Demystifying EMC 2023: China Session

CONFERENCE AGENDA CHINA

UTC+8	Wednesday, Mar 1, 2023	UTC+8	Thursday, Mar 2, 2023
09:30 – 09:45	**OPENING & WELCOME** **Mr. Christian Leicher** **President & CEO, Rohde & Schwarz**	09:30-10:00	**TAS-EWS: Multi-carrier EMS Solution for EMC testing** Andre Ng RS Asia
09:45 – 10:15	**Evolution of EMC measurement methods and solutions** Christina Gessner, Rohde & Schwarz	10:00-10:30	**EMI Testing on Space Systems** Jens Medler, Rohde & Schwarz & Maria Lorenzo, INTA
10:15 – 10:45	**EMC Standards Update: CISPR, RED, ANSI** Jens Medler, Feng Xie, Naseef Mahmud, Rohde & Schwarz	10:30-10:40	**BREAK**
10:45 – 10:55	**BREAK**	10:40-11:10	**Satellite EMC Testing** Daniel Loo, RS Asia
10:55 – 11:25	**AP: ISO TR V2X EMC Standard and Testing** Jiang Guokai, CATARC	11:10-11:25	**EMC Standards Update: MIL-STD** Darren McCarthy, Rohde & Schwarz
11:25– 11:55	**The latest development of international standardization and practical test experience for electromagnetic compatibility of integrated circuits** Cui Qiang, CESI	11:25-11:35	**LUCKY DRAW & QUESTIONAIRE**
11:55-12:05	**LUCKY DRAW & QUESTIONAIRE**	**END** **Day 2 of CN session**	
12:05-14:00	**BREAK**		
14:00-14:30	**EMC Risk Management and Design Compliance for Medical Devices** Matt Nuernberg, Boston Scientific		
14:30-15:00	**EMC Test on Active Implants and its challenges** Estelle Ang RS Asia		
15:00-15:10	**BREAK**		
15:10-15:40	**Introduction to Reverberation chambers** Dimitrios Barakos, Comtest Engineering		
15:40-16:10	**Myth busting antenna testing – your best spent 30 mins in OTA** Benoit Derat & Arthi Krishnamurthy , Rohde & Schwarz		
16:10-16:25	**EMC Standards Update: ISO, UN-ECE** **Reiner Goetz, Rohde & Schwarz**		
16:25-16:35	**LUCKY DRAW & QUESTIONAIRE**		
END **Day 1 of CN session**			

DEMC 2023 – Conference Agenda Day 1

UTC+8	Wednesday, Mar 1, 2023
09:30 – 09:45	**Opening and welcome – Mr. Leicher, President & CEO**
09:45 – 10:15	**Keynote: Evolution of EMC measurement methods and solutions** Join us for an interview with Christina Gessner – following up from last year's keynote on mega trends in EMC testing, we will now take a closer look at how measurement methods and solutions have evolved to keep up. **Christina Gessner, Rohde & Schwarz**
10:15 – 10:45	**EMC standards update: CISPR, RED, ANSI** EMC testing is all about standards. Whether you are developing 5G products, automotive equipment or something as simple as a common table lamp, your device must meet requirements set by a standardization body such as CISPR, CENELEC, ETSI, IEEE, ISO, FCC or the IEC. Enforcement of strict EMC limits can delay product certification, leading to lost revenue, added cost, and redesign headaches. This webinar will highlight latest developments in relevant EMC standards from our standards experts. **Jens Medler CISPR, Feng Xie RED, Naseef Mahmud ANSI, Rohde & Schwarz**
10:45 – 10:55	**Break**
10:55 – 11:25	**Keynote: ISO TR V2X EMC Standard and Testing** This Standard and Testing describes the introduction of radiated immunity testing for the components and vehicles equipped with V2X communications. The link communication connection and V2X scenario simulation are considered to make the V2X functions and their communications operate normally during the immunity testing. This speech aims at giving an overall and clear picture of this standard and the testing methods to it. **Jiang Guokai, CATARC**
11:25 – 11:55	**The latest development of international standardization and practical test experience for electromagnetic compatibility of integrated circuits** This report gives the latest development of international standardization of electromagnetic compatibility of IEC TC 47/SC47A integrated circuits, including the latest development of WG2 and WG9 standards and the next standardization work; Through the practical cases of EMC test of integrated circuits, it provides the test data and test experience. **Cui Qiang, CESI**
11:55 – 12:05	**Lucky draw & Questionaire**
12:05 – 14:00	**Break**
14:00 – 14:30	**EMC risk management and design compliance for medical devices** This presentation provides a "deep dive" into IEC 60601-1-2:2014+AMD1:2020 and how it applies to today's world of Medical Device design compliance, risk management, and electromagnetic (EMC) testing. Understanding what "Essential Performance" is and how it applies to the entire product life cycle is crucial for the success of the project. Test "early and often" is our mantra! **Matt Nuernberg, Boston Scientific**
14:30 – 15:00	**EMC test on active implants and it's challenges** In recent years, active implant markets have grown worldwide, spreading across Asia Pacific. This market is expected to grow with global aging population. An increased in attention on quality of medical products created much awareness and research surrounding safe use of active implants. Due to the complexity of use, EMC test requirements for active implants can be unique. In this topic, we will be discussing the requirements and challenges of active implants in EMC according to ISO 14708 series and ISO 14117. **Estelle Ang, Rohde & Schwarz Asia**
15:00 – 15:10	**Break**

15:10 – 15:40	**Introduction to Reverberation chambers and their growing demand in automotive compliance testing** This work describes an alternative way of EMC measurements, namely the Reverberation Chamber (RC) method. The principle of operation of RCs is presented as well as their strengths and weaknesses compared to Anechoic Chambers (ACs) are discussed. Multiple ways of achieving Field Uniformity (FU) using different stirring methods are provided followed by the promising/potential usage of RCs in various EMC tests and applications. A brief overview of currently published EMC standards supporting the RC method as well as their forthcoming changes in the automotive industry is also exhibited. Moreover, the characterization and FU validation procedure of RCs, according to the aforementioned standards, is addressed in a nutshell. Finally, the limitations and design criteria for an accredited automotive component RC are discussed leading to a well-parameterized; compliance RC for automotive components. **Dimitrios Barakos, Comtest Engineering**
15:40 – 16:10	**Myth busting antenna testing – your best spent 30 mins in OTA** With the trend of wireless connectivity expanding across new applications, protocols and frequency bands, in all kinds of products, an increasingly large amount of product development scenarios requires antenna and OTA testing. A typical challenge in daily antenna and OTA measurement work, is to understand if the test facilities are capable to perform the needed measurements, and at what accuracy. Is my chamber big enough to perform a far-field measurement of a particular device? How close of a distance can I use, and still avoid unpredictable near-field effects? What are the uncertainty contributors that I have to take care of, particularly at shorter range lengths? Is there a way to compensate some of these errors? What can I do when my chamber is way too small but I still need far-field assessment? In a lively discussion, Aleksis and Benoit will take you through practical and applicable answers to technical questions such as these, that you may already have experienced or will face in your work. After the session, you might realize that some traditional assumptions in the antenna test industry are not necessarily valid - enabling you to more efficiently deal with OTA and antenna testing, saving time and money while gaining confidence in the accuracy of the test results. **Benoit Derat & Arthi Krishnamurthy , Rohde & Schwarz**
16:10 – 16:25	**EMC Standards Update: ISO, UN-ECE** Automotive EMC test standards and homologation criteria for vehicles and for subassemblies are adapting to the challenges of new technologies in the automotive industry. This is a brief information which topics are being discussed. **Reiner Goetz, Rohde & Schwarz**
16:25 – 16:35	**Lucky draw & Questionnaire**
16:35	**END OF DAY 1 CHINA SESSION**

DEMC 2023 – Conference Agenda Day 2

UTC+8	Thursday, March 2, 2022
09:30 – 10:00	**TAS-EWS : Multi-carrier EMS Solution for EMC testing** EWS or fully known as EME Window Scanning is an EMS test solution to address the test methodology which was mention in IEC61000-4-3. The initiative of the solution aims to increase efficiency and reduce testing time, by means of using automation controls of vector signal generator, to produce multiple modulated carriers in each scan window used in Automotive and Military Radiated EMS test. **by Andre Ng RS Asia**
10:00 – 10:30	**EMI Testing on Space Systems - Use of FFT based measuring receivers for more speed, more insight and better reliability** The use FFT-based measuring receivers is motivated by reducing the scan time by several orders of magnitude and to get more insight due to the possibility of applying longer measurement times. Comparison measurements on a nanosatellite were performed using conventional EMI receiver and FFT-based time-domain scanning technique. **Jens Medler; Rohde & Schwarz & Maria María Jiménez Lorenzo, INTA (Spain)**
10:30 – 10:40	**Break**

10:40 – 11:10	**Satellite EMC Testing** Introduction to standards and test systems to establish performance and verification requirements for the purpose of ensuring satellite systems electromagnetic compatibility (EMC). Satellite shall be able to achieve electromagnetic compatibility (EMC) among all equipment/subsystems within the space vehicle/launch vehicle. **by Daniel Loo, RS Asia**
11:10 – 11:25	**EMC standards update: MIL-STD** The release of MIL-STD-461G demonstrated the ongoing modernization and technology efforts impacting the defense industry. In addition to the continued commercial technology insertions in the defense industry, the DoD is modernizing the EMC standards to include commercial EMC best practices and matured test technologies. This short presentation will look at some of the changes in test processes, test requirements, and new standards that are impacted with the adoption of MIL-STD-461G. **Darren McCarthy, Rohde & Schwarz**
11:25 – 11:35	**Lucky draw & Questionaire**
11:35	**END OF DAY 2 & CHINA SESSION**