

**Emission Test Site Validation**  
**(Draft ANSI C63.4a) and**  
**Antenna Calibration**  
**(ANSI C63.5)**  
**Workshops**

These two workshops are combined into one day covering these topics: (1) review of the updated emission test site validation procedure between 30 MHz and 1 GHz using the so-called normalized site attenuation (NSA) approach. This is intended to replace what is in Annex D in C63.4-2014 and (2) description of the recently published ANSI C63.5 covering antenna calibration and replacing the 10-year-old version of that standard. These workshops are designed to increase your understanding of the updated Annex D in C63.4 and the modifications in the 2006 edition of C63.5

covering antenna calibrations for making emission measurements. For the C63.4a workshop, key changes include performing NSA measurements at 5 meters, highlighting the requirement to have NSA performed with NSA transmit antennas at the height of the equipment being tested, and better defining the maximum frequency intervals in the measurement process. For the C63.5 workshop, the major changes made to the 2006 edition will be presented. These include a new section covering free space correction terms for tuned dipole antennas and biconicals, and one covering calibration frequency spacing. Completely new to C63.5 is a section on the use of time-gating to determine free-space antenna factors above 1 GHz. Several annexes have been added on the site comparison approach. Calibration site requirements and qualifications for hybrid antennas will be explained.

(Visit [www.c63.org](http://www.c63.org) for more information)

*In the Draft C63.4a workshop, you will learn changes to Annex D (NSA) of the 2014 editions in these areas:*

- Changes to test site validation procedures (30 MHz to 1 GHz)
- Regulatory implications
- Changes in the application of NSA for tall equipment under test (EUT)
- The increased understanding on how to calculate NSA for EUTs of varying heights above 2 meters.
- The need to adjust maximum frequency steps for the discrete and swept validation approaches.

*In the Antenna Calibration (C63.5) workshop, you will learn:*

- How to apply time-gating
- Application of site comparison method
- More stringent calibration site requirements
- Specific application for hybrid antennas

**Support material provided**

- A complete lecture flash drive

**Who Should Attend**

Those responsible for determining compliance with test site validation and those performing antenna calibrations. This includes:

- Test lab engineers and technicians performing site validation
- Test chamber manufacturers
- Those using and calibrating antennas in making radiated emission compliance measurements
- Calibration and measurement accreditation bodies
- Regulatory compliance managers
- Lab quality assessors

**Expert Instructors**

Workshops feature leading industry experts and ANSI C63@ members, including Don Heirman, Workshops Director, (Don HEIRMAN Consultants), and Zhong Chen (ETS-Lindgren).

**Date and Location**

Saturday, August 5, 2017  
Gaylord National Resort & Convention Center (Symposium Host Hotel)  
201 Waterfront Street  
National Harbor, MD 20745, USA

*The workshop room name will be provided upon registration confirmation.*

**Fee Includes**

Lecture flash drive, continental breakfast, lunch, breaks, and completion certificate. Fee does NOT include copies of the draft or published standards. Fee does NOT include hotel accommodations. See <http://www.emc2017.emcss.org/> for hotel and symposium information.

**Agenda**

**ANSI C63.4a: Half-day August 5**

Registration: 8:30 am

Class: 9:00 am to 12:00 pm

**ANSI C63.5: Half-day August 5**

Registration: 12:00 pm

Class: 1:00 pm to 4:30 pm

**Registration Form**

Contact: Janet O'Neil

Telephone: 425-443-8106    [j.n.oneil@ieee.org](mailto:j.n.oneil@ieee.org)

Ms./Mr. \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

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

Daytime Phone \_\_\_\_\_ Fax \_\_\_\_\_

Email \_\_\_\_\_

**C63.4a Emissions Workshop only – August 5 (morning)**

By July 27\*: \$250 USD \_\_\_\_\_

C63@ & its S/C Members (by July 15) \$200 USD \_\_\_\_\_

**C63.5 Workshop only – August 5 (afternoon)**

By July 27\*: \$250 USD \_\_\_\_\_

C63@ & its S/C Members (by July 15) \$200 USD \_\_\_\_\_

**Both Workshops – All day August 5**

By July 27\*: \$475 USD \_\_\_\_\_

C63@ & its S/C Members (by July 15) \$375 USD \_\_\_\_\_

*\*Add \$150 if after July 15 or at the door\*\* for either workshop or both workshops*

\$150 USD \$ \_\_\_\_\_

Total USD \$ \_\_\_\_\_

**Payment Options:**

ON LINE: To pay on line, send an email to [j.n.oneil@ieee.org](mailto:j.n.oneil@ieee.org) along with a scan of this completed registration form. An invoice will be returned to you via email that you can use to pay on line with your credit card.

CHECK: Make check payable to **U.S. EMC Standards Corporation** in U.S. dollars drawn on a U.S. bank. Mail to:

Dan Hoolihan  
P.O. Box 367  
Lindstrom, MN 55045

Please do not mail after July 15.

Please visit [www.c63.org/workshops.htm](http://www.c63.org/workshops.htm) for more information on ANSI ASC C63@, these workshops, and speaker biographies.

NOTE: You are not registered until you receive confirmation.

\*\*With prior telephone confirmation only.

The organizing committee reserves the right to substitute speakers, modify the program (or lecture notes), restrict attendance or to cancel the workshop(s). In the event the workshop(s) is/are canceled, registration fees will be refunded. No refunds will be made to individuals who cancel after July 10. Substitutions are allowed. *Workshops without a minimum of six attendees signed up by 15 July 2017 will be cancelled and registration fees returned. It is suggested that you book refundable travel arrangements as appropriate if workshop(s) is/are cancelled.*