

PRELIMINARY PROGRAM of conference CPEE2014

Tuesday, September 9, 2014

17:00 – 19:00	Registration
19:00 – 22:00	<i>Welcome Party</i>

Wednesday, September 10, 2014

09:00 – 09:20	Opening Ceremony
09:20 – 10:30	Plenary session
10:30 – 10:50	<i>Coffee break</i>
10:50 – 11:50	Poster Session 1
12:00 – 13:30	<i>Group photo, Lunch</i>
14:00 – 15:30	Oral Session 1
15:30 – 15:50	<i>Coffee break</i>
15:50 – 16:50	Poster Session 2
19:00 – 22:00	<i>Conference Dinner</i>

Thursday, September 11, 2014

09:00 – 10:30	Oral Session 2
10:30 – 10:50	<i>Coffee break</i>
10:50 – 11:50	Poster Session 3
12:00 – 13:30	<i>Lunch</i>
13:30 – 19:00	<i>Conference Tour</i>
19:00 – 22:00	<i>Barbecue</i>

Friday, September 12, 2014

09:30 – 10:30	Poster Session 4
10:30 – 10:50	<i>Coffee break</i>
10:50 – 11:50	Oral Session 3
11:50 – 12:00	Closing Ceremony
12:00 – 13:30	<i>Lunch</i>

Plenary session

Wednesday, September 10, 2014, 09:20 – 10:30	
09:20	Ivo Doležel: <i>Advanced methods for solving coupled problems of electromagnetic origin</i>
09:55	Ivo Čáp: <i>Electrical engineering in Biomedical technology</i>

Poster Session 1

Wednesday, September 10, 2014, 10:50 – 11:50	
	Antonino Laudani, Giacomo Capizzi, Salvo Coco, Grazia Lo Sciuto: <i>Equivalent source model for extremely low frequency magnetic field representation</i>
	Zbygniew Watral, Jacek Starzyński, Andrzej Michalski: <i>Computer aided design of field equalizer for an electromagnetic flowmeter</i>
	Karel Leubner, Ivo Doležel: <i>Advanced model of electromagnetic launcher</i>
	Martin Kurfirt, František Mach, Pavel Karban, Ivo Doležel: <i>Numerical study and experimental verification of novel electromagnetic actuator in valve operation</i>
	Pavel Karban, František Mach, Ivo Doležel, Wolfgang Schufft, Ali Shirvani, Akif Gürlek: <i>Computation of surge wave propagation on transmission line using time-adaptive hp-FEM</i>
	Tomasz Grzywacz, Andrzej Łasica: <i>FEniCS solution of corona discharge in Point-Plane Configuration</i>
	Konrad Sobolewski, Andrzej Łasica: <i>Electromagnetic compatibility of electronic scales</i>
	Dorota Typanska, Krzysztof Sieczkarek, Adam Mackowiak: <i>Electromagnetic emission of the intelligent fixed installation model</i>
	Orest Lozynskyy, Yaroslav Paranchuk, Roman Paranchuk: <i>Synthesis and simulation of fuzzy regulator based electromechanical arc steel furnace electrode movement system modes</i>
	David Panek, Pavel Kus, Vaclav Kotlan, Roman Hamar, Ivo Dolezel: <i>Shape optimization of pre-heating inductor for edge welding by laser</i>
	Petr Polcar, Jindrich Jansa, Lukas Koudela, Josef Cesky: <i>Investigation of magnetoviscous effect under different external conditions</i>
	Volodymyr Emets, Jan Rogowski: <i>Shear wave scattering from a deboned piezoelectric inclusion</i>

Victor Demidovich, Irina Rastvorova: <i>3D Simulation of processing plane products in the induction heaters</i>
Przemysław Sul: <i>Concept of a modern lightning protection system based on the field computational method</i>
Dobrzycki, Stanisław Mikulski: <i>Using of wavelet transform in the analysis of AE signals accompanying the process of epoxy resins electrical treeing</i>

Oral session 1

Wednesday, September 10, 2014, 14:00 – 15:30	
14:00	Bartosz Chaber, Jacek Starzynski: <i>Performance analysis of a stripline: FEM simulations and measurements</i>
14:15	Daniel Marcsa, Miklos Kuczmann: <i>Schur complement based parallel finite element analysis coupled with circuit and mechanical equations</i>
14:30	Mariya Howykwycz, Petro Stakhiv: <i>Application of parallelization to analysis of electromagnetic field by means of Finite-Difference Method</i>
15:45	Alexander Kuvaldin, Mikhail Strupinskiy, Nikolay Khrenkov, Maxim Fedin: <i>Development of methods for electrical and thermal calculation of induction heating systems for pipelines</i>
15:00	Pavel Weiss, Pavel Karban, František Mach, Ivo Doležel: <i>Higher-order numerical model of free boundary at magnetic stirring of molten metal</i>

Poster Session 2

Wednesday, September 10, 2014, 15:50 – 16:50

Krzysztof Siwek, Stanislaw Osowski, Jacek Jakubowski:

Face recognition in visible and infra-red imagery - comparison of methods

Tomasz Markiewicz, Zaneta Swiderska, Bartlomiej Grala, Wojciech

Kozlowski: *Automatic ROI selection in virtual slide images for assessment of pathomorphological diagnostic*

Tomasz Markiewicz, Mirosław Dziekiewicz, Wojciech Kozlowski:

A sequential extended regional maxima transformation with contrast-based criterion for image segmentation

Ivan Prudyus, Viktor Tkachenko, Leonid Lazko, Sergiy Fabirovskyy, Andriy Gryvachevskyy:

Sub-pixel based forming of high-resolution Images

Zuzanna Krawczyk, Jacek Starzyński:

Improvement of 3D bones model with the use of 2D image filters applied to CT scan series

Dagmar Faktorová, Mária Pápežová:

Non – Destructive testing of biomaterials using in bone healing and bone replacement

Piotr Figoń, Paweł Irzmański, Adam Jósko:

Classic, adaptive filtering techniques in the ECG signal enhancement

Piotr Figoń, Paweł Irzmański, Adam Jósko:

Adaptive ECG signal denoising approach in the on-line signal processing stage of electrocardiograph system

Marcin Kołodziej, Andrzej Majkowski, Remigiusz Rak:

Automatic correction of eye blinking artifacts in the EEG signal

Andrzej Majkowski, Marcin Kołodziej, Remigiusz Jan Rak, Robert

Korczyński: *Recognition of emotions in speech signal*

Paweł Niedbalski, Łukasz Karpiński, Stefan F. Filipowicz:

Monitoring and brain diagnostics of premature infants

Natalia Padletska, Mykola Dyvak, Yuriy Pigovsky, Iryna Voytyuk:

Correlation analysis of response to RLN stimulation in surgical wound

Milan Smetana, Ladislav Janoušek:

Intelligent textiles shielding function evaluation

Ivana Gálová, Mariana Beňová, Michal Gála:

Simulation of EMF impact to implantable electronic devices

Bartosz Sawicki:

Accuracy of the electric current numerical simulations inside the human body

Oral session 2

Thursday, September 11, 2014, 09:00 – 10:30	
09:00	T. Latkowski, S. Osowski: <i>Recognition of autism on the basis of gene expression microarray data</i>
09:15	Bartosz Chaber, Zuzanna Krawczyk, Jacek Starzynski, Rober Szmurlo: <i>Simple web-based system for radiotherapy assistance</i>
09:30	Mykola Dyvak, Iryna Oliynyk, Andriy Pukas, Volodymyr Manzhula: <i>Interval model for description the small hydroelectric power station and method of its construction</i>
09:45	Dariusz Puchala, Bartłomiej Szczepaniak, Mykhaylo Yatsymirskyy: <i>Lattice structure for parallel Waveclustering on GPUs using CUDA architecture</i>
10:00	Miroslav Novak, Jakub Eichler, Miloslav Kosek: <i>Simple and accurate methods for amplifier characteristic approximation</i>

Poster Session 3

Thursday, September 11, 2014, 10:50 – 11:50

Damian Gluchy, Dariusz Kurz, Grzegorz:Trzmiel:

Energy consumption by the teletask building management system

Damian Gluchy, Dariusz Kurz, Grzegorz:Trzmiel:

Selection criteria for photovoltaic module types

Michal Baherník, Marek Höger, Peter Braciník, Martina Látková:

FSM model of photovoltaic power plant

Lukasz Putz:

Requirements of using the LED lamps power supplies

Grażyna Frydrychowicz-Jastrzębska, Artur Bugała:

Statistical analysis of the impact of selected variables on the production of electricity in PV tracking system

Michał Filipiak:

Research wireless power supply system

Jaroslav Paranchuk, Andrii Matsygin:

Modeling and research of a three-phase EAF arc power regulation system with neuro-controllers in the instantaneous coordinates

Zygmunt Piatek, Tomasz Szczegielniak, Dariusz Kusiak:

Magnetic field in the three-phase shielded busbars systems

Roman Hamar, Petr Kropík, Lenka Šroubová:

The Poynting vector along two parallel overhead lines during a single-phase short circuit

Václav Kotlan, Zdenka Benešová:

Overvoltage propagation from transmission line into transformer winding

Serhiy Rendzinyak, Vasyl Korud:

The choice of numerical integration methods for the subsystems with the distributed parameters

Piotr Pruski, Stefan Paszek:

Calculation of polish power system model state matrix eigenvalues based on angular speed waveforms

Janusz Walczak, Agnieszka Jakubowska:

Resonance in parallel circuit of RLC α class

Yuriy Bobalo, Petro Stakhiv, Orest Hamola:

The conception of intellectual laboratory workshop on the theory of electrical circuits

Yuriy Shapovalov, Bohdan Mandziy, Dariya Bachyk:

The system MAOPCs for analysis and optimization of linear periodically time-variable circuits based on the frequency symbolic method

Jindřich Jansa, Lukáš Koudela, Oldřich Tureček, Petr Polcar:

Pulse localization and Fourier analysis in the mathematical model of acoustic transient field

Poster Session 4

Friday, September 12, 2014, 09:30 – 10:30

Mykhaylo Zagirnyak, Viacheslav Prus, Oleksandr Siomka:

Electric machine reliability prediction models taking into account the state of major structural components

Jan Kacerovský, Ondřej Krpal, František Mach:

Measured and simulated distributions of voltage and temperature along stator coils of synchronous generator

Lukáš Koudela, Václav Kotlan, Petr Polcar:

Analysis of mutual influence of asynchronous motor and clamping head using rotation induction heating

Yu. B. Kazakov, A. I. Tikhonov, L. N. Bulatov:

Development of fast-acting model of traction induction motor based on finite-element calculation results

Grzegorz Utrata, Jaroslaw Rolek, Andrzej Kaplon:

Frequency characteristics of an induction motor determined by means of numerical-analytical calculation methods

Robert Szmurlo, Jacek Starzynski:

Small permanent magnet bearing - design by numerical simulations

S. Bychkov, S. Nazarov, F. Tarasov, V. Frizen:

Coil connection diagrams of induction MHD-pump with flat coils

F. Tarasov, S. Bychkov, S. Nazarov, V. Frizen:

Optimal frequency determination of induction MHD pump power supply

F.N. Sarapulov, S.F. Sarapulov, V.E. Frizen.:

Use of Finite Difference Method and extended equivalent circuits method for investigation of induction electric engineering units

Sebastian Berhausen, Stefan Paszek:

Assessment of the accuracy of synchronous generator parameter estimation when using noisy waveforms under load condition

Jaroslaw Jajczyk:

Parallelized genetic algorithm on a personal computer

Petro Stakhiv, Liliana Byczkowska-Lipińska, Yuriy Kozak:

Effective application of SIMD architecture CPUs for macromodel construction using optimization approach

Vasyl Korud, Orest Hamola, Olena Gajduchok:

USB DISco2 device - path to a virtual lab on the theory of electrical circuits

Seweryn Mazurkiewicz, Janusz Walczak:

Analysis of linear dynamical systems with variable coefficients in the random conditions

Marcin Godziemba-Maliszewski, Andrzej Majkowski, Remigiusz Rak:

Remote laboratories - organization and integration

Eugeniusz Kurgan: *Force calculation in AC dielectrophoresis*

Oral session 3

Friday, September 12, 2014, 10:50 – 11:50	
10:50	Yuriy Bobalo, Myroslav Kiselychnyk, Mykhaylo Melen, Leonid Nedostup: <i>Optimization of processes designed for ensuring the quality and reliability of electronics using cumulative models of defectiveness and total production expenses</i>
11:05	Natalia Shakhovska, Mykola Medykovskyy, Liliana Bychkovska: <i>Building a smart news annotation system for further evaluation of news validity and reliability of their sources</i>
11:20	Adam Musial: <i>Crack identification using soft computing technologies</i>
11:35	Ladislav Janoušek, Martina Zachariášová, Mihai Rebican, Milan Smetana: <i>Reconstruction of partially conductive cracks from eddy current non-destructive testing signals using support vector machine</i>