engineering investigations and provide expert witness services for power system investigations, arc flash & NFPA 70E related issues, commercial and industrial equipment (SPD's, capacitors, motors, transformers), short circuit, electrical code related issues, electrical safety code issues. Responsible for bringing in my own electrical work and assigning to others, as necessary.

## **Penn State University**

Adjunct Engineering Professor. Teach undergraduate electrical engineering courses, electrical engineering continuing education courses, professional review courses in electrical and mechanical engineering; FE/EIT review courses (condensed review and full review).

## **Point Park University**

Associate Engineering Professor. Teach undergraduate electrical engineering, mechanical engineering and math courses.

## **Power System Training** (Formerly Penn State Advanced Power System School)

Adjunct Professor of Electrical Engineering for worldwide (national and international) teaching. Teach several electrical power system courses.

## **Pennsylvania Society of Professional Engineers** (PSPE, Pittsburgh Chapter)

Instructor and Directors of Continuing Education. Teach a condensed FE/EIT review course, and a mini refresher course for civil engineers preparing to take a civil PE review course. Manage the professional review courses offered, including the selection of instructors, course advertising and instructor payroll.

## **Electric League of Western PA** – Instructor and Course Manager

Taught several continuing education courses, managed all aspects of the business from creating new courses to selecting instructors, advertising and instructor payroll.

## **Duquesne Light Company** (electric utility for the greater Pittsburgh area)

Electrical Engineer, Project Engineer and Senior Project Engineer in the high voltage transmission group with primary focus on 138 kV and 345 kV high voltage underground transmission systems. Worked with all overhead and underground medium and high voltage systems.

Senior Electrical Engineer, principal electrical engineer and manager of the power systems studies group. Conducted a wide variety of power system investigations. Managed the engineering work of others. Expert witness in an arc flash case.

## **PUBLICATIONS**

*"138 kV Pipe Type Cable Terminal Relocation in an SF6 Gas-Insulated Substation"* – Presented at the Pennsylvania Electric Association Meeting in Hershey, PA on September 16, 1983.