

APEMC BALI 2021 TECHNICAL PROGRAMS SCHEDULE

I. SCHEDULE AT GLANCE

Time	MONDAY Sept 27th, 2021	TUESDAY Sept 28th, 2021	WEDNESDAY Sept 29th, 2021	THURSDAY Sept 30th, 2021									
8.00	Wokshops/ Tutorials	Registration											
8.30		Opening Ceremony and Plenary Sesion	Oral Sessions	Oral Sessions									
9.30													
10.00	Workshops/ Tutorials		Break										
10.10			Break										
10.20			Oral Sessions	Oral Sessions									
11.00	Oral Sessions												
12.00	Lunch		ISC Virtual Meeting	Lunch									
13.00	Workshops/ Tutorials	Oral Sessions	Oral Sessions										
14.00			Oral Sessions										
14.40		Break		Break									
15.00	Break		Oral Sessions										
15.10	Workshops/ Tutorials	Oral Sessions											
15.30					Oral Sessions								
16.00							Oral Sessions						
16.30									Oral Sessions				
16.40											Oral Sessions		
17.00													Oral Sessions
17.10	Oral Sessions												
17.30			Oral Sessions										
18.00					Oral Sessions								
18.30							Oral Sessions						
19.00									Oral Sessions				
19.10											Oral Sessions		
19.30	Oral Sessions												
20.00			Oral Sessions										
21.00					Oral Sessions								
17.30													`Best Paper Awad Ceremony
18.00													
18.30							Welcome Reception						
19.00													
19.10													
19.30													
20.00													
21.00													

II. PROGRAMS SCHEDULES

Workshops & Tutorials

DAY 1 (Monday, 27 September 2021)

Time : Indonesian Central Time (GMT+8 Time Zone)

ROOM	Room 1	Room 2	Room 3
TIME			
08.00	Tutorial 1 (T1) Global EMC Standards Update for Commercial, Automotive, and Aerospace/Government Applications Chair : Zhong Chen, ETS Lindgren		Tutorial 4 (T4) IEEE Electromagnetic Compatibility Transactions Chair : John Norgard Perry Wilson
10.00	Tutorial 2 (T2) Connected Vehicles: The Future of the Modern Automotive Industry Chair : Garth D'Abaeu, ETS Lindgren		
12.00	Lunch		
13.00	Tutorial 3 (T3) Improving integrated circuit reliability by combining tests to ionizing radiation and electromagnetic compatibility Chair : Fabian Vargas Bernd Deutschmann Sonia Ben Dhia	Tutorial 5 (T5) Power Quality and EMC in Transportation and Renewable Energy Systems Chair : Muhammad Alamsyah Venkatkumar Muneeswaran	Workshop 1 (W1) Risk Based EMC initiatives in Europe Chair : Anne Roc'h Frank Leferink Davy Pissoort Keith Armstrong
15.00	Break		
15.10	Workshop 2 (W2) Empower a billion lives Chair : Frank Leferink Jelena Popovic Deny Hamdani Flavia Grassi	Workshop 3 (W3) Conducted EMI problems with modern static electrical energy meters Chair : Cees Keyer Tom Hartman Bas ten Have	Workshop 6 (W6) Comparing Emission Measurements performed by a Spectrum Analyzer with EMC Functions vs. Pre and Full Compliant Receivers Chair : Michele Zingarelli
17.10		Workshop 4 (W4) The Impact of Electro Mobility on Automotive EMC Standards and Measurements Chair : Jens Medler Sam Chew	Sponsor Exhibition Organizer(s): Narda Safety Test Solutions Srl SUBSIDIARY OF L3HARRIS TECHNOLOGIES, INC.

Tutorials

T1

Tutorial 1

Time : 10.00 – 12.00

Global EMC Standards Update for Commercial, Automotive, and Aerospace/Government Applications

Chaired by : Janet O'Neil

Room : Room 1

Speakers : Zhong Chen, ETS-Lindgren
Garth D'Abreu, ETS-Lindgren

Abstract :

This tutorial will provide updates on the industry EMC standards most commonly used for commercial, automotive, and aerospace/military applications. Speakers will share information about the state of the art in test site validation, automotive performance verification, and use of EMC measurement equipment required by many current international standards. Specific requirements and nuances that can challenge even the most experienced EMC practitioner will be discussed. This tutorial strives to provide the latest developments in CISPR 16, ANSI C63®, Automotive, and Military standards, as well as “behind the scenes” discussions associated with proposed changes to future editions.

Speakers include global experts who are actively involved in using, writing, and maintaining the standards in which the commercial, automotive, and aerospace/ MIL-STD EMC measurement requirements are specified. For example, for the automotive standards, reviews will include the current revisions of the main international automotive component and full vehicle standards, including CISPR 12, CISPR 25, ISO 11451-2, ISO 11452-2, and ECE Reg. 10.6. For the ANSI standards, discussions will include C63.25.1 and C63.25.2 for site validation techniques and requirements for above and below 1 GHz testing. An update on the latest developments proposed for the next edition of C63.4 will be provided. Attendees can expect to increase their understanding of both the background of the latest requirements for usage of EMC measurement equipment and test environments as well as learn novel approaches to test site validation of anechoic chambers.

Agenda :

Update of Site Validation Measurements in the ANSI C63 Standards (C63.25.1 and C63.25.2) and Proposed Changes to C63.4

Zhong Chen, ETS-Lindgren, Cedar Park, Texas, USA

Automotive International EMC Standards Update

Garth D'Abreu, ETS-Lindgren, Cedar Park, Texas, USA

T2

Tutorial 2

Time : 10.00 – 12.00

Connected Vehicles: The Future of the Modern Automotive Industry

Chaired by : Janet O'Neil

Room : Room 1

Speakers : Garth D'Abreu, ETS-Lindgren
Zhong Chen, ETS-Lindgren

Abstract :

The phrase "connected vehicles" is a hot topic these days, but what does this mean and why is it important? "Connected vehicles" refers to communication between vehicles (vehicle-to-vehicle V2V), between vehicles and the surrounding communication infrastructure (vehicle-to-infrastructure V2I), vehicle-to-cloud (V2C) and cellular vehicle-to-everything (C-V2X). The developing Advanced Driver Assistance Systems (ADAS) rely on this communication network for increasing levels of vehicle autonomy. Current ADAS features including adaptive cruise control, autonomous emergency braking, lane departure warning systems, and blind spot warning, to name a few, rely solely on the on board sensors. On board systems are currently included in the scope of module-based EMC tests. Over the Air (OTA) communication for connected vehicles, however, necessitates additional measurements now required to verify wireless performance of the systems. To satisfy the requirements of high network reliability, high data throughput and low latency, there are potential solutions with Dedicated Short Range Communications (DSRC), 4G and 5G based cellular networks. Today's drivers expect safety features to operate flawlessly. In the future, with autonomous vehicles and no driver, it is critical that connected vehicles operate seamlessly, with no margin for error

Speakers in this tutorial will address the challenges connected vehicle technology presents on performance and verification test methods. Novel solutions to these challenges will be provided. Topics related to automotive test and measurement include a primer on basic computer simulation. This will demonstrate how simulation tools can be applied early to achieve compliance, using automotive EMC standards as a guide. Full vehicle measurement techniques and guidelines will be reviewed to evaluate the performance of connected vehicles.

The tutorial will conclude with a discussion on the EMC test environment for conducting these automotive measurements, with a focus on the important contribution of dynamometers and e-motors to simulating real-world applications.

Agenda :

Implementing Vehicle Level Measurements for Advanced Driver Assistance Systems

Garth D'Abreu, ETS-Lindgren, Cedar Park, Texas, USA

Chamber Design Considerations for EMC and Antenna Pattern Measurements of Full Vehicles

Zhong Chen, ETS-Lindgren, Cedar Park, Texas, USA

T3 Tutorial 3 Time : 13.00 – 15.00

Improving integrated circuit reliability by combining tests to ionizing radiation and electromagnetic compatibility

Chaired by : Fabian Vargas
Bernd Deutschmann Room : Room 1
Sonia Ben Dhia

Speakers : Fabian Vargas, Catholic University – PUCRS
Bernd Deutschmann, Graz University of Technology
Sonia Ben Dhia, Université de Toulouse, LAAS-CNRS

Abstract :

Technology scaling, which made electronics accessible and affordable for almost everyone on the globe, has advanced IC and electronics since sixties. Nevertheless, it is well recognized that such scaling has introduced new (and major) reliability challenges to the semiconductor industry. This tutorial addresses the background mechanisms impacting reliability of very deep submicron (VDSM) integrated circuits (Ics). In more detail, topics such as the basics about electromagnetic compatibility (EMC) and ionizing radiation, the mechanisms by which they affect Ics, the current standards and laboratory test infrastructure for EMC, total-ionizing dose (TID) and single-event effects (SEEs) on Ics are presented and their combined effects on the reliability of modern ICs are discussed. Moreover, the way reliability failure mechanisms for (ionizing and non-ionizing) radiation are modeled and how they are impacting IC aging and lifetime will be covered. Recent results from laboratory experimental measurements are described. Classic design solutions to counteract with TID, SEEs, aging and EMC in VDSM ICs as well as the recent achievements on the development of on-chip sensors to monitor EM conducted noise on IC power supply lines are introduced. A YouTube video is presented to illustrate the effectiveness of such on-chip sensors to detect aging. Finally, Spice simulations are used to demonstrate the combined effect of ionizing radiation with power supply noise on SRAM cells followed by the presentation of some measures to counteract with it..

T4 Tutorial 4 Time : 10.00 – 12.00

IEEE Electromagnetic Compatibility Transactions

Chaired by : John Norgard Room : Room 1

Perry Wilson

Speakers : Prof. John Norgard - NASA/JSC
Dr. Perry Wilson - NIST

Abstract :

This EMCT Tutorial is intended for everyone interested in publishing a paper in the EMCT, especially for the first time. This Tutorial is on the IEEE Electromagnetic Compatibility Transactions (EMCT).

Agenda :

Publishing a Paper in the EMCT
Writing a Good EMCT Paper: My Perspective

T5

Tutorial 5

Time : 13.00 – 15.00

Power Quality and EMC in Transportation and Renewable Energy Systems

Chaired by : Muhammad Alamsyah
Venkatkumar Muneeswaran

Room : Room 2

Speakers : Dr.-Ing. Sebastian Koj, IAV GmbH
Prof. Dave Thomas, University of Nottingham
Prof. Petre-Marian Nicolae, University of Craiova
Prof. Robert Smoleński, University of Zielóna Góra

Abstract :

The rapid increasing of renewable energy sources around the world and its EMC problems are something that can not be separated. Both Low-Frequency conducted and radiated emission research have been conducted due to the problem caused by it. Therefore, there is a strong need to analyze the Renewable Energy Systems in Low-Frequency area in order to comply with the EMC standards. In this Tutorial, the related problems will be presented focusing on conducted interference topic, aiming to get better perspective of understanding the EMC issue in power converters in Renewable Energy systems also covering Aerospace applications, and Automotive vehicle sector.

Agenda :

Renewable Energy and Automotive EMC – Testing, Standards and Regulations

Dr.-Ing. Sebastian Koj – Development Engineer EMC and Antenna at IAV GmbH

Methodologies or The Simulation of Conducted Emissions of DC-DC Converters For Future Aerospace Applications

Prof. Dave Thomas – Head of George Green Institute for Electromagnetic Research at University of Nottingham

Some problems concerning Power Quality and EMC in Energy Systems Including Renewables

Prof. Petre-Marian Nicolae – Professor at University of Craiova, Prof. Ileana-Diana Nicolae -Professor at University of Craiova

Aggregated Conducted Interference Generated by Power Electronic Interfaces in Photovoltaic Power Plant

Prof. Robert Smoleński – Professor at University of Zielóna Góra

Workshop

W1	Workshop 1	Time : 13.00 – 15.00
Risk Based EMC initiatives in Europe		
Chaired by :	Anne Roc'h Frank Leferink Davy Pissoort Keith Armstrong	Room : Room 2

Speakers :
Dr. Anne Roc'h, Eindhoven University of Technology
Prof.dr. Frank Leferink, University of Twente - THALES
Prof.dr. Davy Pissoort, Katholieke Universiteit Leuven
Keith Armstrong, Cherry Clough Consultants

Abstract :

The recent European Blue Guide (which is about the implementation of EU product rules) made an EMI risk-based approach (rather than a conventional, rule-based approach) mandatory for any new piece of electronic equipment. Meanwhile, the specific regulations for medical equipment (MDR – Medical Devices Regulations and IEC 60601-1-2), which also refer to a risk-based approach became mandatory in 2021.

The problem is that many companies in the technology industry as well as the users of electronic systems are struggling with this EMI risk-based approach as there is a lack of understanding and no clearly prescribed risk-assessment methodology in place. Small and medium-sized enterprises (SMEs) are often not able to cope with such a major shift in approach.

In this workshop we will present the EMC Risk-based approach, in contrast with the tradition Rule-based one. We will discuss the recent IEEE 1848 which provides a set of practical methods for helping to manage the levels of risks due to electromagnetic (EM) disturbances throughout the lifecycles of electronic equipment.

This new risk-based methodology requires not only a formalization, but trained specialists to address the complexity of system, and all the individuals and institutions involved. We will introduce you to the two large European Networks (PETER and ETERNITY) which are currently training 29 Early Stage Researchers into the development and implementation of the risk-based methodology.

Agenda :

Risk based EMC

Frank Leferink

Techniques and Measures for Managing the Functional Safety and Other Risks that can be caused by EMI (IEEE 1848)

Keith Armstrong

Presentation of the European Training Network PETER

Davy Pissoort

Presentation of the European Training Network ETERNITY

Anne Roc'h

W2	Workshop 2	Time : 15.10 – 17.10
Empower a billion lives		
Chaired by :	Frank Leferink Jelena Popovic Deny Hamdani Flavia Grassi	Room : Room 2

Speakers :

Prof.dr. Frank Leferink, University of Twente - THALES
Dr. Jelena Popovic, University of Twente – Klimop Energy, Vice-Chair TC12 IEEE PELS
Dr. Deny Hamdani, ITB Bandung
Dr. Flavia Grassi, Polito di Milano – Chair TC7 IEEE EMC

Abstract :

IEEE PELS launched IEEE Empower a Billion Lives (EBL-I) in 2018 as a recurring global competition for teams to develop and demonstrate scalable solutions to energy access. Over 450 teams from 70 countries responded. Five regional competitions (China, India, Africa, Europe and US) and field demonstrations in Rwanda, Uganda, Malaysia, Nepal, Madagascar, India, Tanzania, China, Nigeria, Cambodia, Singapore, Kenya & Ivory Coast with a global final in Baltimore in Oct 2019.

Solutions presented by the teams included microgrids, nanogrids, solar home systems, improved business models, and appliances. Over \$500,000 was provide in awards and team support, including a \$100,000 Grand Prize to team SoJLS from IIT Bombay. Other global winners include Xpower, Reeddi, Entrepreneurs du Monde and Okra, SolarWorx and Havenhill Synergy. EMC, and especially power quality is strongly relating to renewable energy generation, as the majority of equipment is using fast-switching semiconductors to connect the generated energy to the micro-or nano-grid, or use fast switching semiconductors to consume energy. By default, any micro-

or nano-grid has low inertia like in conventional grids, and this low inertia is the cause of dips, surges and outages.

Building on the success of EBL-I, Empower a Billion Lives – II, global competition to be held from August 2021 to October 2022. Please visit www.empowerabillionlives.org for further information on joining the EBL community and/or to participate as a team.

Agenda :

In this workshop we will present the concept of EBL, we will discuss with key stakeholders and to build global partnerships, to explore ways in which IEEE can help energy access, and to build a community to support EBL-II.

W3 Workshop 3 Time : 15.10 – 17.10

Conducted EMI problems with modern static electrical energy meters

Chaired by : Cees Keyer
Tom Hartman
Bas ten Have

Room : Room 2

Speakers : Cees Keyer, University of Twente
Tom Hartman, University of Twente
Bas ten Have, University of Twente

Abstract :

More often consumers are complaining about the energy bill after the conventional electromechanical meter has been replaced by an electronic, or static, energy meter. Active infeed converters for photo-voltaic systems are a known source for interference to static meters. To investigate the root cause, experiments on static meters have been performed in a controlled lab environment. Interference cases are found due to dimmed lighting equipment of light emitting diode and compact fluorescent lighting technology, and a speed controlled water pump. Maximum experimental errors of 2675% are found. The drawn currents have a high rising slope, small pulse duration and high crest factor. Static energy meters that use a Rogowski coil to measure the current contribute to the highest misreadings, followed by the current transformer principle, and when using a shunt resistor or Hall effect sensor lower energy readings are reported.

Agenda :

Conducted EMI on static energy meters from modern household appliances

Static energy meters running backwards

Measurement survey of current waveforms occurring in on-site situations

Discussion panel

W4 Workshop 4 Time : 17.10 – 19.10

The Impact of Electro Mobility on Automotive EMC Standards and Measurements

Chaired by : Jens Medler
Sam Chew

Room : Room 3

Speakers : Jens Medler, Rohde & Schwarz GmbH
Zhang Xu, China Automotive Technology and Research Center Co. Ltd
Sam Chew, Rohde & Schwarz ASIA
Jacky Li, Rohde & Schwarz ASIA

Abstract :

This workshop will provide key updates to the global Automotive EMC Standards and will review proposed changes to address the rapidly developing electro mobility. Participants will learn what is new in these standards, what to expect in the new revisions, what to anticipate in future standards based on automotive technology trends, and how this may influence their current EMC test and measurement activity.

Agenda :

Current and Future Changes to the CISPR Automotive EMI Standards and the applicability of FFT-based measuring receivers for compliance measurements

Jens Medler, CISPR A & D Expert, Rohde & Schwarz, Munich, Germany

EMC Safety in ADAS and Autonomous Driving - Challenges and possible solutions

Zhang Xu, ISO/TC22/SC32/WG3 Expert, IEC/CISPRD Expert, UNECE/TF EMC Expert, China Automotive Technology and Research Center Co. Ltd., Tianjin, China

The challenges of electromagnetic environment scenarios testing for connected cars

Sam Chew, Technical Sales for EMC Projects, Rohde & Schwarz ASIA, Singapore

Monitoring and assessing performance of automotive systems during EMS testing

Jacky Li, Senior system engineer for EMC & OTA projects, Rohde & Schwarz ASIA, Singapore

W6 Workshop 6

Time : 15.10 – 17.10

Comparing Emission Measurements performed by a Spectrum Analyzer with EMC Functions vs. Pre and Full Compliant Receivers

Chaired by : Michele Zingarelli

Room : Room 3

Speakers : Dr.Eng. Michele Zingarelli, Narda Safety Test Solutions

Abstract :

A comparison between measurements performed with 1 Spectrum Analyzer, 1 PreCompliant Receiver and 1 Full-Compliant Receiver will be showed, using a Reference CISPR 16-1-1 Pulse Repetition Frequency Generator and a sample EUT, in order to bring the evidence on how much an Emission Test could be affected by a simple Spectrum Analyzer or a Pre-Compliant EMI Receiver, versus a CISPR 16-1-1 Certified Full-Compliant EMI Receiver.

Agenda :

A short theoretical introduction will be given for highlighting the requirements from the Standard and resuming the various CISPR Defined Detectors and their responses to the pulses defined as references for the validation of an EMI Measuring Equipment. Then practical measurements will be performed using these three different equipment on a selected EUT.

TUESDAY, 28 SEPTEMBER 2021
Time : Indonesian Central Time (GMT+8 Time Zone)

ROOM	Room 1	Room 2	Room 3
TIME			
08:30-12:00	PLENARY SESSION		
12:00-13:00			
13:00-15:00	<p>[SS-06] SCENT: EMC in Smart Cities via Power Electronics Organizer(s): Muhammad Imam Sudrajat Session Chairs: Prof. David W.P Thomas & Prof. Robert Smolenski</p>	<p>[SS-01] ESD and Transients Organizer(s): Takahiro Yoshida Session Chairs: Takahiro Yoshida</p>	<p>[SS-03] EMC Diagnostics of Complex Systems Organizer(s): Vladimir Mordachev & Eugene Sinkevich Session Chairs: Vladimir Mordachev & Eugene Sinkevich</p>
15:00-15:10			
15:10-17:30	<p>[SS-05] ETOPIA: Microgrids and Low Frequency EMC Organizer(s): Arun Dilip Khilnani Session Chairs: Prof. Flavia Grassi & Prof. Petre-Marian Nicolae</p>	<p>[SS-02] : Hardware security issue due to EM passive/active attacks on devices complying EMC standards Organizer(s): Yuichi Hayashi & William Radasky Session Chairs: Yuichi Hayashi & William Radasky</p> <p>TC-01 EMC Management, Standards and Regulations Session Chairs: Dr. Ing. Deny Hamdani, M.Sc</p>	<p>[SS-07] The Emerging Near-field/Far-field EMC Measurement and Modeling Technologies for Complex Electromagnetic Problems Organizer(s): Richard Xian-Ke Gao & Xing-Chang Wei Session Chairs: Richard Xian-Ke Gao & Xing-Chang Wei</p>

PLENARY SESSION & PARALLEL SESSION ORAL PRESENTATION
DAY 2 (Tuesday, 28 September 2021)
Time : Indonesian Central Time (GMT+8 Time Zone)

Time	Sessions	Room
PLENARY SESSION		
08:30-08:40	General Report: LoC Chair: Dwi Mandaris, Ph.D TPC Chair: Prof. dr. Ir. Frank Leferink	PLENARY ROOM
08:40-09:00	Welcome Talk: APEMC General Chair: Prof. Er-Ping Li	
09:00-09:30	Opening Talk: Chairman of National Research and Innovation Agency (BRIN), Indonesia: Dr. Laksana Tri Handoko, M.Sc	
09:30-10:00	Opening Talk: Chairman of International Steering Committee (ISC) APEMC: Mark Mifsud	
10:00-11:00	Keynote Speaker: Director of IEEE EMC Society: Prof. Alistair Duffy	
11:00-11:50	Guest Speaker: Researcher from National Research and Innovation Agency (BRIN) Indonesia: Ir. Reza Septiawan, Ph.D	
11:50-11:55	Information from the Chair of APEMC 2022: Dr. Dong-Lin SU	
11:55-12:00	Information from the Chair of EMC Europe 2022: Prof. Jan Carlsson	
12:00-13:00	Lunch	
13:00-15:00	[SS-06] SCENT: EMC in Smart Cities via Power Electronics Organizer(s): Muhammad Imam Sudrajat Session Chairs: Prof. David W.P Thomas & Prof. Robert Smolenski	Room 1
	An Approach in Modelling and Simulation of Crosstalk Effect in Cables Ventatkumar Muneeswaran <i>University of Nottingham, U.K</i>	
	Electromagnetic Disturbance Characteristics and Influence Factors of PETT Oscillation in High-Voltage IGBT Devices Jiayu Fan; Jinqiang Zhang; Feng He; Xuebao Li; Zhibin Zhao; Xiang Cui <i>North China Electric Power University, China; Global Energy Interconnection Research Institute Co. Ltd, China</i>	
	The Influence of Spread-Spectrum Modulation on the G3-PLC Performance Waseem Elsayed; Hermes Loschi; Muhammad Ammar Wibisono; Niek Moonen; Piotr Lezynski; Robert Smolenski <i>University of Zielona Gora, Poland; University of Twente, the Netherlands</i>	

	<p>EMI Mitigation Technique for Warship Power Distribution Systems in the Frequency Range Below 150 kHz Muhammad Imam Sudrajat; Niek Moonen; Hans Bergsma; Frank Leferink <i>Univerisity of Twente, the Netherlands; THALES, the Netherlands; Indonesian Institute of Sciences (LIPI), Indonesia</i></p> <p>Impact of a Speed-Controlled Water Pump on Power Line Communication of Smart Energy Meters Muhammad Ammar Wibisono; Bas ten Have; Waseem Elsayed; Niek Moonen; Deny Hamdani; Frank Leferink <i>Univerisity of Twente, the Netherlands; University of Zielona Gora, Poland; Bandung Institute of Technology (ITB), Indonesia</i></p> <p>Radiated and Conducted EMI by RF Fields at Hospital Environment J. Ramos Evangelista; Hermes Loschi; Eduardo Tavares Costa; Robert Smolenski; Niek Moonen; Robert Vogt-Ardatjew <i>UNICAMP & ANATEL, Brazil; University of Zielona Gora, Poland; University of Campinas, Brazil; University of Twente, The Netherlands</i></p>	
<p>13:00-15:00</p>	<p>[SS-01] ESD and Transients Organizer(s): Takahiro Yoshida Session Chairs: Takahiro Yoshida</p> <p>Development of Immunity Test Method for Long-Duration Induced Noise on a Wearable Devices by Electrostatic Discharge Musashi Tanaka; Takahiro Yoshida <i>Tokyo University of Science, Japan</i></p> <p>Distance Characteristics of Transient Magnetic Field Caused by ESD in Sphere-Gap Kento Kato; Ken Kawamata; Shinobu Ishigami; Osamu Fujiwara <i>Tohoku Gakuin University, Japan; Nagoya Institute of Technology, Japan</i></p> <p>Development and Evaluation of Ultra-Wideband Antenna for Measurement of Transient Electromagnetic Fields Shinobu Ishigami; Toshi-ya Ishizaki; Keita Kobayashi; Ken Kawamata; Katsushige Harima; Shingo Inori <i>Tohoku Gakuin University, Japan; Nagoya Institute of Technology, Japan; Elena Electronics Co. Ltd., Japan; National Institute of Information and Communications Technology, Japan</i></p>	<p>Room 2</p>

	<p>Observation of Peeling Discharge Phenomenon by Ultra-High Sensitivity Ultraviolet Camera Takayoshi Ohtsu; Takami Hasegawa; Ryuji Osawa <i>National Institute of Technology, Numazu College, Japan; Bluevision Ltd., Japan; SEIKOH GIKEN Co., Ltd., Japan</i></p> <p>[SS-02] : Hardware security issue due to EM passive/active attacks on devices complying EMC standards Organizer(s): Yuichi Hayashi & William Radasky Session Chairs: Yuichi Hayashi & William Radasky</p> <p>Board-Level Hardware Trojan Detection Using Sensing Function of On-Board ICs in IT Devices Masahiro Kinugawa; Yuichi Hayashi <i>The University of Fukuchiyama, Japan; Nara Institute of Science and Technology, Japan</i></p> <p>An Analysis of Video Signal Using Double-Endedmode in Perspective of EMI Dong-Hoon Choi; TaeSik Nam; Eui Bum Lee; Jong-Gwan Yook <i>Yonsei University, South Korea</i></p>	
<p>13:00-15:00</p>	<p>[SS-03] EMC Diagnostics of Complex Systems Organizer(s): Vladimir Mordachev & Eugene Sinkevich Session Chairs: Vladimir Mordachev & Eugene Sinkevich</p> <p>Electromagnetic Background Generated by Mobile (Cellular) Communications Mordachev Vladimir <i>Belarusian State University of Informatics and Radioelectronics, Belarus</i></p> <p>UWB EMP Susceptibility Testing of General-Purpose Electronic, Radio Communication, and Industrial Equipment Dzmitry Tsyaneuka; Mordachev Vladimir; Eugene Sinkevich; Alexey Galenko; Xie Ma; Wen-Qing Guo <i>Belarusian State University of Informatics and Radioelectronics & Belarusian State University, Belarus; China Electronics Technology Cyber Security Co., Ltd., China; China Electronics Technology Cyber Security Co., Ltd., China</i></p> <p>Fast Discrete Diagnostics of EMC of Complex Co-Located Radio Systems by Using Worst-Case Models of Electromagnetic Spurious Couplings Mordachev Vladimir; Eugene Sinkevich; Dzmitry Tsyaneuka; Yauheni Arlou <i>Belarusian State University of Informatics and Radioelectronics, Belarus</i></p>	<p>Room 3</p>

	<p>Research on Optimum Scheme of GPS Receiving Sensitivity with Holographic Interference Jiandong Guo; Shuai Hou; Dengyu Zhang; Yue Zhang <i>China Automotive Test Center(Tianjin) Co., Ltd, China; CATARC Automotive Test Center(Tianjin) Co., Ltd., China; CATARC, China</i></p> <p>Experimental Studies of Electromagnetic Compatibility Between 5G Network Transmitters and Receivers Operating in Earth Exploration-Satellite Service and Space Research Service in the 27 GHz Band Valery Tikhvinskiy; Victor Koval; Pavel Korchagin; Altay Aitmagambetov <i>Radio Research & Development Institute (NIIR) & Bauman Moscow State Technical University (BMSTU), Russia; GEYSER-TELECOM, Ltd, Russia; PInternational Information Technologies University, Kazakhstan</i></p>	
	<p>[SS-04] Power Electronics EMC Related to Motor Drive Systems Organizer(s): Kye Yak See, Eng Kee Chua, Fei Fan & Zhenyu Zhao Session Chairs: Kye Yak See, Eng Kee Chua, Fei Fan & Zhenyu Zhao</p> <p>Common-Mode Noise Analysis and Suppression of a GaN-Based LCLC Resonant Converter for Ion Propulsion Power Supply Minghai Dong; Hui Li; Shan Yin; Zhenyu Zhao; Yingzhe Wu <i>University of Electronic Science and Technology of China, China; Nanyang Technological University, Singapore</i></p>	
15:00-15:10	Break	
15:10-17.30	<p>[SS-05] ETOPIA: Microgrids and Low Frequency EMC Organizer(s): Arun Dilip Khilnani Session Chairs: Prof. Flavia Grassi & Prof. Petre-Marian Nicolae</p> <p>Efficient Time-Domain Multi-Channel Measurements Using a Multi-Axis Antenna for Frequency Range Below 30 MHz Denys Pokotilov; Robert Vogt-Ardatjew; Frank Leferink <i>University of Twente, the Netherlands</i></p> <p>EMI Levels Associated with MMC Capacitors Voltage Balancing Techniques Amr Madi; Niek Moonen; Robert Smolenski; Douglas Aguiar do Nascimento; Piotr Lezynski; Frank Leferink <i>University of Zielona Gora, Poland; University of Twente, The Netherlands</i></p>	Room 1

	<p>A Simulation for Parameters Extraction of Double-Layer Shielded Power Cable Using FEA Douglas Aguiar do Nascimento; Robert Smolenski; Hermes Loschi; Amr Madi; Muhammad Septian Alamsyah; Francinei L Vieira <i>University of Zielona Gora, Poland; University of Twente, The Netherlands; Leibniz University Hannover, Germany</i></p>	
	<p>The Influence of the Number of Frequencies and the Frequency Repetitions Rates in Spread Spectrum Sigma-Delta Modulated DC-DC Converters Angel Eduardo Pena-Quintal; Karol Niewiadomski; Steve Greedy; Mark Sumner; David Thomas <i>University of Nottingham & George Green Laboratory for Electromagnetic Research, United Kingdom (Great Britain)</i></p>	
	<p>Limitations in Applying the Existing LISN Topologies for Low Frequency Conducted Emission Measurements and Possible Solution Lu Wan; Arun Dilip Khilnani; Abduselam Hamid; Flavia Grassi; Giordano Spadacini; Sergio A Pignari; Mark Sumner; David Thomas <i>Politecnico di Milano, Italy; University of Nottingham, U.K</i></p>	
	<p>Effects of Random Modulation on Powerline Communication System Abduselam Hamid; Lu Wan; Waseem Elsayed; Flavia Grassi; Paolo S. Crovetti; Giordano Spadacini; Sergio A Pignari <i>Politecnico di Milano, Italy; University of Zielona Gora, Poland; University of Twente, The Netherlands; Politecnico di Torino, Italy</i></p>	
	<p>About the Distorting Regime Induced by an Electronic Induction Heating System Adrian Hurezeanu; Iurie Nuca; Ileana-Diana Nicolae; Lucian-Cristian Scarlatescu; Petre Marian Nicolae <i>University of Craiova, Romania</i></p>	
15:10-17:30	<p>[SS-02] : Hardware security issue due to EM passive/active attacks on devices complying EMC standards Organizer(s): Yuichi Hayashi & William Radasky Session Chairs: Yuichi Hayashi & William Radasky</p> <p>A Scheme to Improve SNR of Received EMI Signal from Information Display Device Eui Bum Lee, Dong-Hoon Choi, TaeSik Nam and Jong-Gwan Yook <i>Yonsei University, South Korea</i></p> <p>Investigation of the Effect of Temperature on Fault Injection Using Intentional Electromagnetic Interference Daisuke Fujimoto; Yuichi Hayashi</p>	Room 2

	<p><i>Nara Institute of Science and Technology, Japan</i></p>	
	<p>A Study for Low Calculation Cost Side-Channel Resistance Prediction Based on Transfer Impedance of Leakage Path Kengo Iokibe; Yoshitaka Toyota; Masaki Himuro <i>Okayama University, Japan</i></p>	
	<p>Analysis of Electromagnetic Information Leakage from Overdesigned Power Delivery Network of Cryptographic Devices Youngwoo Kim; Shinpei Wada; Daisuke Fujimoto; Yuichi Hayashi <i>Nara Institute of Science and Technology, Japan</i></p>	
	<p>A Fundamental Evaluation of EM Information Leakage Induced by IEMI for a Device with Differential Signaling Shugo Kaji; Daisuke Fujimoto; Youngwoo Kim; Yuichi Hayashi <i>Nara Institute of Science and Technology, Japan</i></p>	
	<p>A Study on Output Bit Tampering of True Random Number Generators Using Time-Varying EM Waves Saki Osuka; Daisuke Fujimoto; Arthur Beckers; Benedikt Gierlich; Ingrid Verbauwheide; Yuichi Hayashi <i>Nara Institute of Science and Technology, Japan; KU Leuven, Belgium; ESAT/COSIC</i></p>	
	<p>TC-01 EMC Management, Standards and Regulations Session Chairs: Dr. Ing. Deny Hamdani, M.Sc</p> <p>EMC Regulation in Infrastructure Assurance (IAS) Telkom Indonesia Kiswanto Kiswanto; Eddy Yuniarto <i>PT. Telekomunikasi Indonesia</i></p>	
15:10-17:30	<p>[SS-07] The Emerging Near-field/Far-field EMC Measurement and Modeling Technologies for Complex Electromagnetic Problems Organizer(s): Richard Xian-Ke Gao & Xing-Chang Wei Session Chairs: Richard Xian-Ke Gao & Xing-Chang Wei</p> <p>Research on Calibration Method of Horizontal Loop Magnetic Near-Field Probe Peng-Cheng Huang; Quan Huang <i>School of Electronics and Information South China University of Technology, Guangzhou; China Electronic Product Reliability and Environmental Testing Research Institute, Guangzhou, China</i></p> <p>Exploring the Effectiveness of Thin Microwave Absorber Applied in Parallel-Plate Waveguide Da Yi; Ming-Chun Tang; Xing-Chang Wei <i>Chongqing University, China; Zhejiang University, China</i></p>	Room 3

Reactive Near-Field to 3-Meter Field Transformation Based on Artificial Neural Networks

Zhi Yang; Jun-Jian Ju; Xing-Chang Wei; Guoping Zou
Zhejiang University, China; State Grid Zhejiang Electric Power Research Institute, China

A Miniaturized Tri-Band Frequency Selective Surface for 5G Electromagnetic Shielding

Jinghan Zhang; Liping Yan; Richard Xian-Ke Gao; Xiang Zhao
*Sichuan University, China; A*STAR Institute of High Performance Computing, Singapore*

A Field Iterative Method for Efficient Source Reconstruction Based on Magnitude-Only and Single-Plane Near-Field Scanning

Zou Jian; Xinxin Tian; Wenxiao Fang; Ruo He Yao
School of Electronics and Information South China University of Technology, China; Guangdong University of Technology, China; CEPREI Laboratory, China

A Novel Waveguide Test Kit for Convenient Material Characterization

Si-Ping Gao; Yong-xin Guo
National University of Singapore, Singapore

Equivalent Radiation Source Reconstruction Based on Artificial Neural Network for Electromagnetic Interference Prediction

Zhe Gao; Xiaochun Li; Junfa Mao
Shanghai Jiao Tong University, China

WEDNESDAY, 29 SEPTEMBER 2021
Time : Indonesian Central Time (GMT+8 Time Zone)

ROOM	Room 1	Room 2	Room 3
TIME			
08:30-10:10	TC-05 System Level EMC and Protection Session Chairs: Dr. Richard Xian-Ke GAO, Prof. Xing-Chang Wei	TC-10 Signal Integrity and Power Integrity Session Chairs: Prof. Er-Ping Li, Dr. En Xiao	[SS-04] Power Electronics EMC Related to Motor Drive Systems Organizer(s): Kye Yak See, Eng Kee Chua, Fei Fan & Zhenyu Zhao Session Chairs: Kye Yak See, Eng Kee Chua, Fei Fan & Zhenyu Zhao
10:10-10:20	Break		
10:20-12:00	TC-03 Lightning Session Chairs: Prof. Yoshihiro Baba, Prof. Vladimir Rakoy	TC-09 IC and Semiconductor TC-10 Signal Integrity and Power Intensity Session Chairs: Ding-Bing Lin, Prof. Wen Cheng Lai	[SS-04] Power Electronics EMC Related to Motor Drive Systems Organizer(s): Kye Yak See, Eng Kee Chua, Fei Fan & Zhenyu Zhao TC-06 Transportation EMC, Automotive/Railway/Ship EMC Session Chairs: Kye Yak See, Eng Kee Chua, Fei Fan & Zhenyu Zhao
12:00-13:00	Lunch		
13:00-14:40	[SS-06] SCENT: EMC in Smart Cities via Power Electronics Organizer(s): Muhammad Imam Sudrajat Session Chairs: Prof. David W.P Thomas & Prof. Robert Smolenski	TC-04 High Power Electromagnetics TC-08 Smart Grid and Low Frequency EMC Session Chairs: Dr. William Radasky, Prof. Alistair Duffy	TC-06 Transportation EMC, Automotive/Railway/Ship EMC TC-07 Aerospace EMC Session Chairs: Prof. Sergio Pignari, Dr. Niek Moonen
14:40-15:00	Break		
15:00-17:00 (Room 1) 15:00-16:40 (Room 2&3)	TC-05 System Level EMC and Protection Session Chairs: Dr. Richard Xian-Ke GAO	TC-09 IC and Semiconductor EMC TC-10 Signal Integrity and Power Integrity Session Chairs: Prof. Bernd Deutschmann	TC-11 Computational Electromagnetics and Multiphysics Modeling TC-05 System Level EMC and Protection Session Chairs: Prof. Paolo Manfred, Prof. dr. ir. Frank Leferink

**PARALEL SESSION ORAL PRESENTATION
DAY 3 (Wednesday, 29 September 2021)**

Time	Sessions	Room
08:30-10:10	TC-05 System Level EMC and Protection Session Chairs: Dr. Richard Xian-Ke GAO, Prof. Xing-Chang Wei	Room 1
	Electromagnetic Interference (EMI) Cyber Attack Protective Measures in Modular Data Center (MDC) Shahriar Saadat <i>University of Washington, USA</i>	
	A Magnetic Field Cancelling System Design for Mitigating Extremely Low Frequency Magnetic Field in a High Tech Fab Hung-Yi Lin; Yu-Lin Song; Luh-Maan Chang <i>National Taiwan University, Taiwan; Asia University, Taiwan</i>	
	Modeling of Common Mode Current in Automotive Inverters Based on Norton Equivalent Circuits Jia Li <i>Yoshida-cho Totsuka-ku & Hitachi Ltd, Japan</i>	
	A Polarization-Insensitive Resistor-Free Ultrathin Absorber for Curved-Surface Objects Chien-Ju Chen; Chen-Ying Hsieh; Cheng-Nan Chiu; Yuan-Fu Ku; Ming-Kun Hsieh <i>Yuan Ze University, Taiwan; Taiwan Testing and Certification Center, Taiwan; Bureau of Standards, Metrology and Inspection (BSMI), Taiwan</i>	
	Stochastic Analysis of Braided-Shielded TWP/Twinax Cables with Random Nonuniform Shield Parameters Oussama Gassab; Jingxiao Li; Fang He; Qiwei Zhan; Wen-Yan Yin <i>Zhejiang University, China; Zhejiang Zhaolong Interconnect Technology Co., Ltd., China</i>	
08:30-10:10	TC-10 Signal Integrity and Power Integrity Session Chairs: Prof. Er-Ping Li, Dr. En Xiao	Room 2
	Broadband Characteristic Impedance Extraction for Planar Transmission Lines on Lossy Substrates Chien-Chang Huang <i>Yuan Ze University, Taiwan</i>	
	Asymmetric Dual Bend Skew Compensation Technique for Reducing Differential to Common Mode Conversion Jianquan Lou; Juhi Garg; Alpesh Bhoobe; Joel Goergen <i>CISCO, China; Cisco Systems India, India; CISCO, USA; Cisco Systems, Inc, USA</i>	
	Accurate Multi-Port De-Embedding of Crosstalk-Affected Fixtures for High Speed Devices Simone Scafati; Francesco de Paulis; Mike Resso; Tim Wang-Lee <i>University of L'Aquila, Italy; Keysight Technologies, USA</i>	

	<p>Analysis of Ground Void Patterns for Differential Microstrip Impedance Matching on Surface Mount Pads Kuan-Ting Wu; Hank Lin; Bin-Chyi Tseng; Jackson Yen <i>ASUSTeK Computer Inc., Taiwan</i></p>	
	<p>How the Type of Glass Fiber Cloth Affects Insertion Loss Jerry Syue; Huishan Tsai; Leo Guan; Ranger. Hsu; Doxon Wu <i>ITEQ Corporation, Taiwan</i></p>	
08:30-10:10	<p>[SS-04] Power Electronics EMC Related to Motor Drive Systems Organizer(s): Kye Yak See, Eng Kee Chua, Fei Fan & Zhenyu Zhao Session Chairs: Kye Yak See, Eng Kee Chua, Fei Fan & Zhenyu Zhao</p>	Room 3
	<p>High-Frequency Modeling of Permanent Magnet Synchronous Motor Considering Internal Imbalances Yuandong Guo; Muqi Ouyang; Zhifel Xu; Hongseok Kim; Jun Fan; Junesang Lee; Jungrae Ha; Minhoo Kim; Sangwon Yun <i>Missouri University of Science and Technology, USA; Missouri University of Science and Technology & Electromagnetic Compatibility Laboratory (EMC), USA; Mando, South Korea</i></p>	
	<p>Behavioural Modelling of Common-Mode Chokes with Frequency-Dependent Permeability Core Shaojun Huang; Kye Yak See; Fei Fan; R Simanjorang; Firman Sasongko <i>Nanyang Technological University, Singapore; Advanced Technology Centre, Rolls-Royce Singapore Pte. Ltd, Singapore; Rolls-Royce Electrical, Rolls-Royce Singapore Pte. Ltd, Singapore</i></p>	
	<p>Impact of Motor Stator Winding Faults on Common-Mode Current Fei Fan; Zhenyu Zhao; Pengfei Tu; Jie Huamin; Kye Yak See <i>Nanyang Technological University, Singapore</i></p>	
	<p>Measurement of In-Circuit Common-Mode Impedance at the AC Input of a Motor Drive System Zhenyu Zhao; Fei Fan; Arjuna Weerasinghe; Pengfei Tu; Kye Yak See <i>Nanyang Technological University, Singapore</i></p>	
10:10-10:20	Break	
10:20-12:00	<p>TC-03 Lightning Session Chairs: Prof. Yoshihiro Baba, Prof. Vladimir Rakoy</p>	Room 1
	<p>Discussion on Lightning Indirect Effects Test of DO160 Yin Fang <i>Suzhou Three-ctest Electronic Co., Ltd., China</i></p>	

	<p>Model for Surge Generator Transient Analysis and Immunity Improvement Investigation on Power Grid System Han-Nien Lin; Tzu-Hao Ho; Yu-Lin Tsai; Jie-Kuan Li; Wan-Yu Syu; Yueh-Hsun Lee; Yu-Ming Wei; Liang-Yang Lin; Jun Sheng Lao <i>Feng-Chia University, Taiwan; Bureau of Standards, Metrology & Inspection, Taiwan; Linkuo Lab. of Taiwan Testing and Certification Center, Taiwan</i></p> <p>Analysis of Lightning Environment of Radio Base Stations in Shenzhen Based on Lightning Locating System Li Wei; Yuanlong Liu <i>ZTE Corporation, China</i></p> <p>Lightning Strike EMP Effect on Local Grids Alexander Mathee; Peter William Futter; Robert Vogt-Ardatjew; Frank Leferink <i>University of Twente, The Netherlands; MiX Telematics, South Africa</i></p> <p>Comparison of LEMPs Computed Using Different Lightning Models Nao Kato; Yoshihiro Baba; Thang H. Tran; Vladimir Rakov <i>Doshisha University, Japan; National Institute of Technology, Tsuruoka College, Japan; University of Florida, USA</i></p>	
<p>10:20-12:00</p>	<p>TC-09 IC and Semiconductor TC-10 Signal Integrity and Power Intensity Session Chairs: Ding-Bing Lin, Prof. Wen Cheng Lai</p> <p>Integrated ADC and Low Noise PLL with Low-Dropout Regulator for Transformer Coupler Quadrature Hybrid Wireless Charging Wen Cheng Lai <i>National Taiwan University of Science and Technology, Taiwan</i></p> <p>Technique of Measuring Injection Locking of VCO Yin-Cheng Chang; Ta-Yeh Lin; Chaohung Hsieh; Mao-Hsu Yen; Yih-Hsia Lin; Yan-Wei Yu; Yuan-Fu Ku; Che-Wei Chang; Shuohung Hsu; Da-Chiang Chang <i>Taiwan Semiconductor Research Institute, National Applied Research Laboratories, Taiwan; National Taiwan Ocean University, Taiwan; Ming Chuan University, Taiwan; Taiwan Testing and Certification Center, Taiwan; Bureau of Standards, Metrology and Inspection, Taiwan; National Tsinghua University, Taiwan; Chip Implementation Center, National Applied Research Laboratories, Taiwan</i></p>	<p>Room 2</p>

	<p>Effect of Feed Forward Equalization on EMI-Related Common Mode Noise in 56-Gbps PAM-4 Optical Transmitter Rehan Azmat; Patrick Yue <i>Hong Kong University of Science and Technology, Hong Kong</i></p> <p>A Broadband Common-Mode Filter by Using Dual Band Transmission Zero Cheng-Yi Zhuang; Tjahjo Adiprabowo; Ding-Bing Lin; Yen-Hao Chen; You-Hao Zheng; Bo-Hung Tsai; Aloysius Adya Pramudita <i>National Taiwan University of Science and Technology; Inventec Corporation, Taiwan; Telkom University, Indonesia</i></p> <p>Comparison Among Types of CSRR DGS RCMF Tjahjo Adiprabowo; Ding-Bing Lin; Cheng-Yi Zhuang; Aloysius Adya Pramudita <i>National Taiwan University of Science and Technology, Taiwan; Telkom University, Indonesia</i></p>	
<p>10:20-12:00</p>	<p>[SS-04] Power Electronics EMC Related to Motor Drive Systems Organizer(s): Kye Yak See, Eng Kee Chua, Fei Fan & Zhenyu Zhao TC-06 Transportation EMC, Automotive/Railway/Ship EMC Session Chairs: Kye Yak See, Eng Kee Chua, Fei Fan & Zhenyu Zhao</p> <p>In-Circuit Differential-Mode Impedance Extraction at the AC Input of a Motor Drive System Arjuna Weerasinghe; Zhenyu Zhao; Fei Fan; Pengfei Tu; Kye Yak See <i>Nanyang Technological University, Singapore</i></p> <p>Noise Suppression Using a New Mode Conversion Method on an Asymmetric Boost Converter Retsu Sugawara <i>Mitsubishi Electric Corporation, Japan</i></p> <p>Research of Interference in the Operational Current of DC Motors of Railway Switch Points Tetiana Serdiuk <i>Dnipro National University of Railway Transport named after Academician V. Lazaryan, Ukraine</i></p>	<p>Room 3</p>

	<p>Model of Propagation of Traction Current Harmonics from Trains to a Track Circuit Receiver Volodymyr Havryliuk <i>Dnipro National University of Railway Transport named after Academician V. Lazaryan, Ukraine</i></p>	
12:00-13:00	Lunch	
13:00-14:40	<p>[SS-06] SCENT: EMC in Smart Cities via Power Electronics Organizer(s): Muhammad Imam Sudrajat Session Chairs: Prof. David W.P Thomas & Prof. Robert Smolenski</p>	Room 1
	<p>Why Not(ch) Daria Nemashkalo; Niek Moonen; Frank Leferink <i>University of Twente, the Netherlands</i></p>	
	<p>Characteristic of Conducted EMI in Compact Fluorescent Lamps Application Assessment Based on CISPR-11 Choon Long Lok; Muhammad Ammar Wibisono; Niek Moonen; Robert Smolenski <i>University of Zielona Gora, Poland; University of Twente, the Netherlands; Institut Teknologi Bandung, Indonesia</i></p>	
	<p>Sensitivity Analysis of Parasitics in Power Electronic Circuit Through Sobol' Indices Karol Niewiadomski; Angel Eduardo Pena-Quintal; David Thomas; Sharmila Sumsurooah <i>University of Nottingham, U.K</i></p>	
	<p>Low-Frequency Envelope of DC/DC Converters Due Differences in the Control Hardware Features Waseem Elsayed; Hermes Loschi; Amr Madi; Niek Moonen; Robert Smolenski; Frank Leferink <i>University of Zielona Gora, Poland; University of Twente, the Netherlands</i></p>	
13:00-14:40	<p>TC-04 High Power Electromagnetics TC-08 Smart Grid and Low Frequency EMC Session Chairs: Dr. William Radasky, Prof. Alistair Duffy</p>	Room 2
	<p>Evaluation of Overvoltages Transmitted in High Power Transformer Windings at Lightning During the Design Stage Petre Marian Nicolae; Marian-Stefan Nicolae; Maria-Cristina Nitu <i>University of Craiova, Romania; Research Institute ICMET, Romania</i></p>	
	<p>Time Reversal for Partial Discharge Localization on Power Lines with Different Termination Impedances Antonella Ragusa; Hugh Sasse; Alistair Duffy <i>De Montfort University, United Kingdom (Great Britain)</i></p>	

	<p>A Study of Conduction Noise Suppression Control for Two-Motor Drive Systems Shota Hanioka; Masahiro Iezawa; Satoshi Ogasawara <i>Mitsubishi Electric Corporation, Japan; Hokkaido University, Japan</i></p> <p>Current Emissions Generated by Dimmed Lighting Equipment of Different Technologies Bas ten Have; Niek Moonen; Frank Leferink <i>University of Twente, the Netherlands</i></p> <p>The Effects of Falling and Rising Edge Dimming on Static Energy Meter Errors Tom Hartman; Roelof Grootjans; Niek Moonen; Frank Leferink <i>University of Twente, the Netherlands</i></p>	
<p>13:00-14:40</p>	<p>TC-06 Transportation EMC, Automotive/Railway/Ship EMC TC-07 Aerospace EMC Session Chairs: Prof. Sergio Pignari, Dr. Niek Moonen</p> <p>Optimization Methods for Common Mode Cancellation in Phase Shifted Inverter Operation Jonas Bertelmann; Michael Beltle; Stefan Tenbohlen <i>University of Stuttgart, Germany</i></p> <p>Application of the CRLH-Based Antenna to Improve Aerospace EMI Daichi Hirahara <i>Japan Aerospace Exploration Agency, Japan</i></p> <p>Electromagnetic Scattering Reduction for Conical Objects Jian-Wei Guan; Cheng-Nan Chiu; Chien-Ju Chen; Yu-Chou Chuang; Yuan-Fu Ku; Ming-Kun Hsieh <i>Yuan Ze University, Taiwan; Taiwan Testing and Certification Center, Taiwan; Bureau of Standards, Metrology and Inspection (BSMI), Taiwan</i></p> <p>Measurements of Undesired Radio Waves Nearby a Compact Drone Koh Watanabe; Mai Aoi; Misaki Komatsu; Satoshi Tanaka; Makoto Nagata <i>Kobe University, Japan</i></p> <p>The Impact of Flight Profiles Towards EMC on All-Electric Aircraft Leonardo C Malburg; Frank Leferink; Niek Moonen <i>University of Twente, the Netherlands</i></p>	<p>Room 3</p>
<p>14:40-15:00</p>	<p>Break</p>	

15:00-17:00	TC-05 System Level EMC and Protection Session Chairs: Dr. Richard Xian-Ke GAO	Room 1
	Loop-To-Loop Close-Range EM Signal Transfer Through a Conducting Thin Sheet - an Analytical Study Based on the Cagniard-DeHoop Technique Martin Štumpf; Petr Kadlec; Tomas Dolezal <i>Brno University of Technology, Czech Republic</i>	
	Reconstructing the Material Properties of a Scalar Metasurface - A Stochastic Optimization Approach Petr Kadlec; Martin Štumpf; Tomas Dolezal <i>Brno University of Technology, Czech Republic</i>	
	Shielding Effectiveness of Volume Materials Monika Ewelina Szafranska; Zbigniew Jósiewicz; Jarosław Janukiewicz <i>Wroclaw University of Science and Technology, Poland</i>	
	Transmission Line Model of Field-To-Wire Coupling with Transmission Line Cables from near and Far Field Sources Jingxiao Li; Oussama Gassab; Fang He; Zhizhen Su; Jie Liao; Qiwei Zhan; Wen-Yan Yin <i>Zhejiang University, China; Zhejiang Zhaolong Interconnect Technology Co., Ltd., China</i>	
	A SPICE Model for a Field-Coupled Conductor Based on the Scattered Voltage Formulation Moustafa Raya; Sergey V. Tkachenko; Ralf Vick <i>Otto-von-Guericke University, Magdeburg, Germany</i>	
	Transmission Line Model of Field-To-Wire Coupling with Transmission Line Cables from near and Far Field Sources Jingxiao Li; Oussama Gassab; Fang He; Zhizhen Su; Jie Liao; Qiwei Zhan; Wen-Yan Yin <i>Zhejiang University, China; Zhejiang Zhaolong Interconnect Technology Co., Ltd., China</i>	
15:00-16:40	TC-09 IC and Semiconductor EMC TC-10 Signal Integrity and Power Integrity Session Chairs: Prof. Bernd Deutschmann A Generalisable Component-Level ESD Failure Characterisation for TLP Measurements Patrick Schrey <i>Graz University of Technology & Institute of Electronics, Austria</i> IC-Package Optimization for Conducted EME Performance: Impact of Discrete Decoupling Capacitors and Parasitic Inductive Effects Aurora Sanna; Giovanni Graziosi <i>STMicroelectronics, Italy</i>	Room 2

	<p>Influence of Layout Parasitics on EMI Improved Folded Cascade Amplifier Input Stages Using Filtering and Linearisation Methods Dominik Zupan; Nikolaus Czepl; Bernd Deutschmann <i>Graz University of Technology, Austria</i></p> <p>A Broadband, High Common-Mode Rejection Ratio Instrumentation Amplifier Marcel J. van der Horst <i>Amsterdam University of Applied Sciences, The Netherlands</i></p> <p>3D Full-Wave Simulation of Stub Length Effect of Vias in High Speed PCB Design Eric Steenbergen; Niek Moonen; Frank Leferink <i>University of Twente, the Netherlands</i></p>	
<p>15:00-16:40</p>	<p>TC-11 Computational Electromagnetics and Multiphysics Modeling TC-05 System Level EMC and Protection Session Chairs: Prof. Paolo Manfred, Prof. dr. ir. Frank Leferink</p> <p>Compressed Stochastic Macromodeling of Electrical Systems via Rational Polynomial Chaos and Principal Component Analysis Paolo Manfredi; Stefano Grivet-Talocia <i>Politecnico di Torino, Italy</i></p> <p>Improved Unscented Kalman Filter Algorithm Adapted to the State Under Non-Common View Runjia Su <i>Harbin Engineering University, China</i></p> <p>System Identification of a Branched 50 Ohm Network by Transient Excitation Felix Burghardt; Nico Feige; Heyno Garbe <i>Leibniz Universität Hannover, Germany</i></p> <p>Prediction of Radiated Emission with Transmission Line Model for CISPR 25 Sayantan Dhar; Kaushik Patra; Shynu Nair; Lohith Kumar; Shibu Krishnan; Bibhu Prasad Nayak <i>Robert Bosch Engineering & Business Solutions, India</i></p> <p>Board Level Shielding Effectiveness Measurements Using the Dual VIRC Vasiliki Gkatsi; Robert Vogt-Ardatjew; Hans Schipper; Frank Leferink</p>	<p>Room 3</p>

	<i>University of Twente, the Netherlands; THALES, the Netherlands</i>	
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THURSDAY, 30 SEPTEMBER 2021
Time : Indonesian Central Time (GMT+8 Time Zone)

ROOM	Room 1	Room 2	Room 3
TIME			
08:30-09:50 (Room 1) 08:30-10:10 (Room 2&3)	TC-04 High Power Electromagnetics Session Chairs: Dr. Eng. Achmad Munir	TC-02 EMC Measurements and EM Environment Session Chairs: Prof. Wen-Yan Yin	TC-11 Computational Electromagnetics and Multiphysics Modeling TC-12 Bio-Medical Electromagnetics & Wearable Devices EMC Session Chairs: Prof. Lijun Jiang, Prof. Jianguing Wang
10:10-10:20	Break		
10:20-12:00	TC-10 Signal Integrity and Power Integrity Session Chairs: Prof. Er-Ping Li	TC-02 EMC Measurements and EM Environment Session Chairs: Prof. Wen-Yan Yin, Prof. Jianfei Wu	TC-11 Computational Electromagnetics and Multiphysics Modeling Session Chairs: Prof. Lijun Jiang, Prof. Gamantyo Hendratoro
12:00-13:00	Lunch		
13:00-14:40	TC-08 Smart Grid and Low Frequency EMC Session Chairs: Prof. W. H. Siew	TC-02 EMC Measurements and EM Environment Session Chairs: Dr. Ken Kawamata, Mr. Tomas Hurtig	TC-11 Computational Electromagnetics and Multiphysics Modeling Session Chairs: Prof. Lijun Jiang, Prof. Jianguing Wang
14:40-15:00	Break		
15:00-17:00	TC-08 Smart Grid and Low Frequency EMC Session Chairs: Prof. W. H. Siew, Prof. Francesca Maradei	TC-02 EMC Measurements and EM Environment Session Chairs: Prof. Wen-Yan Yin, Prof. Osami Wada, Dr. Eng. Achmad Munir	TC-13 Wireless Communication EMC Session Chairs: Prof. Gamantyo Hendratoro

**PARALEL SESSION ORAL PRESENTATION
DAY 4 (Thursday, 30 September 2021)**

Time	Sessions	Room
08:30-09:50	<p>TC-04 High Power Electromagnetics Session Chairs: Dr. Eng. Achmad Munir</p> <p>Simulation Model for Evaluation of IEMI Threat on Electrical Substation Fei Fan; Kye Yak See <i>Nanyang Technological University, Singapore</i></p> <p>High Frequency Power Combiner of Two Magnetrons Based on the E-Plane Y-Structure Waveguide Saowalak Siribunkun <i>Suranaree University of Technology, Thailand</i></p> <p>Simulation and Experimental Study on Electromagnetic Heating for Heavy Oil Stimulation Gerry Sasanti Nirmala; John Hery Tuah Ramadhan; Astrie Kusuma Dewi; Doddy Abdassah; Taufan Marhaendrajana; Achmad Munir <i>Bandung Institute of Technology; Polytechnic of Energy And Mineral, Indonesia</i></p>	Room 1
	<p>Switching Noise Analysis for Conducted Electromagnetic Interference from of Power Electronic Module Han-Nien Lin; Tzu-Hao Ho; Po-Ning Ko; Yu-Lin Tsai; Huei-Chun Hsiao; Yen-Ting Lin; Sung-Mao Wu; Liang-Yang Lin; Jun Sheng Lao <i>Feng-Chia University, Taiwan; National Kaohsiung University, Taiwan; Bureau of Standards, Metrology & Inspection, Taiwan; Linkuo Lab. of Taiwan Testing and Certification Center, Taiwan</i></p>	
08:30-10:10	<p>TC-02 EMC Measurements and EM Environment Session Chairs: Prof. Wen-Yan Yin</p>	Room 2
	<p>Portable, Shielded, Repeatable and Adjustable Cable Shielding Effectiveness Tester Francis L Bongo <i>Lexmark Research and Development, Corp., Philippines</i></p>	
	<p>Radiated Noise Dominancy Analysis by Extended Double Pulse Test and Power Device Optimization for Inverter Use Toshiya Tadakuma; SeongHong SH Lim; Koichi Nishi; Michael Rogers; Motonobu Joko; Masahito Shoyama <i>Kyushu University, Japan; Mitsubishi Electric Asia Pte Ltd, Singapore; Mitsubishi Electric Corporation, Japan; Mitsubishi Electric US, USA</i></p>	

	<p>Research on Vehicle AC Charging EMC Test Method for Isolating the Influence of Charging Equipment Kaiyi Sun; Yue Zhang; Chen Guo; Jiandong Guo <i>China Automotive Test Center(Tianjin) Co., Ltd, China; CATARC, China; CATARC Automotive Test Center (Tianjin) Co., Ltd., China</i></p> <p>A New Measurement Method for Electromagnetic Parameters of Flexible Materials in Low Frequency Band Mingjie Sheng; Zhongyuan Zhou; Yixing Gu; Qi Zhou; Yang Xiao; Feng Tian <i>Southeast University, China</i></p> <p>Design and Evaluation of Long Hexagonal Folded Antenna Toshi-ya Ishizaki; Keita Kobayashi; Shinobu Ishigami; Ken Kawamata; Katsushige Harima; Shingo Inori <i>Graduate School of Engineering, Japan; Tohoku Gakuin University, Japan; National Institute of Information and Communications Technology, Japan; Elena Electronics Co. Ltd., Japan</i></p>	
<p>08:30-10:10</p>	<p>TC-11 Computational Electromagnetics and Multiphysics Modeling TC-12 Bio-Medical Electromagnetics & Wearable Devices EMC Session Chairs: Prof. Lijun Jiang, Prof. Jianguo Wang</p> <p>EM Performance of Segmented Diverter Strips Used in Lightning Protection of Wind Turbine Blades Yijie Zheng; Ana Vukovic; Phillip Sewell; Allen Hall <i>University of Nottingham, United Kingdom (Great Britain); Weather Guard Lightning Tech, USA</i></p> <p>Effect of Cable-Bend on CISPR25 CE Current Method Bibhu Prasad Nayak <i>Simyog Technology Pvt. Ltd, India</i></p> <p>Time-Frequency Analysis in EEG for the Treatment of Major Depressive Disorder Using rTMS Mehran Nikravan; Mahdi Masoudi Moqaddam; Elias Ebrahimzadeh <i>Shiraz University, Iran; Ahvaz Jondishapour University of Medical Science, Iran; University of Tehran, Iran & University of Calgary, Canada</i></p> <p>EMF Characteristic Inside the Infant Incubator Compartment Wuwus Ardiatna; Siddiq Wahyu Hidayat; Hutomo Wahyu Nugroho; Ihsan Supono; Irawan Sukma; Dwi Mandaris <i>Research Center for Testing Technology, Indonesian Institute of Sciences, Indonesia</i></p>	<p>Room 3</p>

	<p>Design and Development of Biosensor Microstrip Antenna at 2.45 GHz Yusnita Rahayu; Meilita Kurniati; Inesti Qodriyah <i>Universitas Riau, Riau, Indonesia</i></p>	
10:10-10:20 Break		
10:20-12:00	<p>TC-10 Signal Integrity and Power Integrity Session Chairs: Prof. Er-Ping Li</p> <p>Characterization of Polygonal Planar Loop Probe for Near-Field Measurement Application Haryo Dwi Prananto; Priyo Wibowo; Tyas Ari Wahyu Wijanarko; Wuwus Ardiatna; Harry Arjadi; Achmad Munir <i>Research Center for Testing Technology, Indonesian Institute of Sciences, Indonesia; Bandung Institute of Technology, Indonesia</i></p> <p>[SS-02] Hardware security issue due to EM passive/active attacks on devices complying EMC standards Organizer(s): Yuichi Hayashi & William Radasky</p> <p>TC-14 Nanotechnology and New Materials Session Chairs: Yuichi Hayashi & William Radasky</p> <p>Study on Measurement Resolution of Side-Channel Waveform in Correlation Power Analysis Hideaki Sone; Kohei Utsumi; Yuichi Hayashi; Takaaki Mizuki <i>Tohoku University, Japan; Nara Institute of Science and Technology, Japan</i></p> <p>Fundamental Study on Evaluating Immunity of RO-Based TRNGs Against Frequency Injection Attack Riki Hashimoto; Daisuke Fujimoto; Yuichi Hayashi <i>Nara Institute of Science and Technology, Japan</i></p> <p>Shielding Effectiveness of Conductive CFRP with Copper-Plated Fibre Jin Ann Toh; Neelakantam Venkatarayalu; Viet Phuong Bui; Warintorn Thitsartarn <i>University of Glasgow Singapore, Singapore; 10 Dover Drive & Singapore Institute of Technology, Singapore; Institute of High Performance Computing, Singapore; A*STAR Singapore, Singapore</i></p> <p>Design of Millimeter-Wave Patch Array by Using TSV-Based III-V IPD Technology</p>	Room 1

	<p>Ta-Yeh Lin; Shuw-Guann Lin; Yin-Cheng Chang; Chaoping Hsieh; Mao-Hsu Yen; Yih-Hsia Lin; Yan-Wei Yu; Yuan-Fu Ku; Che-Wei Chang; Da-Chiang Chang</p> <p><i>Taiwan Semiconductor Research Institute, National Applied Research Laboratories, Taiwan; National Taiwan Ocean University, Taiwan; Ming Chuan University, Taiwan; Taiwan Testing and Certification Center, Taiwan; Bureau of Standards, Metrology and Inspection, Taiwan; Chip Implementation Center, National Applied Research Laboratories, Taiwan</i></p>	
10:20-12:00	<p>TC-02 EMC Measurements and EM Environment Session Chairs: Prof. Wen-Yan Yin, Prof. Jianfei Wu</p>	Room 2
	<p>Research on an Optimized Recording Method of Actual Electromagnetic Environment Signal Yue Zhang; Shuai Hou <i>CATARC, China</i></p>	
	<p>Detection and Correction of Scanning Attitude of EMF Meter Using Machine Learning Ken Sato; Takumi Miura; Yoshitsugu Kamimura <i>National Institute of Technology, Hachinohe College, Japan; Utsunomiya University, Japan</i></p>	
	<p>Verification of Using 150-Ohm Δ-AN Specified in Clause 4.7 of CISPR 16-1-2 for Measuring Conducted Emissions on AC Mains Power Ports Nozomi Miyake; Motoki Yoshida; Hidenori Muramatsu <i>NEC Corporation, Japan; Panasonic Corporation, Japan; VCCI Council, Japan</i></p>	
	<p>Correlation Between Measured Wideband Ratio-Frequency Electromagnetic Radiation and the Area of Buildings Xinwei Song; Ruofan Li; Yuntao Yue; Shanshan Wan <i>Beijing University of Civil Engineering and Architecture, China</i></p>	
	<p>An Optimized Test Method Based on IC-Stripline TEM Cell Chen Ledong; Jianfei Wu; Hongli Zhang; Yifei Zheng; Wu Jianyu <i>National University of Defense Technology, China; Tianjin Institute of Advanced Technology, China; National University of Defense Technical, China; KunPeng Company, China</i></p>	
10:20-12:00	<p>TC-11 Computational Electromagnetics and Multiphysics Modeling Session Chairs: Prof. Lijun Jiang, Prof. Gamantyo Hendrantoro</p>	Room 3
	<p>Performance Analysis of PLA-Based EMI Shield Material for MALE UAV Application Agus Wahyudi; Nurul Muzayadah; Abdurrasyid Ruhayat; Imas Setyadewi; Encung Sumarna; Astrie Kusuma Dewi;</p>	

	<p>Gerry Sasanti Nirmala; John Hery Tuah Ramadhan; Achmad Munir <i>National Institute of Aeronautics and Space, Indonesia; Polytechnic of Energy And Mineral, Indonesia; Bandung Institute of Technology, Indonesia</i></p> <p>Study of Radiated Emission from an Automotive Touchscreen System - A Simulation Driven Approach Anant Devi; Ihor Musijchuk; Bibhu Prasad Nayak <i>Simyog Technology Pvt Ltd, India; Infineon Technologies AG, Ukraine</i></p> <p>Stochastic Transmission Line Analysis via Least Squares Polynomial Chaos Regression Weiwei Chen; Xiang Zhao; Liping Yan; Fan Rong <i>Sichuan University, China</i></p> <p>Bandwidth Enhancement of Wideband Sensor Using Triangle-To-Oval Patch Geometric Change for EMC Measurement Agus D. Prasetyo; Achmad Munir <i>Bandung Institute of Technology (ITB), Indonesia</i></p>	
12:00-13:00	Lunch	
13:00-14:40	<p>TC-08 Smart Grid and Low Frequency EMC Session Chairs: Prof. W. H. Siew</p> <p>Parasitics Analysis in the Power and Gate Driver Loops and Impact on the Ringing of SiC MOSFETs Desmon Petrus Simatupang; Ilman Sulaeman; Niek Moonen; Jelena Popovic; Frank Leferink <i>University of Twente, The Netherlands; Klimop Energy, the Netherlands</i></p> <p>Source and Load Impedance Mismatch Analysis of a Power Line Filter in Microgrid Application Ilman Sulaeman; Desmon Petrus Simatupang; Niek Moonen; Jelena Popovic; Frank Leferink <i>University of Twente, The Netherlands; Klimop Energy, the Netherlands</i></p> <p>Susceptibility of Power Line Communication (PLC) Channel to DS, AM and Jamming Intentional Electromagnetic Interferences Arash Nateghi, MEng; Martin Schaarschmidt; Sven Fisahn <i>Leibniz Universität Hannover, Germany; Wehrwissenschaftliches Institut für Schutztechnologien - ABC-Schutz (WIS), Germany</i></p> <p>Super High Resolution Time-Frequency Analysis of Switching Noise Which Emitted on Power Line Fumihiko Ishiyama; Masato Maruyama <i>NTT, Japan</i></p> <p>An Approach to Predict Conducted Noise from DC/DC Converter Considering Switching Fluctuation Shuqi Zhang; Kengo Iokibe; Yoshitaka Toyota <i>Okayama University, Japan</i></p>	Room 1

13:00-14:40	<p>TC-02 EMC Measurements and EM Environment Session Chairs: Dr. Ken Kawamata, Mr. Tomas Hurtig</p>	Room 2
	<p>Experimental Observations of the Minimum Dwell Time for Radiated Immunity Tests in a Vibrating Intrinsic Reverberation Chamber Danilo Izzo; Robert Vogt-Ardatjew; Frank Leferink <i>University of Twente, the Netherlands</i></p>	
	<p>Improved Field Uniformity over Metallic Table in Military Radiated Susceptibility Testing by Adjusting Lengths of Antenna Elements and Test Table Soydan Cakir; Osman Sen; Bahadir Tektaş; Mesut Ozturk; Aykut Ayaydin <i>TUBITAK UME, Turkey</i></p>	
	<p>Analysis of Metamaterial Walls Reverberation Chamber by Using Modal Expansion Theory Judy Kean; Nathalie Raveu; Hamza Kaouach; Kosorl Thourn; Sokchenda Sreng <i>Toulouse INP, France; Laplace - Université de Toulouse - UPS INPT CNRS, France; Université Férérale Toulouse Midi-Pyrénées, France; Institute of Technology of Cambodia, Cambodia</i></p>	
	<p>Proposal of Radiated Disturbances Measurements Above 30 MHz for Large-Scale Electric Equipment Tatsuru Itsukaichi; Shinobu Ishigami; Ken Kawamata; Yasutoshi Yoshioka <i>Tohoku Gakuin University, Japan; Fuji Electric Europe GmbH, Germany</i></p>	
	<p>Influence of Mean and Peak Power on HPEM Susceptibility Tests of a Reference Test Setup Hanna Sundberg; Mattias Elfsberg; Tomas Hurtig; Sten Nyholm <i>Swedish Defence Research Agency - FOI, Sweden</i></p>	
13:00-14:40	<p>TC-11 Computational Electromagnetics and Multiphysics Modeling Session Chairs: Prof. Lijun Jiang, Prof. Jianguing Wang</p>	Room 3
	<p>Study on Shielding Effectiveness Based on the Modeling of a Shielded Enclosure Petre Marian Nicolae; Ileana-Diana Nicolae; Livia-Andreea Dina; Marian-Stefan Nicolae <i>University of Craiova, Romania</i></p>	
	<p>Extraction of Single Cell Impedance from Battery Pack Measurement by Simulation-Based Multiport De-Embedding Herbert Hackl; Martin Ibel; Bernhard Auinger <i>Silicon Austria Labs GmbH, Austria</i></p>	
	<p>SPICE-Based Lumped Circuit Model of Shielded Multiconductor Cables</p>	

	<p>Moustafa Raya; Mathias Magdowski; Ralf Vick <i>Otto-von-Guericke University, Magdeburg, Germany</i></p> <p>The Analytical Method for Pulse EMI Analysis in Shielded Cables Maksim M. Tomilin <i>Moscow Aviation Institute, Russia</i></p> <p>Numerical Study of Facial Nerve Stimulation After Cochlear Implant Surgery Junaid Sadrach; Ursula van Rienen <i>University of Rostock, Germany</i></p>	
14:40-15:00	Break	
15:00-17:00	<p>TC-08 Smart Grid and Low Frequency EMC Session Chairs: Prof. W. H. Siew, Prof. Francesca Maradei</p> <p>Measurement of LiFePO4 Battery Modal Impedances Under Different Conditions Enrico Mazzola; Alessandro Amaducci; Edoardo Franchi Bononi; Valentino Antonio Montanaro <i>Schaffner EMV AG, Switzerland; Autoivoive Industry, Germany</i></p> <p>Active Transient EMI Stabilization Boy Ihsan; Alexander Matthee; Frank Leferink; Tri Desmana Rachmilda; Deny Hamdani <i>Institut Teknologi Bandung, Indonesia; University of Twente, The Netherlands</i></p> <p>Comparative Analysis of Conducted Emission of Off-Grid PV Inverter Using Different DC-LISNs Yudhistira Yudhistira; Dwi Mandaris; Yoppy Yoppy; Deny Hamdani; Tri Desmana Rachmilda; Ferdaus Ario Nurman <i>Indonesian Institute of Sciences, Indonesia; School of Informatics and Electrical Engineering, Bandung Institute of Technology, Indonesia; PT. LEN Industri (Persero), Indonesia</i></p> <p>Magnetic Field Emission of Automotive Inductive Charging Systems in the 9 kHz - 30 MHz Range Manuel Haug; Michael Beltle; Stefan Tenbohlen <i>Institute of Power Transmission and High Voltage Technology, Germany; Universität Stuttgart, Germany</i></p> <p>Identification of Harmonic Current at Off-Grid PV Inverters Connected to the Load Yudhistira Yudhistira; Prayoga Bakti; Tyas Ari Wahyu Wijanarko; Dwi Mandaris <i>Indonesian Institute of Sciences (LIPI), Indonesia</i></p> <p>Dynamic Wireless Power Transfer in Urban Area: EMI on Traffic Signal Cables Silvano Cruciani; Tommaso Campi; Francescaromana Maradei; Mauro Feliziani <i>Sapienza University of Rome, Italy; University of L'Aquila, Italy</i></p>	Room 1

15:00-17:00	TC-02 EMC Measurements and EM Environment Session Chairs: Prof. Wen-Yan Yin, Prof. Osami Wada, Dr. Eng. Achmad Munir	Room 2
	Quantitative Interlaboratory Comparison of Radiated Immunity Test for On-Board Equipment Takanori Uno; Koji Maeda; Hironori Okamoto; Mitsuo Kaiyama; Osami Wada <i>DENSO EMC Engineering Service Corporation & DENSO Corporation, Japan; Aisin Corporation, Japan; Kansai Electronic Industry Development Center, Japan; Bureau Veritas Japan Co., Ltd., Japan; Kyoto University & Graduate School of Engineering, Japan</i>	
	Development of a TEM Cell with 2 m in Height Yixing Gu; Zhongyuan Zhou; Yunfen Chang <i>Southeast University, China; Research Institute of Chemical Defence, China</i>	
	Development of Wideband Discone Antenna for Medical Devices Interference Haryo Dwi Prananto; Achmad Munir <i>Indonesian Institute of Sciences (LIPI), Indonesia; Bandung Institute of Technology (ITB), Indonesia</i>	
	Studying the Probability of EMI Through Time-Variance Behavior of Environment on Medical Devices Mumpy Das; Robert Vogt-Ardatjew; Bärbel van den Berg; Frank Leferink <i>University of Twente, The Netherlands; Medisch Spectrum Twente, The Netherlands</i>	
	Investigating the EMC Performance of a Matrix Converter and Measures to Improve It Nancy Omollo; Robert Vogt-Ardatjew; Frank Leferink; Jan-Kees van der Ven <i>University of Twente, The Netherlands; RH Marine NL, The Netherlands</i>	
	Influence of a MST Probe on the Measured Field Compared to a Classical Dipole Probe Andrzej Sowa; Robert Vogt-Ardatjew; Ikuko Mori <i>Wroclaw University of Technology, Poland; University of Twente, The Netherlands; National Institute of Technology, Japan</i>	
15:00-17:00	TC-13 Wireless Communication EMC Session Chairs: Prof. Gamantyo Hendranto	Room 3
	A Draft of New Japanese Guidelines for Hospital Building Construction to Insure the Safe Introduction of Wireless Communication Systems Eisuke Hanada; Tetsuo Endo; Hiroyuki Sakakibara; Takehiro Tsuruta; Yoshiya Muraki; Hidenao Atarashi; Manabu Kawabe <i>Saga University, Japan; Taisei Corporation, Japan; Kandenko Co., Ltd., Japan; Takenaka Corporation, Japan;</i>	

<p><i>Seisa University, Japan; University of Tokyo Hospital, Japan; Saitama Medical University, Japan</i></p>	
<p>Summary of EMC Test Standards for Wireless Power Transfer Systems of Electric Vehicles Li Jiang <i>CATARC, China</i></p>	
<p>FPGA-Based Design and Implementation of High-Speed Spatial Adaptive Processing Zhongpu Cui; Yongcai Liu; Yaxing Li; Meng Jin; Wang YaChen <i>Naval University of Engineering, China</i></p>	
<p>Channel Discrepancies Adaptive Modulation Recognition Using Domain Adversarial Training Yaxing Li; Hao Wu; Ying Kang; Yu Guo; Zhongpu Cui; JinLing Xing; Qing Wang; Meng Jin <i>Naval University of Engineering, China</i></p>	
<p>A Circularly Polarized Planar Antenna Having High Gain and Shielding Effectiveness Yi Chen Deng; Cheng-Nan Chiu; Yu-Chou Chuang; Yuan-Fu Ku; Ming-Kun Hsieh <i>Yuan Ze University, Taiwan; Taiwan Testing and Certification Center, Taiwan; Bureau of Standards, Metrology and Inspection (BSMI), Taiwan</i></p>	
<p>Characteristic Investigation of Dome-Shaped Patch Antenna as Wearable EMI Sensor Edwar Edwar; Sri Ayu Amalia; Heroe Wijanto; Agus D. Prasetyo; Muhammad Dzaky Ivansyah; Achmad Munir <i>Telkom University, Indonesia; Institut Teknologi Bandung, Indonesia</i></p>	