# 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 Calibration site requirements qualifications for hybrid antennas will be explained.

(Visit <a href="www.c63.org">www.c63.org</a> 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 <a href="http://www.emc2017.emcss.org/">http://www.emc2017.emcss.org/</a> for hotel and symposium information.

#### Agenda

ANSI C63.4a: Half-day August 5
Registration: 8:30 am

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

	: Janet O'Neil	***********		
Felephone: 425-443-8106 j.n.oneil	@ieee.org	· · · · · · · · · · · · · · · · · · ·	t the door** for either workshop or	
		both workshops	\$150 USD \$	
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Company		<b>Payment Options:</b>		
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C63.4a Emissions Workshop only – August 5 (morning)		in U.S. dollars drawn on a U.S.	in U.S. dollars drawn on a U.S. bank. Mail to:	
By July 27*:	\$250 USD	Dan Hoolihan		
C63® & its S/C Members (by July 15)	\$200 USD	P.O. Box 367		
		Lindstrom, MN 55	045	
C63.5 Workshop only – August 5 (afternoon)		Please do not mail after July 15	<u>5.</u>	
By July 27*:	\$250 USD	Please visit <u>www.c63.org/w</u>	vorkshops.htm for more	
C63® & its S/C Members (by July 15)	\$200 USD	information on ANSI ASC	C63®, these workshops, and	
		speaker biographies.	•	
<u> Both Workshops – All day August 5</u>			until you receive confirmation.	
By July 27*:	\$475 USD	2	*With prior telephone confirmation only.	
C63® & its S/C Members (by July 15)	\$375 USD	r r re-re-prione commi		

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.