

ESD
lectro static discharge

It's all about control!

Get the information, tools, and solutions
you need at the

Northeast Regional ESD Tutorial

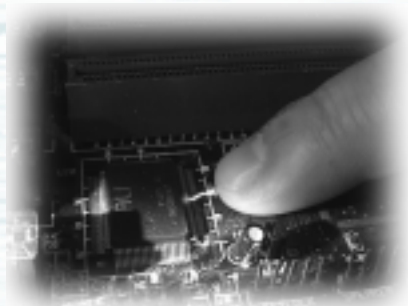
May 15-16, 2000

**Boston University Corporate Education Center
Tyngsboro, MA**



**Co-sponsored by the
Northeast Chapter and the ESD Association**

Electrostatic discharge costs!



*ESD can result in lost time, reduced quality, lower profits.
But you can control the problems of ESD!*

*The Northeast Regional ESD tutorial gives you the practical
tools and knowledge to*

- *Understand the causes and problems of ESD*
- *Set up, manage, and audit an effective program*
- *Select and use the right protective materials and procedures*
- *Understand myths and misconceptions about ESD*

*Designed for engineering, production, quality, test, purchasing,
marketing, sales--anyone involved in ESD control.*

*In three sessions plus exhibits of static control products and
services, the Northeast Regional ESD tutorial provides you
with the information and techniques you need to understand
and manage the problems of ESD.*

Sessions

Monday, May 15

8:15 AM — Registration Opens

9:00 AM – Noon: Session 1, Part 1

ESD Basics

This all day introductory session presents the fundamentals of ESD. The following topics will be covered: an overview of electronics, ESD as a significant cause of failure of semiconductor devices, the economics of ESD, material charging, discharge models, how the event occurs, ESD control products and measurements, and examples of ESD problems and their solutions. Demonstrations will supplement the lecture material. This tutorial is tailored to those who are new to the ESD field and those who would like a refresher in the subject. **Lou DeChiaro, Ph.D., Lucent Technologies**

Noon — Lunch

1:00 PM – 4:00 PM: Session 1, Part 2

ESD Basics

A continuation of the morning session on the fundamentals of ESD. **Lou DeChiaro, Ph.D., Lucent Technologies**

Vendor Show

Tuesday, May 16, 8:15 AM -- 1:00 PM

View Table-Top Exhibits of the latest ESD products and services. Meet local representatives for regional and national suppliers. Have your questions answered about materials and services. Open to attendees and the public at **NO CHARGE**. **Tutorial registration is NOT required to attend the show.**

Sessions

Tuesday, May 16

8:15 AM — Registration Opens

8:15 AM – 1:00 PM: Vendor Exhibits

9:00 AM – Noon: Session 2

ESD Auditing

This session will explore controversial areas, which an ESD Auditor might encounter and discuss with the audience what the real concerns are, and ways and means of dealing with them. Intended for individuals who perform audits or are responsible for training and certifying ESD Auditors, the session will cover actual measurement techniques, strategies for using audits as a teaching experience, and getting the ESD Audit results before entity management. Subjects to be discussed include preparing for the audit, identifying static-safe areas, resistance to ground measurements, testing ionizer performance, wrist strap testing, personnel grounding, garments, and packaging. **Larry Fromm, Hewlett Packard**

Noon—Lunch

1:00 PM – 4:00 PM: Session 3

Workshop: Dispelling Common ESD Myths

Common misunderstandings about ESD can have significant impact on ESD programs. Some of these misunderstandings or “myths” may result in unnecessary expenditures, device failure, higher operating costs or dissatisfied customers. As a consequence, it is important to identify and dispel these myths. This highly interactive workshop will include live demonstrations to dispel common myths. Get answers to questions such as: Is it sufficient to base your program on HBM data? Does air flow cause charging? Is shielding essential? Is there one widely accepted standard (ANSI/ESD S20.20 vs. EIA 625)? Is a grounded conductive surface ESD safe? Are circuit board assemblies ESD susceptible? Are smocks essential? Is it possible to damage a sensitive device or assembly while wearing a wrist strap? Bring your questions and myths to these industry experts! **Moderator: Jerry Guiliano, Julie Associates; Panel Members: Larry Fromm, Hewlett Packard; Lou DeChiaro, PhD, Lucent Technologies; Ted Dangelmayer, Lucent Technologies; Ryne Allen, ESD Systems**

Speakers

Lou DeChiaro received the B.S., M.S., and Ph.D. degrees in physics from Stevens Institute of Technology, Hoboken, NJ in 1970, 1972, and 1979, respectively. From 1972 to 1976 he served as an Electronic Systems Officer in the United States Air Force (SAC). From 1979 to 1984, he was associated with AT&T Bell Laboratories and performed research and development in the areas of custom logic NMOS and CMOS reliability and generic reliability studies of commercial memory products. From 1985 to 1995 he was associated with Bellcore, Red Bank, NJ and was engaged in failure mechanism studies of III-V devices and ESD field problems. In 1995 he returned to Lucent Technologies / Bell Laboratories in Princeton, NJ and is currently studying both component and systems ESD effects. He has been a frequent tutorial presenter and author at the EOS/ESD Symposium. Dr. DeChiaro is a member of Tau Beta Pi.

Larry Fromm received his BSEE from Ohio Northern University in 1970 and his MBA from San Jose State University in 1975. He worked for General Electric and Varian Associates Medical Equipment Group before joining Hewlett Packard in 1979. He was Production Manager for Microwave Counters and later for IC Packaging. In 1988, he became the Quality Engineering Manager for HP's Optical Communication Division (OCD). In 1990, he became Customer Service Manager with responsibilities for customer audits and the site's ESD control programs. In 1993, Larry joined HP Corporate Quality as ESD Control Program Manager. His responsibilities include ESD auditing, material qualification, and ESD training programs. He is a past president of the Silicon Valley ESD Society. He serves on several ESD Association standards working groups. Larry is a registered Professional Engineer in the state of California and a NARTE certified ESD control engineer.



Getting There

From New Hampshire

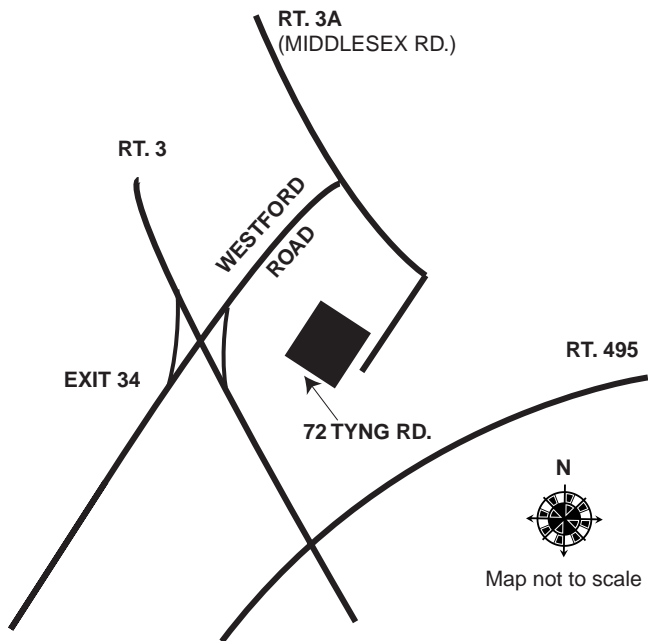
- Rte 3 south to Exit 34 (Westford Road) take a left at the end of the off ramp
- Go 1 mile to traffic light and turn right.
- Go 1 mile and take a right onto Tyng Road at the Boston University Sign

From Massachusetts

- Rte 3 north to Exit 34 (Westford Road) take a right at the end of the off ramp
- Go 1 mile to traffic light and turn right.
- Go 1 mile and take a right onto Tyng Road at the Boston University Sign

Boston University Corporate Education Center

72 Tyng Road, Tyngsboro, MA



Where to Stay

Rooms are available at the Sheraton Tara in Nashua, NH, Tel: 603-888-9970 and the Hawthorne Suites in Chelmsford, MA, Tel: 800-527-1133.

How to Register

Registration fees include copies of presentations, lunches, and coffee breaks. Use the attached Registration Form . Visa, MasterCard and American Express accepted. If paying by credit card, you may phone (315-339-6937) or Fax (315-339-6793) your registration. Payment must accompany registration. **Please register by May 8.** **Cancellation Requests** will be honored if received in writing and postmarked no later than May 3. Advance registration will be accepted only until May 8.

Registration Form

Northeast Regional ESD Tutorial

Make checks payable to ESD Association and mail with registration form to: ESD Association, 7900 Turin Road, Bldg 3, Suite 2, Rome, NY 13440-2069. Phone registration: 315-339-6937. Fax registration: 315-339-6793. **Cancellation Requests** will be honored if received in writing and postmarked no later than May 3. **Payment must accompany registration.** Advance registration will be accepted only until May 8.

Please Print or Type

Last Name _____ First Name _____

Company Name _____

Mailing Address _____

City _____ State _____ Zip Code _____

Phone _____ Fax _____ E-Mail _____

Is address: _____ Home address or _____ Office address

_____ Check if under the Americans with Disabilities Act, you require auxiliary aids or services

Method of Payment (Company purchase orders are not accepted.)

_____ Pers. Check _____ Co. Check

Credit Card Type (circle): MASTERCARD VISA AMERICAN EXPRESS

Number _____

Corporate Card Code Number _____ Expiration Date _____

Name as It Appears on Credit Card _____

Signature _____

Sessions and Fees

One Day \$290.00*

Two Days \$510.00*

*Includes membership in the Northeast Chapter

Indicate Sessions and Fees Below

Session	Fees
Monday, May 15--\$290	_____
Tuesday, May 16--\$290	_____
Both Days--\$510	_____
Total Enclosed	_____

Payment must accompany registration.

Fees include copies of each presentation, lunch, coffee breaks, the Vendor Show and membership in the Local Chapter.

Early Registration Bonus: The Chance to Win A Free Book!

The first 20 registrants will be entered in a drawing to receive one of five copies of *ESD Program Management* by Ted Dangelmayer.