

**In Person**  
**Hands-On ESD Workshop**  
***"ESD Best Practices for Technology Change!"***  
***July 23, 24, 25th, 2024***



We are excited to host  
the workshop at the  
Elks at Bass Rocks in Gloucester, MA

**ESD Dream Team**  
[www.dangelmayer.com](http://www.dangelmayer.com)



***Hands-on ESD Workshop with the Dream Team:***

*Basic and Advanced Principles*

**Intended for Professionals Who:**

- Want to Expand Their Knowledge of ESD
- Desire Roadmap for Today's Advanced Technologies
- Need A Better Understanding of The Technology
- Want to know if Standards Adequately Protect Their Products

**What You Will Learn:**

- CDM, CBE, CDE & Class 0 Fundamentals and Counter Measures
- The Latest ESD Trends & Best Practices
- Hands-On CDM & Class 0 Test Methods
- Auditing Skills & Class Exercises Daily
- 99.9% of ESD Failures are CDM – Not HBM
- Most FA Experts Misdiagnose CBE as EOS
- ESD S20.20 2014 Changes Implications & Limitations
- Class 0 & CDM Advanced Measurement Techniques

## Workshop Agenda

### Day 1: Tuesday

1. Introductions
2. Fundamental ESD Concepts
3. Hands-on – Class Exercises & Measurement Pitfalls
  - Resistance Measurements
4. Fundamentals Continued
5. Hands-on – Class Exercises & Measurement Pitfalls
  - Fieldmeters & Voltmeters
6. Day's Highlights & Questions



**Ted  
Dangelmayer  
President**



**Terry  
Welsher  
Sr. Vice  
President**

## Workshop Agenda

### Day 2: Wednesday

8. Is the ESD program working? TR53 & CDM Auditing Strategy & Test Methods
9. Hands-on – Class Exercises: Measurement & Trouble Shooting - Workstations
10. How do I know when Ionization is necessary and if it is effective?
11. Hands-on – Class Exercises & Ionization Pitfalls
12. Day's Highlights & Questions



**Ginger  
Hansel  
Director**



**Arnie  
Steinman  
Director**

## **Workshop Agenda**

### **Day 3: Thursday**

- 13. SMT Line ESD Assessment Beginning to End**
- 14. Fixture Design Considerations and Case Studies**
- 15. ESD QMS Best Practices and Secret Sauce for sustained Success**
- 16. Advanced Event Detection with Videos  
Finding, Diagnosing and Fixing Problems**
- 17. Hands on Session**
  - **Tribocharging: Glove – Screwdriver -**
  - **Charge Board Event**
  - **Automation video analysis**
- 18. Day's Highlights & Questions**

**DA Hands-On ESD Workshop July 23, 24, 25, 2024  
Gloucester Elks, 97 Atlantic Rd #101**

The workshop includes lunch every day.

3-Day Registration \$2,380 per person. Register by June 30 for \$2,180

Email Registration Information to: [kristin@dangelmayer.com](mailto:kristin@dangelmayer.com)

**Registration Information**

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Company: \_\_\_\_\_

Mail Stop: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: work \_\_\_\_\_ cell \_\_\_\_\_

E-mail: \_\_\_\_\_

Preferred method of contact:

Phone \_\_\_\_\_ E-mail: \_\_\_\_\_

Credit Card ☐ Visa ☐ Master Card ☐ Amex

Card # \_\_\_\_\_ Expiration \_\_\_\_\_

Security Code \_\_\_\_\_

Billing Address \_\_\_\_\_

Name on Card \_\_\_\_\_

If paying by check, please make check payable to:

Dangelmayer Associates

14 Butternut Lane

Gloucester, MA 01930

**\*No Refunds after June 30th**

**Complete your registration  
today!**

Local Accommodations: ([www.capeann.com](http://www.capeann.com))

Rockport B&Bs ([www.capeann.com](http://www.capeann.com)) (10 Min)

Rockport Inn & Suites (10 Min)

Beauport Hotel Gloucester (8 Min)

Danvers Marriott Courtyard 978-777-8630 (43 Min)

Peabody Marriott 978-977-9700 (39 Min)