

## **CURRICULUM VITAE STEVE P. VIROSTEK**

### **QUALIFICATIONS**

- Conducted hundreds of engineering investigations and documented results through technical reports as a Mechanical Engineering Consultant for Fire Cause Analysis, a forensic analysis company.
- Testified on many occasions as a Forensic Engineering expert witness in trial, deposition and mediation.
- Interfaced with lawyers and insurance adjusters (clients) to discuss investigation details and results.
- Performed quality review and editing of more than one thousand engineering investigation reports for Fire Cause Analysis. Assisted in the development and institution of new quality and content standards for technical reports.
- Conducted numerical modeling of structure fires using public domain fire simulation software. Wrote detailed reports documenting analysis methodology and results.
- Oversaw, directed and reviewed the work of an entry level Forensic Engineer for Fire Cause Analysis.
- Performed structural, dynamic and thermal finite element analyses of numerous complex mechanical systems. Developed concepts and oversaw the design, fabrication, installation and testing of hardware.
- Coordinated and directed the design, assembly, testing and maintenance of numerous complex mechanical systems and fixtures for particle accelerators and electromagnetic launchers over the past 25 years.
- Instituted detailed procedures, schedules and budgets and compiled documentation for hardware design projects at two national labs. Assigned tasks and supervised the work of engineers, designers and technicians.

## ACCOMPLISHMENTS

- Performed extensive analysis and developed unique designs and fabrication techniques for Radio Frequency Quadrupole Accelerators as part of the Spallation Neutron Source and other science projects sponsored by the Department of Energy.
- Coordinated and oversaw the design, fabrication and testing of large-scale superconducting solenoid magnets for use in particle physics experiments.
- Devised and incorporated hardware upgrades and implemented revised operation and maintenance procedures to improve the performance and reliability of the two-mile long Stanford Linear Accelerator.
- Formulated a code to simulate the coupled electro-mechanical behavior of linear induction coil accelerators.

## RELATED SKILLS

- **Numerical Analysis:** 20 years ongoing ANSYS FEA experience; 15 years using fire simulation software.
- **Testing Hardware:** material testing, x-ray, strain gages, accelerometers, thermocouples, data acquisition.
- **Experimentation:** impact mechanics, high current sliding contacts, data analysis and theory development.
- **Computers:** 25+ years background in UNIX, PC, Apple and related software; experienced in internet research.
- **Programming:** more than 10 years coding in FORTRAN and Basic; experience with C, MatLab and Simulink.

## EXPERIENCE

9/97 to present	<b>Fire Cause Analysis, Berkeley, CA</b>	Engineering Consultant
1/96 to present	<b>Lawrence Berkeley National Laboratory, Berkeley, CA</b>	Managing Mechanical Engineer
1/94 to 12/95	<b>Stanford Linear Accelerator Center, Menlo Park, CA</b>	Lead Mechanical Engineer
9/86 to 1/94	<b>Westinghouse Electric Corporation, Sunnyvale, CA</b>	Senior Mechanical Engineer
6/84 to 8/86	<b>University of California, Berkeley, CA</b>	Research Assistant

## EDUCATION

**Professional Engineering License, Mechanical Engineering, 1992**

**Master of Science in Mechanical Engineering, University of California, Berkeley, 1986**

**Bachelor of Science in Mechanical Engineering, University of California, Berkeley, 1984**