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TECHNICAL UNIVESRTY OF
CLUJ-NAPOCA



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BELVEDERE HOTEL, CLUJ-NAPOCA, ROMANIA

PROGRAM

Tuesday / Marți, 11 November 2008

16⁰⁰-20⁰⁰ Registration open* / Deschidere înregistrare*

20⁰⁰ -23⁰⁰ Welcome cocktail / Cocktail de bun venit – Sponsor  **EnergoBit**

Location: Belvedere Hotel

Wednesday / Miercuri, 12 November 2008

10⁰⁰ -11⁰⁰ Opening Ceremony / Festivitate de deschidere

11⁰⁰ -13⁰⁰ Session / Lucrări pe secțiuni

13⁰⁰ -15⁰⁰ Lunch / Pauza de masa

15⁰⁰ -17⁰⁰ Session / Lucrări pe secțiuni

17⁰⁰ -17³⁰ Coffee break / Pauza de cafea

17³⁰-19⁰⁰ Session / Lucrări pe secțiuni

Thursday / Joi, 13 November 2008

9⁰⁰ -11⁰⁰ Session / Lucrări pe secțiuni

11⁰⁰ -11³⁰ Coffee break / Pauza de cafea


11³⁰-13⁰⁰ Session / Lucrări pe secțiuni

13⁰⁰ -15⁰⁰ Lunch / Pauza de masa

15⁰⁰ -17⁰⁰ Session / Lucrări pe secțiuni

17⁰⁰ -17³⁰ Coffee break / Pauza de cafea

17³⁰-19⁰⁰ Session / Lucrări pe secțiuni

20⁰⁰ -24⁰⁰ Conference Banquet / Banchet – Sponsor  **Electrogrup**

Location: Chios Restaurant

Friday / Vineri, 14 November 2008

10⁰⁰ -12⁰⁰ Session / Lucrari pe sectiuni

12⁰⁰ -12³⁰ Closing ceremony / Festivitate de închidere

*Registration will be open also on 12th and 13th of November 2008 / Înregistrarea este posibilă și în zilele de 12 și 13 Noiembrie 2008



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Wednesday / Miercuri, 12 November 2008

11⁰⁰ - 13⁰⁰

TRANSPORT & DISTRIBUTION 1

Chair: *Mircea CHINDRIS, Sorin PAVEL*

1. GHEORGHE MAZILU, MIHAELA CONU, ADRIAN MAZILU, **Asset Condition Assessment for Transmission and Distribution HV Equipment**
2. SIMONA-LILIANA SOARE, **Risk Management Integrated System - a Powerful Condition for a (Power) Energy Market**
3. DANA MIHAELA POP, ILIE ARDELEAN, NICOLAE CHIOSA, STEFAN KILYENI, GHEORGHE VUC, CONSTANTIN BARBULESCU, **Congestion Risk Management by Using the Probable Value of Congestion**
4. OANA POP, MIRCEA NEMEȘ, **Reactive Power Allocation in Electrical Systems**
5. CARLOS GONZÁLEZ, ROBERTO VILLAFÁFILA, ANDREAS SUMPER, EDUARD VALSERA, MIRCEA CHINDRIS, **Isolation of Faults and Restoration of Power Systems**
6. BOGDAN TOMOIAGA, MIRCEA CHINDRIS, **Approach for Optimal Reconfiguration of a Distribution System**
7. CRISTINA DANIELA DEAC, I. BIRIS, GH.ZIRBO, **The Need for Increasing Eco-Energy Efficiency in Romanian Metallurgy Industry**

ELECTROMAGNETIC COMPATIBILITY 1

Chair: *Andrei MARINESCU, Uwe FLOR*

1. ANDREAS EBERHARD, ALEX MCEACHERN, **A New, Ultra-Low-Cost Power Quality and Energy Measurement Technology**
2. DANIELE DESIDERI, ALVISE MASCHIO, **Preliminary Tests on a Low Cost Two-Port TEM Cell**
3. DANIELE DESIDERI, ALVISE MASCHIO, MONICA SPOLAORE, **Design and Realization of a Magnetron Sputtering Device for Deposition of Electromagnetic Shields**
4. M. DAVARI, B. VAHIDI, **A New Analysis of VFTO on Transformers Based on DM: Considering Frequency Variable Losses**
5. UWE FLOR, FRANK NIECHCIAL, **Update on EFT/Burst Testing - The revision of IEC 61000-4-4**

15⁰⁰ - 17⁰⁰

ANALYSIS AND SIMULATION 1

Chair: *Vasilis CHATZIATHANASSIOU, Gilbert DE MEY*

1. IRINEL-SORIN ILIE, GIANFRANCO CHICCO, **Exploiting Support Vector Clustering Techniques for Electrical Load Profiling**
2. GHEORGHE VUC, CONSTANTIN BĂRBULESCU, ȘTEFAN KILYENI, DAN JIGORIA-OPREA, ANDREI CECLAN, DAN D. MICU, **New Software Tool Designed for Stochastic Power System Analysis**
3. V. CHATZIATHANASSIOU, G. T. ANDREOU, D.P. LABRIDIS, **A Finite Element Approach for the Thermal Analysis of Parallel Routed LV Power Distribution Cables**
4. GILBERT DE MEY, VASILIS CHATZIATHANASSIOU, **Effective Thermal Conductivity of Multicore Power Cables**
5. A.H. AGHAKHANI, H. NAFISI, M. ABEDI, H. HOSSEINIAN, A.H. HESSAMINIA, **Using Bayesian Network for Fault Diagnosis on High Voltage Power Transmission Lines**
6. MARIAN GAICEANU, GIANMICHELE ORSELLO, **Load-Following Model of the Solid Oxide Fuel Cell Power Conditioning System**

ELECTROMAGNETIC COMPATIBILITY 2

Chair: *Calin MUNTEANU, Liviu ANCAS*

1. MIODRAG MILUTINOV, ANAMARIJA JUHAS, MIROSLAV PRŠA, **Electric and Magnetic Fields in Vicinity of Overhead Multi-Line Power System**
2. LIVIU ANCĂȘ, VLAD PAVLOVSKI, **Mitigation of Buried Metallic Pipelines due to 50 Hz AC Influence of the High Voltage Overhead Lines**
3. DENISA STET, DAN D. MICU, A. CECLAN, LAURA DARABANT, MIHAELA PLESA, **The study of the Electromagnetic Interferences between HV Lines and Metallic Pipelines using a Professional Analysis Software**
4. ANCA MIRON, ANDREI CZIKER, MIRCEA CHINDRIS, **Detection and Analysis of Interharmonics**
5. VASILE MUREȘAN, **The Estimation of the Harmonic Parameters using the Kalman Filtration**
6. A. CECLAN, D. MICU, L. CZUMBIL, D. D. MICU, E. SIMION, **Numerical Monte Carlo Formulation of an Electromagnetic Interference Problem**

ANALYSIS AND SIMULATION 2*Chair: Virgil MAIER, Andrei CZIKER*

1. VIRGIL MAIER, SORIN GH. PAVEL, IULIAN BIROU, **Connecting the Maximum Power Receiver in the Equivalent Receivers Network**
2. ANDREI CZIKER, MIRCEA CHINDRIS, ANCA MIRON, **Distributed Generators for Voltage Unbalance Mitigation**
3. ANDREI CZIKER, MIRCEA CHINDRIS, ANCA MIRON, STEFAN UNGUREANU, **Implementation of Fuzzy Logic in Power Engineering using Virtual Instrumentation**
4. ANCA MIRON, MIRCEA CHINDRIS, ANDREI CZIKER, **Virtual Electrical Signals Generator**
5. B. VAHIDI, A. H. RANJBAR, H. OMRANPOUR, M. AKBARI, **Application of Artificial Neural Network in Cable Life Time Estimation and its Failure rate per 100 km**
6. B. VAHIDI, M. SHAFIEE, M. MAHMOODAN, **Differential Evolution Algorithm Approach to Design of an Optimal Active Power Controller for AC-DC Transmission Systems**

ELECTROMAGNETIC COMPATIBILITY**3***Chair: Valeriu DAVID, Eleonora DARIE*

1. VALERIU DAVID, IONUT NICA, ALEXANDRU SALCEANU, **On the Estimation of SAR in Human Head from Electromagnetic Field Measurements**
2. CALIN MUNTEANU, EMIL MERDAN, ANDREI MARINESCU, TEOFIL MURESAN, ADINA RACASAN, CLAUDIA PACURAR, VIRGIL POP, MIHAI GEORGE, NICOLEANU PAUL, **Compliance with EU Directives Regarding the Human Exposure to Electromagnetic Fields. Experimental Study in Cluj-Napoca City**
3. BOGDAN MANEA, DAN D. MICU, RADU MUNTEANU JR., DIANA POPOVICI, OVIDIU POPOVICI, **Overview of Methods and Models Regarding the Electromagnetic Fields Exposure near HV Lines**
4. IOAN POCAN, ROMAN MORAR, CLAUDIA RĂCĂȘAN, OVIDIU MUNTEAN, ILIE SUĂRĂȘAN, IOAN SFÎRLEA, **Conducted Emissions Measurement of the Assembly “High Voltage Source – Corona Electrostatic Separator” in the Main System**
5. ELEONORA DARIE, COSTIN CEPIȘCĂ, EMANUEL DARIE, **Numerical Analysis of Conducted Electromagnetic Interferences**
6. ELEONORA DARIE, COSTIN CEPIȘCĂ, EMANUEL DARIE, **Modeling EMI Problems Associated with DC-DC Converters**



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Thursday / Joi, 13 November 2008

9⁰⁰ – 11⁰⁰

TRANSPORT AND DISTRIBUTION 2

Chair: Stelian GAL, Mircea EREMIA

1. STELIAN ALEXANDRU GAL, DORU MIRCEA PAUNESCU, FELICIA MIHAELA LAZAR, RODICA BALAURESCU, **Automatic System to Avoid Major Frequency Disturbances – A Part of the Defence Plan against Major Disturbances of the Romanian EPS**
2. FLORIN CIAUȘIU, MIRCEA EREMIA, **Probability of a Blackout in Romanian Power System**
3. DORU PĂUNESCU, MIRCEA NEMEȘ, GHEORGHE VUC, **Probability of Congestions because of Contingencies in Power Systems**
4. IOAN DIACONU, IOAN DORIN HAȚEGAN, TRAIAN FAGARASAN, MARIUS OLTEAN, **Recent Maintenance Experience on HV Bushings**
5. STELIAN ALEXANDRU GAL, IOAN DIACONU, MARIUS NICOLAE OLTEAN, MIRCEA OPINCARU, LUCIAN BRABETE, **On-line monitoring of OHL Conductor Temperature; Live-Line Installation of the RITHERM System**
6. NICOLAE FLOREAN PINTE, COSTICA NITU, CALIN MUNTEANU, IOAN DIACONU, EMIL MERDAN, MARIUS NICOLAE OLTEAN, **TIS Cultural Filtration, Implemented within the Directional Relay Structure**
7. NICOLAE FLOREAN PINTE, MIRCEA EREMIA, CALIN MUNTEANU, EMIL MERDAN, MARIUS NICOLAE OLTEAN, **It's Time for the Linear Code**

GENERAL ELECTROTECHNICS 1

Chair: Emil SIMION, Mihai IORDACHE

1. MIHAI IORDACHE, LUCIA DUMITRIU, ELENA ROTAR, GABRIELA NICOLESCU, **Changing the Thermal Class of the Electrical Machines by Using a New Electro Insulating Varnish**
2. LUCIA DUMITRIU, MIHAI IORDACHE, **Increasing Analysis Efficiency of Analogue Circuits by Order Reduction**
3. DAN MICU, DAN DORU MICU, LAZAR CHIRA, **The Design Optimization for an Electrical Circuit using the Geometrical Inversion with Parametrical Elements**
4. DAN D. MICU, DAN MICU, ANDREI CECLAN, EMIL SIMION, **Interaction between an Overhead Single Conductor and a Two-Layer Earth. Analytical and Numerical Development**
5. FLORIN POP, HORIA F. POP, **Residential Energy Efficient Lighting**
6. ȘTEFAN NAGY, CLAUDIU MICH-VANCEA, **Computing Eddy Currents in Induction Melting Processes**
7. M. PANTEA, A. GRAVA, M. SILAGHI, D. SOPRONI, F.I. HATHAZI, **The Local Interpretation of the Gradient and the Direct Decoupling of the Adapted Residue**
7. VASILE DARIE ȘOPRONI, FRANCISC IOAN HATHAZI, CARMEN OTILIA MOLNAR, MIRCEA ARION, LIVIA BANDICI, **Analysis Regarding the Technical Aspects that Appear during Drying, Disinfection and Decontamination in High Frequency Field for Agricultural Seeds**

11³⁰ – 13⁰⁰

RENEWABLE ENERGY 1

Chair: Hermina ALBERT, Petru POSTOLACHE

1. HERMINA ALBERT, CRISTINA ANDREEA ȘERBAN, **Grid Requirements for the Integration of Wind Power Plants into the Electric Network**
2. D. DRAGOMIR, N. GOLOVANOV, P. POSTOLACHE, **Overview on the Grid Code Requirements Related to the Connection of Wind Power Plants**
3. DOINA ILISIU, CALIN MUNTEANU, ADINA RACASAN, **A Challenge for Romanian Power System – the Wind Farms Integration**
4. MONICA ALONSO, H. AMARÍS, **Wind Farm Optimal Placement for Voltage Stability Enhancement**
5. CARLOS GONZÁLEZ, ALEJANDRO RODRÍGUEZ, ROBERTO VILLAFÁFILA, ANDREAS SUMPER, MIQUEL RAMON, MIRCEA CHINDRIS, **Integration of Photovoltaic Generation on Low-Voltage Networks through Software Analysis Tool**
6. TIBERIU TUDORACHE, ALEXANDRU MOREGA, **Optimum Design of Wind/ PV/ Diesel/ Batteries Hybrid Systems**

COMMAND, CONTROL, PROTECTION 1

Chair: Dan APETREI, Petre NICOLAE

1. DAN APETREI, VIOREL PINTEA, **Quality of Measurement Data Support for Power Quality**
2. M.E. ARDELEANU, A. MARINESCU, GH. OPRAN, AL. MANTA, D. POPA, **On Damped A.C. Voltage Use for On-Site Measurement of Partial Discharges in HV Equipment Insulation**
3. ILEANA DIANA NICOLAE, PETRE-MARIAN NICOLAE, LUCIAN MANDACHE, **Some Aspects Concerning Energy Consumption in an Urban Substation**
4. GABRIELA RAȚĂ, MIHAI RAȚĂ, CRENGUȚA ELENA BOBRIC, RADU PENTIUC, **Bay Control Solution with PLC**
5. ANDREI CECLAN, DAN D. MICU, EMIL SIMION, LEVENTE CZUMBIL, ANCA MUTU, CLAUDIU BOCA, **On an Energy Efficiency Strategy for Romanian Water Companies**
6. H. NAFISI, A.H. AGHAKHANI, M. ABEDI, G.B. GHAREHPETIAN, A.H. HESSAMINIA, **Detection of Partial Discharge Location in Power Transformers Using Fuzzy ATRmap Neural Network**

15⁰⁰ – 17⁰⁰

RENEWABLE ENERGY 2

Chair: Anca POPESCU, Hermina ALBERT

1. ANCA POPESCU, HERMINA ALBERT, GEORGE LAVROV, **Reliability in NPS Operation in Presence of Wind Power Plants**
2. SILVIU DARIE, **Wind Farm Simulation with Doubly-Fed Induction Generator (WFSDFIG)**
3. LUIGI PIEGARI, RENATO RIZZO, PIETRO TRICOLI, **Sizing Guidelines for Stand-Alone Systems Supplied by Photovoltaic Arrays**
4. CRISTIAN DRAGOȘ DUMITRU, ADRIAN GLIGOR, **Software Development for Analysis of Solar-Wind Hybrid Systems Supplying Local Distribution Networks**
5. CRISTIAN DRAGOȘ DUMITRU, ADRIAN GLIGOR, **Power Quality Analysis of a System Based on Renewable Energy Supplying a Local Distribution Network**
6. L. DAN MILICI, MARIANA MILICI, RADU PENTIUC, SORIN POHOATA, DINU CIRDEI, **Study of the Energetic Regime for a Fuel Cell Discharge**

COMMAND, CONTROL, PROTECTION 2

Chair: Ioan DIACONU, Ioan VIZITEU

1. CIPRIAN DIACONU, IOAN T. POP, MIHAELA NITU, CALIN MUNTEANU, **Remote Control of the Power Substations Belonging to the Romanian Tso Company**
2. IOAN DIACONU, IOAN DORIN HAȚEGAN, NICOLAE FLOREAN PINTE, DUMITRU TOADER, **The Protective Block for Medium Voltage Networks**
3. CONSTANTIN POSOIU, MIRELA DUȚOIU, **General Guidelines for Distribution and Transmission Tariffs Calculation within the Romanian Liberalized Electricity Market**
4. CARMEN STANESCU, STELIAN GAL, SORIN PISPIRIS, PETRU POSTOLACHE, **Power Quality Permanent Monitoring Systems in Romania**
5. ILIE ARDELEAN, NICOLAE CHIOSA, VASILE DUSA, BUCUR LUSTREA, IOAN BORLEA, DAN JIGORIA OPREA, **Feeding Self Services from a Substation Belonging to the National Power Grid using Fuel Cells Source as Normal and Backup Source**
6. VASILE METIU, AURORA MORARU, VALENTIN ZAHARESCU, DANIEL MORAR, GHEORGHE MORARU, **Monitoring of Transformer Units of ST Sibiu – Achievements and Anticipation**
7. IOAN P. VIZITEU, ION NEDELCU, MARIA VIZITEU, **Telecommunications used for Protection Systems in Romania: Gutinas and Adjacent Substations**

17³⁰ - 19⁰⁰

ANALYSIS AND SIMULATION 3

Chair: Marcel ISTRATE, Viorel VARVARA

1. MARCEL ISTRATE, MIRCEA GUȘĂ, **Analysis of Lightning's Strokes on HV Lines in an ATP Approach**
2. GH. CARTINA, GH. GRIGORAS, E.C. BOBRIC, **Robust Load Models for Customers' Consumption**
3. PETRE-MARIAN NICOLAE, ION PURCARU, ILEANA-DIANA NICOLAE, **The Designing and Manufacturing of a Monitoring System for an Asymmetrical Three-Phase Consumer**
4. ANDREA DEMEAN, ADRIAN TĂMAȘ, **Power System Optimization Using PSO Program from EDSA – PALADIN DESIGNBASE**
5. A.H. HESAMINIA, S.H. HOSSEINIAN, B. VAHIDI, H. NAFISI, A.H. AGHAKHANI, **A Novel Approach for Optimal Power Flow in Power Networks Including FACTS Devices Using PSO**
6. H. NAFISI, M. DAVARI, B. VAHIDI, **Corona and Electromagnetic Transient Study in Overhead Transmission Lines**

COMPANIES PRESENTATIONS

Moderator: Calin MUNTEANU,
Mircea CHINDRIS

1.  **NATIONAL INSTRUMENTS**
Graphical Systems Design for Power Quality Applications
2.  **ABB**
SCADA Systems for Distribution Substations
3.  **iproeb**
New Types of Aluminum Steel Reinforced Conductors with Increased Carrying Capacity and Multi-Purpose Medium Voltage Cables for Distribution Networks



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10⁰⁰ – 12⁰⁰

RENEWABLE ENERGY 3

Chairmen: *Silviu DARIE, Ioan VADAN*

1. ADRIAN TĂMAȘ, CONSTANTIN BUDA, MARIUS MUREȘAN, **The Influence of Wind Generation Power on Electrical Transilvania Nord 110kV Electrical Distribution Network**
2. SIMONA ARDELEAN, ANCA MUTU, SILVIU DARIE, IOAN VADAN, ANDREI CECLAN, **On the Implementation of a Micro Hydropower Plant at a Sand Processing Company**
3. DAN CĂPĂȚĂNĂ, IOAN STOIAN, IOAN VADAN, NICOLAE SÂNCRĂIAN, IOAN ROGOZ, **The Pilot Station for Studying the Hybrid Wind-Hydro Power Plants**
4. RADU TIRNOVAN, IOAN VADAN, HOREA BALAN, AUREL BOTEZAN, **Energetic Balance of a Proton Exchange Membrane Fuel Cell (PEMFC) Generator**
5. IOAN VADAN, SORIN PAVEL, AUREL BOTEZAN, SIMONA ARDELEAN, ANCA MUTU, **The Developing of a Scientific Renewable Energies Park**

GENERAL ELECTROTECHNICS 2

Chairmen: *Vasile TOPA, Renato RIZZO*

1. M. S. D. ACAMPA, R. RIZZO, **A Lumped Parameter Model of Permanent Magnet Brushless Machine**
2. CARMEN CIURTIN, DAN ILEA, FRÉDÉRIC GILLON, PASCAL BROCHET, MIRCEA M. RADULESCU, **Comparative Design of Radial-Flux and Axial-Flux Switched Reluctance Motors**
3. A.S. GAVRIS, R. MUNTEANU JR., B. ZAGAR. M. D. IUDEAN, M. MUNTEANU, DIANA POPOVICI, **Controlling a Dc Motor with a P-I Regulator using a DSP**
4. THEODOROS I. KOSMANIS, IOANNIS T. REKANOS, **Optimal Design of Permanent Magnets by the Differential Evolution Algorithm and a Hybrid Time Domain Technique**
5. MIROSLAV PRŠA, KAROLINA KASAŠ-LAŽETIĆ, **Frequency Dependent Current Distribution and Impedance in a “U” Shaped Busbars**
6. M. TÎRȘU, V. BERZAN, **Composition of HV Cable Mathematical Model Step-by-Step**
7. DORIN LUCACHE, ADRIAN APARASCHIVEI, GABRIEL CHIRIAC, **Short Overview on the Uninterruptible Power Systems**
8. CATALIN MOLDOVAN, **The Neutral Movement Voltage of the Medium Voltage Electrical Networks Working in Unbalanced Regime**