



UNIVERSITATEA DIN ORADEA  
DEPARTAMENTUL DE INGINERIE ENERGETICĂ



ELECTRICA TRANSILVANIA NORD S.A.

SDEE, AFEE, AISE ORADEA



S.I.E.R. – FILIALA

UNIVERSITĂȚII DIN ORADEA



# C.I.E.-2013

*“ENERGIE CURATĂ ȘI ACCESIBILĂ”*

## PROGRAM

## COMITETUL DE ORGANIZARE

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DEPARTAMENTUL DE INGINERIE  
ENERGETICĂ**

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Albuț-Dana Daniel  
Moldovan Vasile  
Barla Eva Maria**

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ENERGETICIENI DIN ROMÂNIA**

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Președinte SIER/Director**

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Electrice, “Electrica DISTRIBUȚIE  
Transilvania Nord” SA,  
SDEE Oradea**

**Boja Ionel -Director**

**Sucursala de Întreținere și Servicii  
Energetice Cluj  
AISE Oradea**

**Matica Radu- Director**

**SC Sucursala de Furnizare a Energiei  
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Sucursala HIDROCENTRALE Oradea**

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**Rogoz Ioan – Director**

**S.C. ORADEA  
TRANSPORT LOCAL S.A.**

**Csuzi István - Director**

**CONFERINȚA DE INGINERIE ENERGETICĂ  
BĂILE FELIX, 23-25 Mai 2013  
COMITETUL ȘTIINȚIFIC**

<b>Gleb DRĂGAN</b>	<b>Academia Română</b>
<b>Florin Gheorghe FILIP</b>	<b>Academia Română</b>
<b>Carlo MAZETTI</b>	<b>Universita "La Sapienza" di Roma, Italia</b>
<b>David RIVKIN</b>	<b>Ohalo College, Katzrin, Israel</b>
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<b>Jacques PADET</b>	<b>Universite de Reims, France</b>
<b>János TAKÁCS</b>	<b>Technical University of Bratislava, Slovacia</b>
<b>John SAROUDIS</b>	<b>AECL, Canada</b>
<b>Nikolai VOROPAI</b>	<b>Energy Systems Institute, Rusia</b>
<b>Paulo RIBEIRO</b>	<b>Calvin College Michigan, U.S.</b>
<b>Roberto CIPOLONE</b>	<b>University of L'Aquila, Italy</b>
<b>Anatolie CARABULEA</b>	<b>Universitatea Politehnica București</b>
<b>Stefan KILYENI</b>	<b>Universitatea Politehnica Timișoara</b>
<b>Iosif LINGVAY</b>	<b>INC DIE – ICPE – CA, Bucuresti</b>
<b>Mihai JĂDĂNEANȚ</b>	<b>Universitatea Politehnica Timișoara</b>
<b>Gheorghe LĂZĂROIU</b>	<b>Universitatea Politehnica București</b>
<b>Victorița RĂDULESCU</b>	<b>Universitatea Politehnica București</b>
<b>Dan ZLATANOVICI</b>	<b>ICEMENERG București</b>
<b>Ioan FELEA</b>	<b>Universitatea din Oradea</b>
<b>Florin POPENȚIU</b>	<b>Universitatea din Oradea</b>
<b>Victor VAIDA</b>	<b>Universitatea din Oradea</b>
<b>Marcel ROȘCA</b>	<b>Universitatea din Oradea</b>
<b>Cornel ANTAL</b>	<b>Universitatea din Oradea</b>
<b>Gabriela Elena BADEA</b>	<b>Universitatea din Oradea</b>
<b>Mircea VEREȘ</b>	<b>Universitatea din Oradea</b>
<b>Zsigmond ZÉTÉNYI</b>	<b>Universitatea din Oradea</b>
<b>Nicolae COROIU</b>	<b>Universitatea din Oradea</b>
<b>Gabriel BENDEA</b>	<b>Universitatea din Oradea</b>
<b>Călin SECUI</b>	<b>Universitatea din Oradea</b>
<b>Laurențiu POPPER</b>	<b>Universitatea din Oradea</b>

## PROGRAM:

<b>Miercuri, 22 mai:</b>	<b>orele 16.00 - 20.00</b>	<b>Primirea participanților la Hotelul Termal din Băile Felix</b>
<b>Joi, 23 mai:</b>	<b>orele 08.00 - 10.00</b> <b>orele 10.00 - 11.00</b> <b>orele 11.00 - 11.15</b> <b>orele 11.15 - 14.00</b>	<b>Primirea participanților la Hotelul Termal din Băile Felix</b> <b>Deschiderea CIE 2013 în sala S1, Hotel Termal</b> <b>Coffee break</b> <b>Lucrări invitate:</b>  <b>CONSIDERATIONS ABOUT THE OPERATION OF ENERGY MARKET IN ROMANIA</b>  VAIDA V.  <b>TRANSMISSION NETWORK EXPANSION PLANNING BASED ON ARTIFICIAL INTELLIGENCE METHOD</b>  KILYENI S., BĂRBULESCU C., CRISTIAN D., SOLOMONESC FL.  <b>INTENSIVE ENERGY HARNESSING SOLUTIONS OF AGRICULTURAL BIOMASS</b>  LĂZĂROIU GH., TOADER M., NICULESCU B.  <b>ENERGY – ONE OF THE BIGGEST CHALLENGES OF HUMANITY IN THE 21th CENTURY</b>  LINGVAY I.  <b>orele 14.00 – 15.30</b> <b>Masa de prânz la Hotel Termal Băile Felix</b> <b>orele 15.30 – 17.30</b> <b>Comunicări pe secțiuni</b> <b>orele 17.30 – 17.45</b> <b>Coffee break</b> <b>orele 17.45 – 19.30</b> <b>Comunicări pe secțiuni</b> <b>ora 20.00</b> <b>Cina festivă la Hotel Termal Băile Felix</b>
<b>Vineri, 24 mai:</b>	<b>orele 10.00 – 14.00</b>	<b>MASĂ ROTUNDĂ</b>  <b>EFICIENȚA PROCESELOR ENERGETICE / THE EFFICIENCY OF ENERGY PROCESSES</b> Moderator. FELEA I.  <b>orele 14.00 – 15.30</b> <b>Masa de prânz la Hotel Termal Băile Felix</b> <b>orele 15.30 – 18.00</b> <b>Comunicări pe secțiuni, Încheierea conferinței, concluzii</b> <b>orele 18.00</b> <b>Picnic</b>

**Secțiunea 1 – Sala S1 – Hotel Termal**  
***FIABILITATEA SISTEMELOR ȘI CALITATEA SERVICIILOR ENERGETICE***  
***RELIABILITY AND SYSTEMS ENERGY QUALITY SERVICES***

**joi, 23 mai: orele 15.30 – 17.30**

**Coordonatori: prof.dr.ing. Ioan Felea**  
**conf.dr.ing. Călin Secui**

**1. APPLICATIONS OF THE MODERN TECHNOLOGIES IN PREVENTIVE MAINTENANCE ON EQUIPMENT IN THE TPG**

RODEAN I., MORAR D.

**2. AVAILABILITY MODELING AND SIMULATION OF THE HYBRID POWER GENERATION SYSTEMS**

BUNDA S., FELEA I.

**3. TECHNIQUES FOR THE ANALYSIS OF INCIDENTS IN THE ELECTRO-ENERGY FACILITIES**

BALTEANU M., MIRCEA M.

**4. TECHNIQUES FOR INCIPIENT FAULT DIAGNOSIS**

CIULAVU C.A.

**5. STUDY ON OPERATIONAL RELIABILITY OF STEAM BOILERS FROM ORADEA CHP PLANT**

FELEA I., SECUI C., CIOBANCA A., GOIA E.

**6. A FUZZY MODEL REGARDING THE MANAGEMENT OF PREVENTIVE MAINTENANCE OF SOME MEANS OF TRANSPORTATION BELONGING TO S.C. ORADEA TRANSPORT LOCAL S.A.**

CSUZI I., BUȘ C.G., TEODOROF C., CÂRLAN M.

**7. THE CORROSION BEHAVIOR STUDY, BY OCP-TIME EVOLUTION MONITORING, OF MARTENSITIC STAINLESS STEELS IN DIFFERENT ENVIRONMENTS**

BANU A., PARASCHIV A., JUGANARU C., CREȚ P

**joi, 23 mai: orele 17.45 – 19.30**  
**Coordonatori: dr.ing. Iosif Lingvay**  
**conf.dr.ing. Emil Dale**

**1. MULTI-STATES RELIABILITY MODEL FOR TURBOGENERATOR GROUPS**

BENDEA G., SECUI C., BENDEA C.

**2. ASSESSMENT OF BASIC TECHNOLOGICAL SUBSYSTEM'S FORECASTED RELIABILITY IN CHP PLANT**

FELEA I., CIOBANCA A., GOIA E.

**3. STOCHASTIC EVALUATION ON THE RELIABILITY OF THE THERMOELECTRIC POWER PLANTS**

FELEA I., CIOBANCA A., GOIA E.

**4. STUDY ON OPERATIONAL RELIABILITY OF STEAM BOILERS FROM ORADEA CHP PLANT**

FELEA I., SECUI C., CIOBANCA A., GOIA E.

**5. RELIABILITY MODELING AND SIMULATION OF THE HYBRID POWER SYSTEMS**

BUNDA S., FELEA I.

**6. STOCHASTIC EVALUATION ON THE RELIABILITY OF THE GEOTHERMAL ENERGY EXPLOITATION SYSTEMS**

FELEA I., PANEA C., BENDEA G.

**7. STUDIU PRIVIND ANALIZA FIABILITĂȚII OPERAȚIONALE A PROTECȚIILOR HOMOPOLARE DIN REȚELELE DE MEDIE TENSIUNE**

FELEA I., PĂCUREANU I.R., CONSTANDACHE N., ALBUȚ-DANA D.

**Secțiunea 2 – Sala S2 – Hotel Nufărul**  
**RESURSE REGENERABILE DE ENERGIE. TEHNOLOGII ENERGETICE SUSTENABILE**  
**RENEWABLE SOURCES OF ENERGY. SUSTAINABLE ENERGY TECHNOLOGIES**  
**joi, 23 mai: orele 15.30 – 17.30**  
**Coordonatori: prof.dr.ing. Cornel Antal**  
**prof.dr.ing. Gabriela Badea**

- 1. SOLUȚII DE VALORIFICARE ENERGETICĂ INTENSIVĂ A BIOMASEI AGRICOLE**  
LAZAROIU GH., TOADER M., NICULESCU B.
- 2. USING LOW POWER TURBINES IN AREAS WITH LOW WIND POTENTIAL**  
JOIAN R., HORGOS M., PETRUȘ D., PALAGHIȚĂ N.
- 3. ALGORITHM SIZING FOR A SYSTEM WITH RENEWABLE ENERGY SOURCES CONNECTED TO THE NETWORK**  
ENACHE (FIRINCĂ) S.D., IVAN (STAN) F.E., ION M.
- 4. LNG IMPORT FACILITY CONSISTING OF EXISTING LNG MOSS TYPE VESSEL INTO FLOATING TERMINAL WITH REGASIFICATION UNIT**  
SAGAU. M.
- 5. PREDICTING MINERAL DEPOSITS THAT IS FORMED IN INSTALLATIONS WITH GEOTHERMAL FLUIDS BY PHYSICO-CHEMICAL STUDY**  
SEBESAN M., BADEA G.E., SEBESAN R., STANASEL O.D., MOISA C.
- 6. ANALYSES OF PROMOTING SCHEME IMPACT ON RENEWABLE ENERGY SOURCES INTEGRATION**  
OPREA S.V.
- 7. A COMPARATIVE STUDY FOR MAXIMUM WIND SPEED PREDICTION**  
ALBU R.D., POPENTIU-VLADICESCU FL., NAGHIU I.M.
- 8. INDIRECT POWER TRANSFER TRANSMISSION COST ALLOCATION USING DISTRIBUTION FACTORS**  
POP O., BARBULESCU C., KILYENI S., SURIANU F.D.
- 9. ALTERNATIVE METHOD OF ASSESSMENT OF SOLAR POTENTIAL IN LOW PROSPECTED AREAS**  
ZÉTÉNYI Z.
- 10. THE INFLUENCE OF THE MANUFACTURERS ON THE PERFORMANCES OF THE PHOTOVOLTAIC SYSTEMS**  
BARLA E.
- 11. RESEARCHES REGARDING THE EFFICIENCY OF PHOTOVOLTAIC PANELS**  
BARLA E.
- 12. CURRENT STATUS OF GEOTHERMAL ENERGY PRODUCTION AND UTILIZATION IN ROMANIA**  
BENDEA C., BENDEA G., ROSCA M., CUCUETEANU D.

**Secțiunea 3 – Sala S2 – Hotel Termal**  
***EVOLUȚIA SISTEMELOR ELECTROENERGETICE DE TRANSPORT ȘI DISTRIBUȚIE.***  
***SISTEME ENERGETICE PERFORMANTE***  
***EVOLUTION OF POWER ELECTRIC SYSTEMS TRANSPORT AND DISTRIBUTION. ENERGY***  
***SYSTEM'S PERFORMANCE.***

**joi, 23 mai: orele 17.45 – 19.30**

**Coordonatori: prof.dr.ing. Victor Vaida**  
**prof.dr.ing. Ion Mircea**

**1. TRANSMISSION NETWORK EXPANSION PLANNING BASED ON ARTIFICIAL INTELLIGENCE METHOD**

KILYENI S., BARBULESCU C., CRISTIAN D., SOLOMONESC FL.

**2. THE ANALYSIS OF SINGLE-ENDED MODE AND PHENOMENS THAT CAN OCCUR IN ELECTRICAL CIRCUITS, WAS ESCORTED FROM THE VOLTAIRE ARCING**

ERCHAN F.; VOINESCO D.

**3. VOLTAGE DIPS ANALYSIS USING VIRTUAL INSTRUMENTS**

MOLNAR-MATEI F., BALOI A.

**4. CONVEYOR ENERGY EFFICIENCY PARAMETERS DETERMINATION USING MATLAB – SIMULINK**

POPESCU N., DINU R.C., MIRCEA I.

**5. TECHNIC AND ECONOMIC INDICATORS ANALYSIS FOR A COGENERATION SYSTEM WITH HEAT RECOVERY THROUGH FLUE GASES FROM PROCESS FURNACES**

DINU R.C., POPESCU N., IVAN (STAN) F.E.

**6. SUSTAINABLE ENERGY TECHNOLOGIES AND LOCAL AUTHORITIES: ENERGY SERVICE COMPANY, ENERGY PERFORMANCE CONTRACT, FORFEITING**

VORONCA M.M., VORONCA S.L.

**7. COMPARATIVE REVIEW BETWEEN PROJECT SOLUTION AND REAL OPERATING CONDITIONS REGARDING THE VOLTAGE DROPS AND POWER LOSSES FOR PHOTOVOLTAIC PARK CASE FROM CHIRILEU**

GEORGESCU O., JEFLEA I, MOLDOVAN C., MARCHIEVICI E.

**8. RECENT PROGRESS IN NON RESIDENTIAL BUILDING ENERGY SIMULATION SOFTWARE**

IONESCU GH. , BALOTA R.S.

**9. ELABORATION OF THE ENERGY BALANCE FOR MACHINE TOOLS**

MIRCEA. P.M., POPESCU. D., MIRCEA. I.

**10.IMPACTUL RACORDĂRII CENTRALELOR FOTOVOLTAICE ASUPRA FUNCȚIONĂRII PROTECȚIILOR DIN CADRUL STAȚIILOR ELECTRICE**

FELEA I., PĂCUREANU I.R., CONSTANDACHE N., ALBUȚ-DANA D.



**vineri, 24 mai: orele 15.30 – 17.30**  
**Coordonatori: conf.dr.ing. Nicolae Coroiu**  
**conf.dr.ing. Gabriel Bendea**

**1. COMPARATIVE ANALYSIS OF ENERGY EFFICIENCY FOR DIFFERENT TYPES OF LIGHTING LAMPS**

MITULEȚ A., MARIN D., LINGVAY I.

**2. IMPORTANCE OF MODERNIZATION OF MACHINE TOOLS IN REDUCING ENERGY CONSUMPTION**

POPESCU.D., MIRCEA.P.M., MIRCEA.I.

**3. MATHEMATICAL MODEL AND SOFTWARE FOR THE SIMULATION OF THE BEHAVIOR OF HYDRO GENERATOR AND AUTOMATIC VOLTAGE REGULATOR AT THE THROWING RATED LOAD**

ZLATANOVICI D., IONESCU F., HERISANU A., CICIRONE C.

**4. ANALYSIS OF EFFICIENCY AND SAFETY OF LIGHTNING RODS WITH EARLY STREAMER EMISSION (ESE). CASE STUDY ON PREVECTRON 2**

LOLEA M., GAL L.

**5. CONTRIBUTION OF ENERGY MANAGEMENT MATRIX FOR IMPROVING THE QUALITY OF ENTERPRISE ENERGY MANAGEMENT**

LOLEA M., GALE S., CIOBANCA A.

**6. CONSIDERATIONS REGARDING THE EXPOSURE OF OPERATIONAL STAFF FROM HYDROPOWER PLANTS TO RISKS GENERATED FROM ELECTRIC AND MAGNETIC FIELDS**

LOLEA M., GABOR GH.

**7. METHODS FOR CALCULATING OF THE ELECTROMAGNETIC FIELD IN ELECTRICAL NETWORKS. A COMPARATIVE ANALYSIS**

LOLEA M.

**8. SOFTWARE APPLICATIONS FOR MODELING AND SIMULATIONS WITH PC SUPPORT ON ELECTROMAGNETIC FIELD IMPACTS WITH TECHNICAL AND BIOLOGICAL SYSTEMS**

LOLEA M., MOLDOVAN V.

**9. IDENTIFICATION THROUGH POWER AUDITING OF THE ELECTRO ENERGETIC SPECIFICITY OF A FOUNDRY**

FELEA I., DAN FL., ALBUȚ-DANA D.

**10. OPTIMUM OPERATING CONFIGURATION ESTABLISHING FOR MEDIUM VOLTAGE NETWORKS OF ORADEA MUNICIPALITY**

FELEA I., BOJA I., ALBUȚ-DANA D.

**Secțiunea 4 – Sala S2 – Hotel Termal**  
***PIATA SI BURSA DE ENERGIE. MANAGEMENTUL SISTEMELOR ENERGETICE***  
***MARKET AND STOCK-MARKET OF POWER. MANAGEMENT OF POWER SYSTEMS***

**vineri, 24 mai: orele 09.00-11.00, 11.15-12.30**

**Coordonatori: prof. dr. ing. Cărlan Miltiade,  
conf. dr. ing. Laurențiu Popper**

**1. ENERGY - ONE OF THE BIGGEST CHALLENGES OF HUMANITY IN THE 21TH CENTURY**  
LINGVAY I.

**2. PREMISES OF A SUCCESSFUL RISK MANAGEMENT IMPLEMENTATION IN POWER COMPANIES**

PURCAREA A. A., VORONCA S. L., NEGOITA O. D.

**3. CONSIDERATII PRIVIND FUNCTIONAREA PIETEI DE ENERGIE DIN ROMANIA**

VAIDA V.

**4. SOLUTIONS IN THE DEVELOPMENT AND IMPROVEMENT OF DRINKING WATER SUPPLY SYSTEM FROM ORADEA METROPOLITAN AREA**

LOLEA M., GALE S., CREȚ P., CIOBANCA A., HORA C.

**5. PASSIVE DESIGN AND PERFORMANCE EVALUATION OF BUILDING USING E-QUEST: A CASE STUDY**

AKASH SAMANTA, ARINDAM DUTTA, SUBHASIS NEOGI

**6. OPTIMAL DIMENSIONING OF PUBLIC URBAN COMPANIES TRAM PARKS**

FELEA I., CSUZI I., SECUI C., BARLA E.

**7. PROIECTAREA ÎNTREPRINDERILOR ASISTATE DE REȚELE INFORMATICE INTELIGENTE SMART-GRIDS**

GHEORGHIU I.D., CARABULEA A., STĂNCIULESCU B., ANGELESCU R., NEGOIȚĂ O., CIRICĂ R., CUREA C., SIMION C.

**8. MODEL NEUROROBOTIC APLICABIL COMPANIILOR INDUSTRIALE RECONFIGURATE ARHEMIC ÎN CONCEPȚIILE FRACTALĂ**

GHEORGHIU I.D., CUREA C., SIMION C., PRISĂCARU B., NEGOIȚĂ O.

**9. EFICIENȚA ABORDĂRII INTEGRALE A POLITICILOR ENERGETICE DE DEZVOLTARE DURABILĂ ÎN CONCEPȚIE ARHEMO – SISTEMICĂ A STRUCTURILOR DE PRODUCȚIE A ENERGIEI INTEGRATE PIETEI CONCURRENTIALE**

GHEORGHIU I.D., CARABULEA A., POPPER L., STELEA N., VAI DA V., BĂLĂȘOIU C., CUREA C.

**10. PROIECTAREA RESURSEI UMANE DIN CADRUL COMPANIILOR FRACTALE ASISTATE NEURONAL**

GHEORGHIU I.D., CARABULEA A., CUREA C., STĂNCIULESCU B., CIRICĂ R., NEGOIȚĂ O.

**11. DIVERSITY AND EFICIENCY IN ENERGETICAL PROJECTS**

COROIU N., ȚIGAN P.I.

**12. TECHNICAL AND ECONOMICAL ANALYSIS OF THE WIND TURBINES INTERCONNECTION WITH THE WIND FARM SUBSTATION**

COROIU N.

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