

## Seminar & Presentations: Titles & Abstracts

The following seminars and presentations will be conducted throughout the day. The Counterfeit Components seminar is 2 hours in length. The remainder of the presentations are 30-45 minutes.

**Title: Counterfeit Components – Determining Your Plan of Attack**

**9:30AM-11:30AM (Seminar Room) – this is a 2 hour session**

Abstract:

Yes, we have all heard about the issue of counterfeiting in the electronics market. But is it a threat for you? Is it fact or a fabrication to place additional regulations on your production environment? Whatever you may think, you may be interested to know how the issue has evolved, its impact to the industry and market as a whole, and the steps that companies are putting into place to deal with and prevent materials from entering into their process and ultimately into the products they deliver. Join us for a brief overview and a list of "Next Steps" to take to address this issue. Attendees will better understand the counterfeit component issue presented with current examples and sources of counterfeit materials, as well as the "next Steps" to take to address this issue.

Presented by: Mark Young – IPC Master Instructor

**Title: "The Changing Electronics Market – and Customer"**

**8:30AM-9:15AM (Seminar Room)**

Abstract:

EMS companies don't sit still. EMS companies are prone to jumping in and out of end-markets; acquisitions, divestitures and mergers; moving to new regions; and above all, adding services. But in the quest for margins, EMS firms are effectively becoming OEMs. Meanwhile, having outsourced everything from assembly to design to component purchasing, OEMs are finding themselves with little remaining ability to innovate. With their backs against the wall, will OEMs bring assembly back in-house? And is Apple's manufacturing model the roadmap for saving the traditional OEM?

Presented by: Mike Buetow - Editor in Chief, Circuits Assembly

**Title: The Fundamentals of ESD Flooring: Things every user of static control flooring should know**

**8:30AM-9:15AM and 1:15PM-2:00PM (ESD Room)**

Abstract:

Static control flooring has become an important integral component of an effectively reliable static control program. As a result of increased susceptibility of static sensitive devices the need to understand, implement and maintain an ESD floor has become a requirement. There are many misunderstood and overlooked elements of static control flooring. This discussion will include various types of floors, common ESD flooring terms and standards, general floor requirements as outlined in ESD S20.20 & ESD S7.1, as well as the hidden costs of installing and maintaining an ESD floor properly. Anyone that maintains or manages a static control program will benefit and walk away with the confidence they will know and understand static control flooring.

Presented by: Tom Ricciardelli – President Selectech: MS Chem E & MBA: MIT

**Title: Realistic ESD Programs for a Lab Environment**

**9:30AM-10:15AM and 2:15PM-3:00PM (ESD Room)**

Abstract:

Join us for this interactive tutorial and learn how to establish realistic ESD controls in an Engineering Lab without interfering with R & D activities. Learn also what ESD data is essential for reliable manufacturing and how to transfer it during the NPI (New Product Introduction) process. Based on the quality of ESD programs in Engineering Labs around the world, there must be a new law of physics that I haven't hear of: "Lab Engineers don't generate Static Electricity!" Kidding aside, ESD procedures in Laboratories are notoriously below even basic standards; however, design oversights have been the root cause of multi-million dollar losses. Related case studies will be presented. With the ESD trend toward Class 0 device sensitivities, extreme ESD controls are becoming increasingly common Labs. A case study involving these extreme controls at the Gemini Observatory will be presented.

Presented By: Ted Dangelmayer: BSEE; President NE ESDA Chapter; Past President National ESD Association; Author Book "ESD PROGRAM MANAGEMENT"; ESDA Founders Award; President & CEO Dangelmayer Associates

## **Seminar & Presentations: Titles & Abstracts**

**Title: Achieving Assembly Excellence for Fastening and Torque Application**

**10:45AM-11:30AM (Materials Room)**

**Abstract:**

AIMCO has been providing Assembly Solutions for threaded fastening applications since 1970. Our global market focus addresses Automotive, Electronics, Aerospace, Energy Services and General Assembly Industries. Using Productivity, Ergonomics, Reliability, and Quality (PERQ) as a guide, we will review how solutions are derived in a multitude of scenarios. When to choose an Electric versus a Pneumatic tool, a Continuous Drive versus a Discontinuous Drive or whether or not a user requires Data Collection will be discussed. Auditing methods for torque values whether they are Before the job is done, During actual assembly or After the product has been assembled will complete the session.

**Presented by: Ken Maio – AIMCO**

**Title: ESD - A Surprisingly Dominate Root Cause of Device Failure!**

**10:45AM-11:30AM and 3:15PM-4:00PM (ESD Room)**

**Abstract:**

While most companies are acutely aware of the hazards of ESD (electrostatic discharge), few are aware of just how pervasive ESD failures actually are. Likewise, many ESD Program Managers have difficulty securing adequate management support. This tutorial will shed light on multiple sources of ESD damage and the circumstances where ESD failures dominate. Recent studies into the misdiagnosis of EOS failures suggest that ESD damage may, in fact, occur much more often than previously realized – especially at the circuit board level. This fact is a compelling justification for strong management support. Attendees will also learn which are the most frequent ESD failure mechanisms among CDM, HBM and MM and why, as well as the best practices for prevention for these recently recognized sources of ESD damage.

**Presented By: Ted Dangelmayer: BSEE; President NE ESDA Chapter; Past President National ESD Association; Author Book “ESD PROGRAM MANAGEMENT” ; ESDA Founders Award; President & CEO Dangelmayer Associates**

**Title: Protection of Electronic Devices & Assemblies**

**1:15PM-2:00PM (Materials Room)**

**Abstract:**

This is an overview of the circuit board protection methods available today. It will cover topics including potting, conformal coating, low pressure molding, and module sealing. The audience will learn the advantages and disadvantages of various technologies, and when to employ each strategy.

**Presented by: Oliver Chu - Technical Service Engineer, Henkel Electronic Materials, LLC**

**Title: Micro Conformal Coating**

**1:15PM-2:00PM (Seminar Room)**

**Abstract:**

As demand for conformal coating protection becomes more prevalent in mobile consumer products and handheld electronic devices, traditional market segments such as defense, aerospace, and automotive electronics are being challenged by high volume applications requiring smaller, more intricate, and precise application processes. Wide, sparsely populated coverage areas are quickly being replaced by processes requiring the micro application of conformal coatings in small, densely populated regions where volume, accuracy, and process control are crucial. The requirements, application and techniques implemented to overcome these demands will be addressed.

**Presented by: Erin Vickers – PVA**

**Title: Modern Thermal Management Materials for Electronic Assemblies**

**2:15PM-3:00PM (Materials Room)**

**Abstract:**

Discussion will provide an introduction to thermal interface materials and the growing importance of thermal management. A review of the different types of thermal management materials used to interface heat-generating devices to heat sinks will be included. The discussion will encompass older technologies such as thermal greases and pads, and highlight next-generation phase change thermal interface materials. Attendees will have a better understanding of the use and implementation of various thermal management materials for various applications.

**Presented by: Oliver Chu - Technical Service Engineer, Henkel Electronic Materials, LLC**

## **Seminar & Presentations: Titles & Abstracts**

Title: Solder Paste Inspection: Why, Where and How, Best Methods and Advantages  
[2:15PM-3:00PM \(Seminar Room\)](#)

Abstract:

Studies have shown that up to 80% of all defects within the Electronics Manufacturing process originate at the Screen Printer. The reason for this is that there are over 50 different variables in the screen printing process. As components decrease in size, stencil apertures decrease as well and boards become denser. Therefore we are forced to have tight control over the screen printing process. If we do not, then defects will be created that at the least will have a negative impact on rework and scrap costs. Worst-case scenario, finished product with latent and intermittent defects will get out into the field. Ideally it is best to catch the defect before components are placed and reflowed. Solder Paste Inspection right after the Screen Printer provides the ideal location and most cost-effective solution. This discussion will cover the different types and technologies of Solder Paste Inspection focusing on improving the screen printing process and providing the fastest return on investment.

Presented By: Cleve Williams, Applications Engineer, EasyBraid Co.

Title: Lead Free Soldering: Alloy and Flux Developments for Improved Solderability  
[3:15PM-4:00PM \(Materials Room\)](#)

Abstract:

A review of current and novel lead free alloys for manufacturing electronics assemblies for specifically pastes for surface mount assembly. Reflow specifications and requirements as well as compatibility between alloys and effective use of flux will be discussed. An understanding of implementing the proper flux and profile will be taken into consideration. This will also describe possible issue and failures to avoid. Attendees will obtain a wealth of information that is expected to increase and improve lead free soldering.

Presented by: Oliver Chu - Technical Service Engineer, Henkel Electronic Materials, LLC