

June 20-22, 2018

**Canmax, 99 Shuangma Street,
Suzhou Industrial Park, Jiangsu, Suzhou, China**

June 20th

FC110: Cleanroom Considerations for the Program Manager*

**Live classroom broadcast*

Certification: PrM

Cleanrooms and clean environments are enabling technologies required for the manufacturing of many products that have exacting contamination control requirements in order to achieve defined yield and reliability targets. Clean manufacturing is required in the semiconductor, hard disk drive, flat panel display, and pharmaceutical industries, to name a few. Requirements of cleanroom and clean environments, and tooling therein, result in low humidity levels, low surface contamination levels, use of process-required insulators, and a lack of natural ions in the controlled environment. These factors can contribute to the development of elevated static charge levels in close proximity to sensitive products, presenting both a contamination and electrostatic discharge exposure.

This tutorial will provide a detailed review of the following concepts:

- Cleanroom and clean environment function
 - Airborne particle classification standards
 - Cleanroom compliance monitoring test methodologies
 - Electrostatic attraction relation to airborne and surface contamination
 - Electrostatic discharge concerns
 - Cleanroom static charge generation challenges and control methodologies
- In addition, several case studies of static charge control issues in clean environments will be presented.

FC120: Air Ionization Issues and Answers for the Program Manager*

**Live classroom broadcast*

Certification: PrM

The primary method of static charge control is direct connection to ground for conductors, static dissipative materials, and personnel. Air ionization is also part of a static control program to deal with the problems of isolated conductors and insulating materials. This seminar is a basic course on ionizers, providing an introduction to their use, as well as application information. It examines common problems caused by static charge and the need for ionizers in a static control program. Types of ionizers, their use environments, and performance test methods using the Ionization Standard will be demonstrated. Installation, safety, maintenance, and contamination issues will be presented. Finally, case histories will be analyzed illustrating the use of ionizers in a variety of work environments.

June 20th

In person review with John Kinnear Jr., IBM Corporation

Question and Answer session

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June 21st

FC200: Packaging Principles for the Program Manager*

**Live Classroom Broadcast*

Certification: PrM

Shipping electronic parts within a factory, to another factory, distributor, or to an end-user has always been an area of uncertainty within the manufacturing process.

To provide clear-cut information on what type of controlled packaging should be used in any situation, EOS/ESD Association, Inc. released a comprehensive revision of the obsolete industry standard EIA 541-1988. The newer document, ANSI/ESD S541, is the focus of this inclusive session. It provides information and guidance, as well as material specifications, to assist in the design and implementation of a packaging plan for use within an ANSI/ESD S20.20 based ESD control program. Current and newly released test method standards suitable for packaging material evaluation will be described. Course credit applies to the ESD program manager certification curriculum. Previous attendance at the "FC100: ESD Basics" and "FC101: How To's" tutorials are highly recommended.

FC210: ESD Standards Overview for the Program Manager*

**Live Classroom Broadcast*

Certification: PrM

The ESD Association's introduction of the Program Manager Certification curriculum has created a need to modify the Standards Tutorial that has been presented for a number of years, mainly to help individuals prepare for the iNARTE Engineering and Technician Exams. Currently, many of the ESDA Standards and Standard Test Methods are discussed in depth in the individual tutorials related to the specific subject matter. This Standards Tutorial provides an overview of all the Standards, grouped into common test types, based on measurement probe and test instruments. A common methodology is used in this tutorial to cover the requirements, applications and specifications for each Standard and Standard Test Method.

June 21st

In person review with John Kinnear Jr., IBM Corporation

Question and Answer session

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June 22nd

FC140: System Level for the Program Manager - In Person Instruction

Certification: PrM

This tutorial is intended to help those tasked with testing products to IEC and other system level ESD standards by providing detailed information on IEC 61000-4-2, the most widely used standard, and highlighting the harmonization and differences among IEC, ANSI, Telcordia, and some automotive ESD standards. We will answer common questions regarding test set-ups, test points, and procedures, and address key issues, including: 1) Differences between “verification” and “calibration” and when is each required; the influence of ESDA WG14 technical report (TR) on IEC and how it affects the calibration and verification procedures. 2) Test set-up requirements, the test environment, ground connections, and return paths and ground plane effects. 3) Testing procedures with demonstration on actual products, how the tester affects test results, and problems with test result variations due to simulator influences. 4) What points need to be tested and why, guidance on determining “operator accessible” points and ports, exempted points and ports, and what to do around connectors and connector pins. 5) ANSI and other ESD standards, the drive toward harmonization with IEC, why standards will probably never be the same as IEC, and the scope of different standards. This system level ESD tutorial will cover several facets of ESD as applied to electronic systems.

Exam Highlights Review in person with John Kinnear Jr., IBM Corporation



John Kinnear is an IBM senior engineer specializing in process & system technology, and facility certification in accordance with ANSI/ESD S20.20. He has a BS degree from University of Buffalo and a MS degree from Syracuse University. John is well known globally for his technical contributions to national and international standards. He has been the IBM ESD site coordinator for the Poughkeepsie site since 1989. He is past chairman of the IBM inter-divisional technical liaison committee for ESD protection and is an important member of his company’s committee to develop and implement the ESD corporate program for IBM. John has coordinated the testing of large mainframes for compliance to EMC, safety, environmental, shipping, and volatile organic emission standards. He has also been the lead engineer on testing large mainframe systems to EMC emissions and immunity standards for FCC, CE Mark, VCCI, and other national

requirements. As a member of the ESD Association since 1990, John has served in several standards development committees as well as association management positions. John is the appointed technical adviser to the United States National Committee/IEC technical committee 101, where he represents the United States to the International Electrotechnical Commission (IEC). In this position he assisted in the evolution of international ESD standards and supports international adoption of ANSI/ESD S20.20. As chair of the ESDA’s facility certification (ANSI/ESD S20.20) development program, John played major roles in the program’s development and industry launch. In particular, John coordinated the initial development of lead assessor training, ISO registrar certification, and witness audits. John has served in every ESD Association officer’s position, including vice president, senior vice president, and president. He is the past chairman of the EOS/ESD Symposium technical program committee and past general chairman of the 2004 EOS/ESD Symposium. For his contributions to the ESD Association, John was presented with the Outstanding Contribution award in September 2006.

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June 20-22, 2018

\$1,530

Cancellation & refund requests will be honored only if received in writing no later than May 20, 2018, and are subject to a \$50 fee. Any other approved dispositions will also be assessed a \$50 fee.

Register Online: <http://www.cvent.com/d/cgq800>

Accomodations:

Double Tree by Hilton CNY 800/night

Genway International CNY 500/ night

Atour Hotel CNY 380/night

Above rates include service charge, tax, and breakfast-
for one person (add CNY 20/person for extra breakfast.

Other forms of payment Contact:

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To enjoy the special room rates at the Double Tree by Hilton use the corporate account 113120308

Setting the Global Standards for Static Control!

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