

**XXIV International Conference on
Electromagnetic Disturbances**

EMD'2017

PROGRAM

Białystok, September 20 - 22, 2017

Wednesday, 20 September 2017

REGISTRATION OF THE PARTICIPANTS

9.00 – 10.00

OPENING

10.00 – 10.10

PRESENTATION OF IEEE

10.10 – 10.20

IEEE Poland Section • Polish Chapter of the IEEE EMC Society - Grzegorz Masłowski

Session 1

10.20 – 11.20

Sources of electromagnetic disturbances

Session chairman - Karol Aniserowicz

1. MORA Maria Alejandra, COYITANGIYE L. A., CUCCHIARO M.
ELECTROMAGNETIC FIELDS RADIATED BY HIGH SPEED RAILWAY LINES, APPLICATION CASE: COVER SLAB
OVER THE RAILWAY LINES
FRANCE
2. SADOWSKI Maciej
MEASUREMENTS OF LEAKAGE FROM DEVICES OF CATV SYSTEM
POLAND
3. SZAFRAŃSKA Monika E.
ELECTROMAGNETIC WAVES PROPAGATION IN TUNNELS – DETECTION OF THE EM DISTURBANCES SOURCE
POLAND

Coffee break

11.20 – 11.40

Session 2

11.40 – 13.00

Measurements and simulation of disturbances

Session chairman - Robert Ziemba

1. BITTERA Mikulas, NOVAKOVA Tereza
FREQUENCY DEPENDENT CONTRIBUTIONS OF RADIATED EMI MEASUREMENT UNCERTAINTY
SLOVAKIA
2. KARNAS Grzegorz, FILIK Kamil, SZCZUPAK Paweł, MASŁOWSKI Grzegorz
AN OPEN TEST SITE CALIBRATION OF ELF-MF ELECTRIC FIELD ANTENNA DEDICATED TO LIGHTNING
MEASUREMENTS
POLAND
3. MACHCZYŃSKI Wojciech, TYPAŃSKA Dorota
COMPUTER SIMULATIONS OF EFFECTS OF LIGHTNING SURGE DISTURBANCES IN LIGHTING POWER
CONTROLLER
POLAND
4. ROŽANSKIENĖ Arnolda, MARKEVIČIUS Linas
EVALUATION OF ELECTROMAGNETIC PROCESSES IN HIGH VOLTAGE OHL BY TRANSIENT FAST ANALYSIS
MODELS
LITHUANIA

LUNCH

13.00 – 14.00

Visiting of High Voltage Laboratory and laboratory Inno-Eko-Tech

14.00 – 14.40

Session 3

14.40 – 15.40

EMD emission and susceptibility

Session chairman - Andrzej Karwowski

1. NOGA Artur, WÓJCIK Dariusz, SURMA Maciej, KARWOWSKI Andrzej
FULL-WAVE NUMERICAL ANALYSIS OF EEG DEVICE RADIATED IMMUNITY
POLAND
2. WÓJCIK Dariusz, SURMA Maciej, MAGNUSKI Mirosław, NOGA Artur, MOCHA Jan
EXPERIMENTAL VERIFICATION OF SUSCEPTIBILITY TO EMI OF OPERATIONAL AMPLIFIERS
POLAND
3. NOGA Artur, WÓJCIK Dariusz, SURMA Maciej
INFLUENCE OF LAYER STUCKUP AND DECOUPLING CAPACITORS PLACEMENT ON POWER DELIVERY NETWORK IMPEDANCE
POLAND

Coffee break

15.40 – 16.00

Session 4A

16.00 – 17.00

EMD standards and testing Shielding techniques

Session chairman - Renata Markowska

1. FILIK Kamil, MASŁOWSKI Grzegorz, KARNAS Grzegorz, SZCZUPAK Paweł, KARPIŃSKI Lesław, ZIEMBA Robert, WYDERKA Stanisław
DIFFERENT APPLICATION OF MODULAR IMPULSE GENERATORS DEDICATED TO LIGHTNING OVERVOLTAGE TESTS OF AVIONICS
POLAND
2. HALLON Jozef, KOVÁČ Karol, BITTERA Mikuláš
ELECTROMAGNETIC CLAMP FOR EFT PULSES INJECTION
SLOVAKIA
3. HARTÁNSKÝ René, HALGOŠ Ján, MIERKA Martin
TEM CELL DESIGN
SLOVAKIA

Coffee break

17.00 – 17.20

Session 4B

17.20 – 18.40

EMD standards and testing Shielding techniques

Session chairman - Jaroslaw Wiater

4. KACZMAREK Andrzej, STENCEL Przemysław
THE CONCEPT OF AUTOMATION TEST STANDS FOR THE PROCEDURE RS103 STANDARDS MIL-STD-461G
POLAND
5. MICHALAK Marek P.
ALTERNATIVE ELECTROMAGNETIC COMPATIBILITY METHODS TESTS OF MINING EQUIPMENT
POLAND
6. MICHALAK Marek P., SZAFRAŃSKA Monika E.
EMC IN IOT WORLD
POLAND
7. PRUDNIK Aleksander, KUDRYAVTSEVA Tamara, BELOGLAZOV Alexander, LYNKOU Leanid
PRODUCTION TECHNOLOGY AND SHIELDING PROPERTIES OF THE NEEDLE-PUNCHED NON-VOWEN FABRICS WITH CARBON ADDITIVES
BELARUS / RUSSIA

Banquet

19.30 – 22.00

Thursday, 21 September 2017

Session 5

8.20 – 9.20

EMD in power systems, power quality

Session chairman - Linas Andronis Markevicius

1. MANIAK Krzysztof, TOMCZYK Tomasz
ELECTROMAGNETIC COMPATIBILITY IN DISTRIBUTED POWER SYSTEMS
POLAND
2. REBOUL Clément, CUCCHIARO Michel
IMPACT OF VOLTAGE LIMITING DEVICES ON RAIL POTENTIAL IN D.C. RAILWAYS
FRANCE
3. GUDŽIUS Saulius, MORKVĖNAS Alfonsas, BRAZIONIENĖ Dovilė, TIČKA Vidmantas, JASIŪNAS Kęstutis
EXPERIMENTAL INVESTIGATION OF SWITCHING OVERVOLTAGES OF SHUNT REACTOR
LITHUANIA

Coffee break

9.20 – 9.40

Session 6A

9.40 – 11.00

Lightning and overvoltage protection Grounding and equipotential bonding

Session chairman - Grzegorz Maslowski

1. ALIPIO Rafael, De MIRANDA Audine S.
INFLUENCE OF FREQUENCY-DEPENDENT BEHAVIOR OF GROUNDING SYSTEMS AND LINE MODELS ON LIGHTNING OVERVOLTAGES IN OVERHEAD LINES
BRAZIL
2. NOGA Artur, KARWOWSKI Andrzej, TOPA Tomasz
EVALUATION OF THE MAGNETIC FIELD INSIDE GRID-LIKE LARGE VOLUME SHIELDS FOR PROTECTION AGAINST LEMP
POLAND
3. ALIPIO Rafael, SEGANTINI Renan C.
ELECTROMAGNETIC DISTURBANCES PROPAGATION ALONG A GROUNDING GRID SUBJECTED TO LIGHTNING CURRENTS
BRAZIL
4. ZIEMBA Robert, MASŁOWSKI Grzegorz, KOSSOWSKI T.
ANALYSIS OF THE OVERVOLTAGES CAUSED BY NEARBY LIGHTNING STROKE
POLAND

Coffee break

11.00 – 11.20

Session 8

11.20 – 12.00

Presentations of companies

Session chairman - Renata Markowska

1. WARZYWODA Mariusz; Rohde-Schwarz Osterreich Sp. z o.o.
PRESENTATION OF THE COMPANY
POLAND
2. MRÓZ Małgorzata; AMETEK CTS Germany GmbH
PRESENTATION OF THE COMPANY
POLAND

Session 7

8.20 – 12.00

Poster session*

Session chairman - Karol Aniserowicz

1. ANISEROWICZ Karol, MARKOWSKA Renata
SEMI-ANALYTIC CALCULATIONS OF OVERVOLTAGES CAUSED BY DIRECT LIGHTNING STRIKE IN BURIED COAXIAL CABLE
POLAND
2. SZCZUPAK Paweł, FILIK Kamil, KARNAS Grzegorz, MASŁOWSKI Grzegorz, KARPIŃSKI Lesław
OPERATION TESTS OF PULSED POWER ELECTROMAGNETIC GENERATOR
POLAND

3. LITWINCZUK Norbert
ANALYSIS OF MULTIPOINT EXCITATION CIRCUITS FOR ANTENNA ARRAY
POLAND
 4. ZANKIEWICZ Andrzej, SADOWSKI Maciej
ANALYSIS OF TRANSMISSION RELIABILITY IN LTE SYSTEM FOR VARIOUS CHANNEL CONDITIONS
POLAND
 5. GRISZIN Jurij
ADAPTIVE DATA PROCESSING ROBUST WITH RESPECT TO THE PULSE INTERFERENCES WITH UNKNOWN PROBABILITY OF ARISING
POLAND
 6. JANCZAK Dariusz
ESTIMATION IN CONDITION OF HEAVY-TAILED DISTRIBUTION OF MEASUREMENT NOISE VARIANCE
POLAND
 7. NIKOLAJEW Adam
A REDUCTION OF AN INFLUENCE OF DISTURBANCES ON UNDERSAMPLING OF PERIODICAL SIGNALS
POLAND
- * - Space of A1 dimension will be provided for each poster presentation in the session as well as basic mounting facilities.

Coffee break

12.00 – 12.20

Session 9A

12.20 – 13.20

EMD in wire and radio communication

Session chairman - Andrzej Zankiewicz

1. HANADA Eisuke, ISHIDA Kai, KUDOU Takato
ELECTROMAGNETIC INTERFERENCE WITH WIRELESS COMMUNICATION IN HOSPITALS: NEWLY IDENTIFIED PROBLEMS WITH MEDICAL TELEMETER SYSTEMS
JAPAN
2. ISHIDA Kai, GOTOH Kaoru, HIROSE Minoru, ARIE Sazu, HANADA Eisuke, MATSUMOTO Yasushi
ELECTROMAGNETIC COMPATIBILITY OF LIGHT-EMITTING DIODE (LED) LAMPS AND WIRELESS MEDICAL TELEMETERS
JAPAN
3. SOKOLOV Stanislav A.
THE INFLUENCE OF EXTERNAL ELECTROMAGNETIC FIELDS UPON OPTICAL CABLES
RUSSIA

LUNCH

13.20 – 14.20

Excursion

15.20 – 22.30

Friday, 22 September 2017

Session 6B

8.20 – 9.20

**Lightning and overvoltage protection
Grounding and equipotential bonding**

Session chairman - Grzegorz Maslowski

5. MARKOWSKA Renata, ANISEROWICZ Karol
EXPOSURE OF UNDERGROUND CABLE INTRUSION DETECTION SYSTEM TO OVERVOLTAGES CAUSED BY LIGHTNING STRIKE
POLAND
6. WIATER Jarosław
FIRE HAZARD IN EX ZONES CAUSED BY LIGHTNING PROTECTION SYSTEM
POLAND
7. WIATER Jarosław
STEP VOLTAGE NEARBY OVERHEAD TRANSMISSION LINE PYLON EXITED BY HIGH VOLTAGE SURGE
POLAND

Coffee break

9.20 – 9.40

Session 9B

9.40 – 10.40

EMD in wire and radio communication

Session chairman - Maciej Sadowski

4. GARBARUK Marek, MIECZYŃSKA Marta
DUAL-BAND ANTENNA WITH PARASITIC ELEMENTS FOR WI-FI APPLICATIONS
POLAND
5. KONOPKO Krzysztof
COMPARISON OF SENSING TECHNIQUES FOR COGNITIVE RADIO NETWORKS OPERATING IN NON-GAUSSIAN DISTURBANCES
POLAND
6. ZANKIEWICZ Andrzej
VULNERABILITY OF IEEE 802.11AC WAVE 1 NETWORKS TO MUTUAL INTERFERENCE
POLAND

Coffee break

10.40 – 11.00

Session 10

11.00 – 12.20

Disturbances in electronic equipment EMD in control and measurement systems

Session chairman - Ewa Swiercz

1. GRISZIN Jurij, JAŃCZAK Dariusz
REAL TIME ESTIMATION OF SIGNAL TO NOISE RATIO
POLAND
2. NIKOLAJEW Adam
A SIGMA UNDERSAMPLING APPLIED FOR AN IDENTIFICATION OF NONLINEAR OBJECT IN THE PRESENCE OF
DISTURBANCES
POLAND
3. ŚWIERCZ Ewa
IMAGE ENCRYPTION ALGORITHMS BASED ON WAVELET DECOMPOSITION
POLAND
4. GILEWSKA Grażyna
DISTURBANCES OF MEASUREMENTS IN THE SELECTED IMAGING MEASUREMENT SYSTEMS
POLAND

CLOSING CEREMONY

12.20 – 12.30

LUNCH

12.30 – 13.30