

ISSUE: July 2022

Symposium Shares Knowledge On Electrical Transients And Electrical Overstress

The EOS/ESD Association's annual EOS/ESD Symposium, which will be held September 18-23, 2022, at The Peppermill in Reno, NV, is the premier international event for professionals in industry and academia working in the field of EOS and ESD to meet and learn about the latest technical findings and innovative designs. The EOS/ESD Symposium is a long-standing conference dedicated to the understanding of issues related to electrical transients and electrical overstress, and the application of this knowledge to the solution of problems in consumer, industrial, and automotive applications. This includes electronic components and manufacturing, as well as systems, subsystems, and equipment.

Our program is packed, featuring a modular three-track design that gives you complete flexibility to pick and choose what interests you. The program has defined focus areas that comprise one or several sessions with technical papers, invited talks, tutorials, seminars, topic in reviews, discussion groups, hands-on demonstrations, and workshops.

Two tracks focus on high-speed communications, EMC, advanced design and technologies, heterogeneous integration, low power, and automotive with experts from around the world. The third track is three and a half days dedicated to manufacturing topics including a new hands-on session using two automated equipment BSE-100 systems provided by Boston Semi Equipment.

Symposium Topics

High Speed Communications:

ESD Protection for RF Switches, CDM characterization and simulation methodology for High-Speed Interfaces, Alternative materials for RF Front-End

ESD/EOS in Automotive Applications:

Challenges of Autonomous
Vehicles, SiC Driving Forward
in Automotive Applications,
New AEC Q100/Q101
Specification, HV technologies
for automotive applications,
Latch-up issues and co-design
in HV technologies

EMC

Linearity of TVS devices, ESD detection with UWB Antennas, System Level ESD Testing, ESD in touchscreen display, CPU Loading Effect On ESD Susceptibility, USB soft-failure, System-Level EMC and ESD Simulation Methods, Fundamentals of System-Level ESD Design

Heterogeneous Integration:

ESD in 2.5D/3D Bonding Technologies

Low Power:

Low iQ Design challenges-systems and battery power perspective

Advanced Design and Technologies:

Basics of Latch-up Testing, Latch-up Prevention for Advanced CMOS Technologies, JEDEC JESD78 Rev F Latch-up Standard, New frontiers in CDM testing, CDM Testing for Bare Die, ESD Handling and Control for the Circuit Designer

Manufacturing:

High Reliability, EPAs, ESD TR53 - Compliance Verification, Process Assessment, Hands-on Demonstrations using BSE-100 systems, Packaging, Mobile Equipment, Flooring, Footwear, and System Qualification, Field Meter Measurements

Tutorials:

ESD Basics,
Operation training,
Safe Equipment
Handling,
Professional
Instructor,
ANSI/ESD S20.20,
Device Physics, EDA
Tools, ESD System
Level

You do not want to miss this year's keynote "Volcanic Lightning: The Electrical Charging and Discharging of Volcanic Eruption Plumes" presented by Sonja Behnke from Los Alamos National Laboratory. Volcanic plumes produced by explosive volcanic eruptions become charged through the fragmentation of magma into ash and the subsequent collisions between particles of ash in an eruption column. As a result, lightning and other forms of electrical activity occur throughout a volcanic plume.

Not only is volcanic lightning a fascinating phenomenon, but it also reveals details about the dynamics of a volcanic plume and thus has applications for volcano monitoring. This presentation will explore volcanic lightning from volcanoes across the globe and examine how volcanic lightning can be used for eruption detection and forecasting of volcanic hazards.



This event also provides designers, technicians, engineers, and manufacturers with focused time in the exhibit hall to discuss and display the latest manufacturing technologies, products, and services. It is the one place where industry professionals can find solutions to solve challenges, learn from industry best practices, and see technology advances through networking, new technology displays, and products to meet their needs. Strengthening ties, benchmarking operations, and staying ahead of the competition happens at this event.

The EOS/ESD Association is excited to host our first-ever Student Day at the 2022 EOS/ESD Symposium on Wednesday, September 22. This initiative is a joint endeavor with the University of Nevada – Reno and Professor Mohammed Ben-Idris. Student Day is open to all interested students.

Two defined parallel tracks are scheduled including invited talks, seminars, and hands-on demonstrations in the communications, EMC, heterogeneous integration, and automotive focus areas. The day includes a meet and greet with ESD professionals to answer students' questions about career and employment opportunities and the ESD industry. Students will also have time to visit the exhibit hall to talk to industry-leading vendors. The day will culminate with the general chair's reception in the evening with a TESD Talk for continued networking and in-depth discussions on displayed posters with technical paper authors.

We cannot wait to see you in person and get back to what makes conferences great—you and me and us—interacting, sharing, networking, learning, and asking questions. For those still unable to travel, livestream connection is available to attend the keynote, invited speakers, seminars, topic in reviews, and technical paper presentations.

Visit the EOS/ESD Symposium website for full program and registration details.