**IEEE EMC Society Chapter Meeting Announcement**
**The Central Texas, Chicago, Italy, Los Angeles, Long Island, Phoenix, Poland, San Diego, Santa Clara, SE Michigan, Twin Cities, Vancouver BC, and Washington DC/Northern Virginia EMC Chapters, Together with ASC C63®, Announce a LIVE Webinar:**

# *NEW ASC C63® Wireless and ISM Equipment Measurement Standards: Working Group Chairs Provide Update on Wireless Power Transfer and Lighting Devices*

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| **Date:** | | **Thursday, May 20, 2021** |
| **Time:** | 8:00 am PDT | **Welcome and Announcements** – *Bob DeLisi, Principal Engineer, UL LLC, Melville, NY* |
| | 8:05 am | **Wireless Power Transfer, Emerging Applications, and ANSI C63.30** *By Travis Thul, White House Fellow, Washington DC* |
| | 8:40 am | **RF Lighting Devices EMI Measurements Techniques Update: A 21st Century View of LED and Other Lighting per ANSI C63.29** *By Ernesto Mendoza, Standards and Regulations Americas EMC/EMF Senior Policy Manager, Signify, Rosemont, IL* ***(See speaker and moderator biographies below)*** |
| | 9:15 am | **Question and Answer Session** *moderated by Bob DeLisi* |
| | 9:30 am | **Wrap Up/Final Comments** |

**Register:** Click here to register now on line or enter the following on your browser: https://attendee.gotowebinar.com/register/3102792541435796492

**Questions:** Janet O'Neil, ETS-Lindgren, cell (425) 443-8106, email j.n.oneil@ieee.org

## TECHNICAL PROGRAM

***Wireless Power Transfer, Emerging Applications, and ANSI C63.30***
*By Travis Thul, White House Fellow, Washington DC*

**Abstract:** Due to the exponential proliferation of mobile battery powered devices in the last 20 years - everything from tablets to electric vehicles - the need for wireless charging infrastructure has grown at a commensurate rate. These chargers, typically operating as inductively coupled resonators at frequencies less than 30 MHz, do not easily comport with traditional EMC measurement requirements found in 47 Code of Federal regulations or ANSI C63.10. To better align measurement standards with this emerging technology, the ANSI C63.30 Working Group was established in 2015, with team members from the Federal Communications Commission; Innovation, Science and Economic Development Canada; and UL helping to lead

the initiative. Throughout this process, C63.30 has worked to ensure repeatable measurements can be made for these reactive near-field devices, that extrapolation techniques reflect the nuances associated with such field-measurements, and that procedures take into consideration complimentary standards, such as SAE J2954. In totality, this standard represents one of the most comprehensive contributions to field measurement techniques below 30 MHz since publication of the FCC's MP-5 and will help facilitate the adoption of technologies which will impact everything from pacemakers to electric VTOL aircraft. The standard was approved by ASC C63 in March of 2021 and is pending final review and publication by the IEEE. This presentation will provide an overview of the methods for testing as described in C63.30 for closely coupled wireless power transfer devices. We will review the current state of wireless power transfer applications, areas where regulations diverge from technology, and the ways in which ANSI C63.30 can address those divergences.

***RF Lighting Devices EMI Measurements Techniques Update: A 21st Century View of LED and Other Lighting per ANSI C63.29***

*By Ernesto Mendoza, Standards and Regulations Americas EMC/EMF Senior Policy Manager, Signify, Rosemont, IL*

**Abstract:** ASC C63 established the working group C63.29 in order to update the EMI testing methods for RF lighting devices. This is a diverse group encompassing EMI experts, regulators from the US and Canada, test labs, as well as industry. The digital transformation and "ledification" of the lighting industry have raised the need to update the EMI testing techniques and methods. There are no specific RF lighting devices test methods described in any of the ASC C63 standards at the moment. As a result, test labs, experts, and others have had to interpret and adapt various standards in a case-by-case scenario. This presentation explains how the ASC C63 committee has been working to ease this difficulty. We describe how the forthcoming ANSI C63.29, "American National Standard for Methods of Measurement of Radio-Frequency Emissions from Lighting Devices" is building upon the knowledge and techniques described in ANSI C63.4, "American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz." We will discuss fascinating topics from how to test a programmable LED driver to a high-power dimmers' tower. EMI professionals interested in discussing how to characterize a digital LED lamp or a digital lighting control electromagnetic perturbance will find interesting material to consider in this presentation. ANSI C63.29 is nearing the final editorial stages and is targeted to be submitted for approval by the end of 2021.

## HOST AND MODERATOR

**Bob DeLisi**, Principal Engineer, Consumer Technology Division, has been with UL for over 30 years and involved in all facets of the UL EMC/Wireless business from testing to lab management. He is a Telecommunications Certification Body for the FCC, Foreign Certification body for ISED Canada, and is a Notified Body under both the EMC Directive and the Radio Equipment Directive. He participates on Accredited Standards Committee C63® and is the current Chair of Subcommittee 4 for Wireless and ISM Devices. He also actively participates on Subcommittee 1 (Techniques and Development) and Subcommittee 6 (Accreditation/Conformity Assessment) and Subcommittee 8 (Medical Devices). In addition, he is a member of the IECEE's Committee of Testing Laboratories Expert Task Force, CLT-EFT 10 for EMC. Bob holds a Bachelor of Electrical Engineering and is a NARTE Certified EMC Laboratory Engineer.

## SPEAKER BIOGRAPHIES

**Travis Thul** is a Coast Guard Lieutenant Commander currently serving as a White House Fellow with a focus on Transformational Export policy. Travis was previously the Dean of Technology at Minnesota State College Southeast and the Federal Communications Commission's Wireless Power Transfer subject matter expert. Travis' research focus has been sub-30 MHz inductively coupled resonators and wireless power transfer parameter optimization for the U.S. marketplace. He has been Chair of ANSI C63.30 since 2015 and was appointed a member of the Minnesota Board of Electricity in 2021. Travis holds a Bachelor of Science from the Milwaukee School of Engineering, a Master of Science from the University of Wisconsin-Madison, and a Doctor of Engineering from George Washington University. He is a licensed Professional Engineer and holder of multiple patents.

**Ernesto Mendoza** holds a Bachelor's degree in Physics and Engineering, a Master's Degree in Technology Management, and he is working on his Doctoral research project. He holds various certifications including MIT's Innovation Introduction in Organizations, Software Reliability Certification, and others. He has been in the light industry for more than 30 years in different technical lead roles. Currently he is Signify's Standards and Regulations Americas EMC/EMF Senior Policy Manager. Ernesto is the United States CISPR and CISPR F Technical Advisor as well as the US IEC TC 77A Deputy Technical Advisor. He chairs the ANSI C82-77 EMC Committee and the ANSI C63.29 working group, which is responsible for developing Electromagnetic Interference Lighting Devices test methods for North America and Canada. Ernesto chairs multiple ANSI lighting standards committees, as well as various National Electrical Manufacturers Association (NEMA) committees. He is the current NEMA Ballast and LED Drivers section chair. He has published multiple research papers on power quality and lighting devices electromagnetic interference. Ernesto appears in various US and International patents as well as technical disclosures.