

# Boster, Kobayashi & Associates

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## MARK A. RHODES, Ph.D., P.E.

### Curriculum Vitae

#### **EDUCATION:**

Ph.D. in Engineering, University of California, Los Angeles  
Major Field: Applied Plasma Physics  
Minor Fields: Quantum Electronics, Microwave Electronics

M.S. in Engineering, University of California, Los Angeles  
Major Field: Applied Plasma Physics

B.S.E.E. Tufts University, Magna Cum Laude, Eta Kappa Nu, and Tau Beta Pi  
Major: Electrical Engineering  
Minor: Music composition

#### **QUALIFICATIONS SUMMARY:**

- Licensed Professional Electrical Engineer in California
- 19 years experience as an expert witness and forensic engineer
- Participated in over 100 cases, 30 depositions, and 8 trials
- 29 years experience as a practicing research engineer in Science and Industry

#### **CORE TECHNOLOGIES:**

Electrical and Electronic Forensic Engineering, Electric Shocks, Industrial Controls, Equipment and Machinery, Electric Arcs and Explosions, Electro-mechanical equipment failure and accidents, Crane, Lift and Hoist controls, Electric power, Photonics, RF and Microwaves, Plasma Devices, Lasers, Pulse Power, High-Voltage, Material Science, Microelectronics, Microfluidics, Vacuum Systems

#### **PRESENT POSITION:**

Boster, Kobayashi & Associates, Livermore, California

A consulting firm specializing in the technical aspects of accident reconstruction, failure analysis, highway design, and injury causation. Typical assignments involve application of physics and principles of engineering to vehicular accident reconstruction and product design/defect analysis.

## **PREVIOUS POSITIONS:**

### Rhodes Engineering: 1992 to present

Principal, Rhodes Engineering provides Forensic Engineering and Expert Witness services with a specialization in electrical and electronic matters.

- Electrics shocks, arcs, electric power, transformers, motors
- Electromechanical equipment failures and accidents (cranes, lifts, hoists, electric doors)
- Technology IP (lasers, semiconductor equipment, fiber optics, electronics)
- Good balance of Plaintiff and Defense cases
- Experienced testifying at depositions and trials
- Mixture of Liability, Intellectual Property, and Insurance Claims type cases

### Lawrence Livermore National Laboratory: 2001 to present

NIF Electromagnetic Compatibility Project Leader in Laser Engineering Division

Leading the effort to insure proper grounding, shielding, and electromagnetic compatibility of all National Ignition Facility (NIF) subsystems.

### Signature BioScience: 1999-2001

VP of Engineering

Built a complete Engineering Department of 15 people with Electronic, Microwave, Mechanical, and Software elements while leading technical development of the Company's proteomic detection technology and maintaining close collaboration with Biology and Informatics Departments.

### Lawrence Livermore National Laboratory: 1989-1999

Optical Switch Project Leader in Laser Engineering Division

Led development and implementation of the world's largest optical switches (square yard aperture) for Livermore's Laser Fusion program. This was an enabling technology for NIF, a 3 billion dollar follow-on laser to NOVA.

### Maxwell Laboratories Inc.: 1986-1989

Project Engineer in the Advanced Power Technology Group

Developed inductive energy storage technology for new generation of flash x-ray generators in support of Defense Nuclear Agency's nuclear weapons effects simulator program.

### TRW: 1984-1986

Accelerator RF Power Systems Project Manager

Developed high average power, superconducting, electron accelerators and storage rings for free electron lasers (FEL) in support of Strategic Defense Initiative (Star Wars).

### UCLA: 1976-1984

Research Assistant and Research Engineer in the Applied Plasma Physics Laboratory

Experimental plasma physics research including RF heating of Tokamak plasmas, microwave-plasma interactions, and advanced fusion plasma confinement schemes.

**PATENTS, PUBLICATIONS, AND REFERENCES:**

- Several issued patents and several more in various stages of application
- Several publications in leading journals such as Physical Review letters and a cover feature in Applied Optics (list available)
- Many conference presentations (list available)
- Professional references are available on request.