



SCOTT F. LEE, Ph.D., P.E.
SENIOR MANAGING CONSULTANT

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Dr. Lee is a licensed electrical engineer specializing in electrical safety, failure analysis, product design, and energy storage. His experience encompasses design review, device testing, circuit board and component failure analysis, failure mode and effects analysis, and safety risk assessment.

As an electrical engineering consultant, Dr. Lee has investigated incidents involving arc flash hazard analysis, building and vehicle system failures, industrial and consumer electronics, and renewable and battery energy storage system failures. He provides valuable insights to his clients on a wide spectrum of projects, rooted in scientific principles and enhanced through diversified experiences.

Dr. Lee's academic background centers around microgrid technologies, and he has conducted numerous studies on electrical power quality and electromagnetic interference. Dr. Lee was a lecturer for power systems and power electronics courses at the California State University, San Jose and University of California, Irvine campuses. He holds several patents pertaining to the control of renewable energy and battery storage systems.

Areas of Specialization

Failure analysis of electrical and electronic equipment
Electrical outage causes
Electrical safety
Product design review
Renewable energy
Battery systems

Education

Ph.D., Electrical Engineering, University of California, Irvine
M.S., Electrical Engineering, University of California, Irvine
B.S., California State University, Fresno

July 2024



Licensed Professional Engineer (P.E.)

State of California

License No. 24108

Professional Affiliations

Institute of Electrical and Electronics Engineers (IEEE)

Member

Positions Held

Engineering Systems Inc., Aurora, Illinois

Senior Managing Consultant, June 2024 to Present

Independent Consultant

Electrical Engineering Consultant, 2023 - 2024

Exponent, Menlo Park, California

Managing Engineer 2020 - 2023

NEXTracker, Fremont, California

Senior Power Systems Engineer, 2019 - 2020

University of California, Irvine

Graduate Research Assistant, 2010 - 2018

DST Controls, Benicia, California

Electrical / Automation Engineer, 2008 - 2009

University of California, Irvine

Power Systems Lecturer, 2018

San Jose State University, California

Power Electronics, Power Systems Lecturer, 2021-2023

Publications/Presentations

"Dynamics of high penetration photovoltaic systems in distribution circuits with legacy voltage regulation devices," J. Payne, **F. Gu**, G. Razeghi, J. Brouwer and S. Samuelsen, *International Journal of Electrical Power & Energy Systems*, vol. 124, 2021, <https://doi.org/10.1016/j.ijepes.2020.106388>.

"A generic microgrid controller: Concept, testing, and insights," G. Razeghi, **F. Gu**, R. Neal and S. Samuelsen, *Applied Energy*, Volume 229, 1 November 2018, pp 660-671, <https://doi.org/10.1016/j.apenergy.2018.08.014>.

"A study on the impact of high penetration distributed generation inverters on grid operation and stability." **F. Gu**, J. Brouwer and S. Samuelsen. *AIP Conference Proceedings*, vol. 1556, no. 1, American Institute of Physics, 2013. <https://doi.org/10.1063/1.4822247>

Technical Reports

Dr. Lee has authored hundreds of reports addressing various topics including:

- Electrical Ignition Events
- Distribution Equipment Failures
- Power Systems: Distribution and Transmission
- Battery Energy Storage Systems Failures
- Consumer Electronics Design
- Electrical Safety
- Electric Generators
- Lightning Damage to Electronic Equipment

Patents

Systems and methods for photovoltaic direct current (DC) bus control
Patent No: US11907000B2

Systems and methods for split-cell and multi-panel photovoltaic tracking control
Patent No: US11942893B2