Eric M. Schultz

CFEI

Staff Consultant

Eric Schultz is a Staff Consultant for Engineering Systems Inc. (ESi) in the Electrical practice group. Prior to joining ESi, he worked as an Electrical Engineer at Parker Aerospace and Lockheed Martin.

Mr. Schultz specializes in electrical engineering matters involving electrical failure analysis, printed circuit boards, electrical components, battery systems, electrical fires, and aerospace electrical requirements. His experience includes forensic investigation, root cause analysis, risk-reduction testing, circuit design, component qualification, derating, and evaluation of electrical evidence in technical, insurance, and legal matters.

Education

BS, Electrical Engineering. Brigham Young University, Provo, UT. 2020

AS, Utah Valley University, Orem, UT. 2014

Licenses & Certifications

- State of Texas F.E. License 24-171-75
- Transportation Worker Identification Credential (TWIC®)
- NAFI Certified Fire and Explosion Investigator (CFEI) Certificate #29020-17567

Positions Held

Engineering Systems Inc., Houston, Texas

- Staff Consultant, 2023 – Present

Parker Aerospace, Fort Worth, Texas

- Electrical Engineer – Circuit Design, 2022–2023

Lockheed Martin, Arlington, Texas

- Electrical Engineer - Components, 2020–2022

Raytheon Missile System, Tucson, Arizona

- EE Intern, 2019

Contact Information

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(832) 403-2052

ESi Houston

18500 Trails End Road
Conroe, TX 77385

Areas of Specialization

- Electrical Devices
- Electrical Power Systems
- Controls & Software

Professional Affiliations/Honors

Institute of Electrical and Electronics Engineers

- Member, 2024 – Present

National Association of Fire Investigators

- Member, 2024 – Present

Project Experience

Investigations

Fire Investigations – Electrical Systems & Battery Technologies

- Conducted forensic investigations of residential, commercial, and utility-scale fires involving electrical systems, consumer devices, and battery energy storage systems (BESS).
- Casework includes incidents with losses ranging from $50,000 to over $10 billion.

Transformers

- Investigated transformer damages at manufacturing facilities.

Electric Shock

- Investigated electric shock events related to utility power distribution, commercial electrical repairs, and system installations.
- Evaluated compliance with electrical safety standards and fault conditions.

Design and Operational Experience

PCBA Analysis – Root Cause

- Diagnosed root causes of recurrent PCB failures in consumer electronics and medical devices.
- Developed engineering solutions and design modifications to mitigate future failures and enhance product safety and reliability.

Publications

"Metal Oxide Varistors in Fires: Cause v Fire Victim," L.F. Bilancia, P.R. Ritchie, **E.M. Schultz**, and K.G. Cline, Proceedings of the 2025 IEEE International Symposium on Product Compliance Engineering, pp. 1–7, doi:10.1109/ISPCE64260.2025.11044895, 2025.

"Design, Risk, and Efficacy While Testing to Standards: Tradeoffs for Surge Protective Devices," **E.M. Schultz**, L.F. Bilancia, and T.J. Bajzek, Proceedings of the 2024 IEEE International Symposium on Product Compliance Engineering, pp. 1–6, doi:10.1109/ISPCE61193.2024.1054114, 2024.

Presentations

“MOV Thermal Runaway Features: Fire Cause vs. Effect” **Eric M. Schultz**, Daniel R. Muller, ISPCE Boston, MA, May 2026.

“Throwing Down the Gauntlet: Confronting Battery Failures in the Glovebox,” **Eric M. Schultz**, Jessica Crosby, Brian M. May, ISPCE Boston, MA, May 2026.

“When Sparks Fly: Electrical Fire Risks, Failure Modes, Demonstrations, and More,” **Eric M. Scultz**, SPCE Portland, OR, November 2025.

“Metal Oxide Varistors in Fires: Cause v Fire Victim,” **Eric M. Schultz** and L.F. Bilancia, International Symposium on Product Compliance Engineering, San Francisco, CA, May 2025.

“Design, Risk, and Efficacy While Testing to Standards: Tradeoffs for Surge Protective Devices,” **Eric M. Schultz**, L.F. Bilancia, and T.J. Bajzek, International Symposium on Product Compliance Engineering, Chicago, IL, April 2024.