MTechnology, Inc.

Stephen A. Fairfax
President
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Expertise

Probabilistic risk assessment, modeling and analysis of high-availability power systems. Electrical power, energy storage, and pulsed energy conversion systems. Electrical safety and electrocution injury analysis. Linear and rotary electric machines, power electronics, motor drives, rectifiers, inverters, AC circuit breakers, DC circuit breakers. Electromagnetics, cryogenic systems, and very high vacuum materials and technology. Computer-aided design, analysis, and circuit simulation. Very high current and high voltage power supplies, protection systems. Electrical accident and failure analysis. Visible and x-ray spectroscopy. Sensors and instrumentation, especially signal conditioning and isolation techniques. Computerized data acquisition and control systems.

Education

S.B. Physics, Massachusetts Institute of Technology
S.M. Physics, Massachusetts Institute of Technology
S.M. Electrical Engineering and Computer Science, MIT

Experience

President
MTechnology, Inc., Saxonville, MA
Managing Engineer
Failure Analysis Associates, Failure Group Inc., Menlo Park, CA
Engineering and Operations Head, Alcator C-MOD tokamak
Project Manager, Alcator C-MOD
Power Systems Engineer, Alcator C-MOD
MIT Plasma Fusion Center, Cambridge MA
Chief Engineer
Kaiser Systems, Inc., Beverly MA
Principal Engineer
Cyborg Corporation, Newton, MA
Technical Editor, *Trends and Prospectives in Signal Processing*
Signal Processing Resources, Waltham, MA

Professional Affiliations

Member, Institute of Electrical and Electronic Engineers
IEEE Distinguished Guest Lecturer Award, Boston Nuclear and Plasma Physics Society

Publications

Author of over 20 articles on high availability power systems, magnet power systems, linear synchronous motor design and operation, fusion reactor operations, and plasma physics in professional and trade journals, including invited papers at several conferences. Complete bibliography available upon request.