CONFERECE PROGRAMME

17th International Conference
“Computational Problems of Electrical Engineering” (CPEE 2016)
14-17th, September, 2016, Sandomierz, Poland

Venue: Hotel Mały Rzym, ul. Okrzei 9, 27-600 Sandomierz
CPEE 2016 – Wednesday, September 14

- 12:00 Start of conference registration
- 13:00 – 14:00 Lunch break
- 15:00 – 16:00 Conference opening and Keynote session  
  (chairmen Kazimierz Mikolajuk, Yuriy Bobalo)
  - 15:00 – 15:15 Opening ceremony
  - 15:15 – 16:00 Stanislaw Osowski, Data mining methods and their application in bioengineering
- 16:00 – 16:20 Coffee break
- 16:20 – 17:40 Poster session 1 – Computer Science  
  (chairman Ivo Dolezel)
  - Bartłomiej Stasiak and Marcin Serwach, GA-based Parametrization and Feature Selection for Automatic Music Genre Recognition
  - Bobalo Yurii, Stakhiv Petro and Shakhovska Natalya, The system of Remote Education Resource Center development
  - Jarosław Jajczyk, Use of Personal Computers with Multi-core Processors for Optimisation Using the Genetic Algorithm Method
  - Mykhaylo Zagirnyak and Pavlo Kostenko, External optimization of SQL-query under conditions of databases structural uncertainty
  - Sergii Babak, Mykhailo Myslovych and Roman Sysak, Module Structure of UAV-based Computerized Systems For Remote Environment Monitoring of Energy Facilities
  - Alicja Bobko, Tomasz Grzywacz, Solving nonograms using genetic algorithms
  - Dorota Typanśka and Jan Szymenderski, Control model of energy flow in agricultural biogas plant using SCADA software
  - Agnieszka Choroszuccho and Boguslaw Butrylo, Implementation of the Adaptive Mesh within the Finite Difference Frequency Domain Algorithm to Analysis of Electromagnetic Field in Building Constructions
  - Aleksandr Yenikeyev, Mykhailo Myslovych and Leonid Shcherbak, Multiprocessor System Control and Optimization of Parameters of Diamond Grinding
  - Maciej Ciuba and Michał Wojciechowski, Comparison of simulation of electric field distribution in heat-shrinkable MV cable termination with assembly faults
- 19:00 Welcome party

CPEE 2016 – Thursday, September 15

- 8:00 – 9:00 Breakfast
- 9:00 – 10:20 Oral session 1 – Algorithms and Data Processing  
  (chairman Stanisław Osowski)
  - Mykhaylo Zagirnyak, Zhanna Romashykchina and Andrii Kalinov, Diagnostic signs of induction motor broken rotor bars in electromotive force signal
  - Marek Wdowiak, Tomasz Markiewicz and Janina Słodkowska, Cell segmentation in Desmoglein-3 Stained Specimen Microscopic Images using GVF and watershed algorithm
o Bogusław Butryło and Agnieszka Choroszuczo, Implementation of some iterative matrix solvers in simulation of the wave propagation problem using the time-harmonic finite difference algorithm

o Tomasz Leś, Tomasz Markiewicz, Wojciech Kożłowski and Urszula Brzoskowska, HER2/CEN17 biomarkers detection in CISH images

• 10:20 – 10:40 Coffee break
• 10:40 – 12:00 Poster session 2 – Circuits and Systems (chairman Petro Stakhiv)
  o Michał Filipiak, Comparison of the Efficiency of Two-coil and Three-coil Wireless Power Supply Systems
  o Volodymyr Voitiuk, Dmitro Trushakov and Serhiy Rendzynyak, Influence on the Pollution of the Electrodes Impact of the Conductive Controvert Cross-Sectional Fluid Flow on Its Outbound Current
  o Mykhaylo Zagirnyak, Dmitro Rodkin, Iurii Romashykhin, Nikita Rudenko and Vladimir Chencheyov, Identification of nonlinearities of induction motor equivalent circuits with the use of the energy method
  o Vasyl Mal'yar, Orest Hamola and Volodymyr Maday, Calculation of capacitors for starting up a three-phase asynchronous motor fed by single-phase power supply
  o Yuriy Bobalo, Leonid Nedostup, Myroslav Kiselychyn, Mykhailo Melen and Petro Stakhiv, Problems of Adequate Modelling of Radio Electronic Device Parameter Distributions
  o Kazimierz Mikolajuk and Andrzej Tobola, Multiobjective Optimization Approach to the Active Power Filter Control
  o Liliana Byczkowska-Lipinska, Orest Hamola, Oksana Hoholyuk and Yuriy Kozak, Adaptation of Discrete Macromodels for Calculations in MATLAB/Simulink Environment
  o Łukasz Putz and Milena Kurzawa, Two-Step Power Supply Application to Reduce THDi Ratio in LED Light Sources with Integrated Driver
  o Jan Sroka, Simplified Method for Verification of Common Mode Absorption Devices
  o Bartosz Chaber, Jacek Starzyński and Robert Szmarło, Computer simulation as a way of usable volume estimation in TEM waveguides
  o Krzysztof Siwek and Stanisław Osowski, Particle Swarm Optimization in Synthesis of Electric Circuits
• 13:00 – 14:00 Lunch break
• 14:30 – 19:00 Sightseeing break
• 20:30 Banquet

CPPE 2016 – Friday, September 16

• 8:00 – 9:00 Breakfast
• 9:00 – 10:20 Oral session 2 – Electromagnetic Fields (chairman Eugeniusz Kurgan)
  o Michał Borecki and Jacek Starzyński, Simulation of Electric Field on the Surface of a Long Flashover Arrester
  o Arkadiusz Miaskowski, Piotr Gas and Andrzej Krawczyk, SAR Calculations for Titanium Bar-Implant Subjected to Microwave Radiation
- Patryk Zradziński, A Comparison of ICNIRP and IEEE Guidelines to Evaluate Low Frequency Magnetic Field Localised Exposure
- Zygmunt Piatek, Tomasz Szczegielniak and Dariusz Kusiak, The Current Density Distribution In The Three-Phase Bus-Bars System

- 10:20 – 10:40 Coffee break
- 10:40 – 12:00 Poster session 3 – Engineering Applications 1 (chairman Oksana Hoholyuk)
  - Zaneta Swiderska-Chadaj, Tomasz Markiewicz, Szczepan Cierniak and Robert Kotysz, Automatic quantification of vessels in hemorrhoids Whole Slide Images
  - Piotr Gas and Eugeniusz Kurgan, Comparative Analysis Between the 2D and 3D Models of Interstitial Microwave Hyperthermia
  - Andrzej Tolarczyk and Krzysztof Siwek, Sequential pattern recognition for medical records analysis
  - Eugeniusz Kurgan and Piotr Gas, Analysis of electromagnetic heating in magnetic fluid deep hyperthermia
  - Zuzanna Krawczyk and Jacek Starzyński, Generation of skeletal structures for the pelvis area with the use of 3-dimensional binary thinning algorithm
  - Mykola Dyvak, Iryna Hural and Piotr Lipinski, Automatic recognition of drill condition on the basis of images of drilled holes
  - Michal Kruk, Albina Jegorowa, Jarosław Kurek, Stanisław Osowski and Jarosław Górski, Automatic recognition of drill condition on the basis of images of drilled holes
  - Artur Krupa and Bartosz Sawicki, Preliminary study of random variable algebra for biological tissue description
  - Konrad Sobolewski, Andrzej Lasica and Przemysław Sul, Lightning safety of tourists infrastructures
  - Andrzej Lasica, Robert Szmurło and Jacek Starzyński, Accuracy of numerical model of coaxial impulse voltage divider validated with measurements

- 13:00 – 14:00 Lunch break
- 14:00 – 15:20 Oral session 3 – Circuit and Systems Theory (chairman Zygmunt Piątek)
  - Przemysław Sul, Jacek Starzyński, Diana Stepnowska, Adam Siok and Krzysztof Pachowicz, Impact of the Selected FCG Design Parameters on the Current Gain
  - Sebastian Różowicz, Maciej Włodarczyk and Andrzej Zawadzki, Wave parameters of symmetrical two-port networks containing elements of fractional order
  - Yuriy Shapovalov, Bohdan Mandziy and Dariya Bachyk, The investigation of the Energy Characteristics of Linear Periodically-Time-Variable Circuits by the Frequency Symbolic Method Symbolic Method
  - Arkadiusz Miaskowski, Bartosz Sawicki and Mahendra Subramanian, Identification of diffusion coefficients in heat equation on the base of non-adiabatic measurements of ferrofluids

- 15:20 – 15:40 Coffee break
• **15:40 – 17:00 Poster session 4 – Engineering Applications 2**

  (chairman Liliana Byczkowska-Lipińska)

  o **Przemysław Sul, Zdobysław Flisowski and Łukasz Kolimas**, Simulation studies of electric field distribution in the evaluation of the influence of neighboring conductive infrastructure on field conditions over air terminals

  o **Vaclav Kotlan, David Panek, Roman Hamar and Ivo Dolezel**, Combination of Induction and Laser Cladding and its 3D Computer Model

  o **Dariusz Kurz**, Heat Flow in Installations with Photovoltaic Tiles

  o **Milena Kurzawa, Wiesław Lyskawiński and Rafał Wojciechowski**, A System of Wireless Transmission of Electric Energy with the Selection of Resonant Capacitances

  o **Łukasz Kolimas and Przemysław Sul**, Examination of the Flat Contact

  o **Mykola Dyvak, Iryna Oliynyk and Petro Stakhiv**, Method of reduction for interval system of linear algebraic equations and its application to modeling of the electric power generated by a small hydroelectric power station

  o **Konrad Sobolewski and Kamil Dydek**, Composite panels as electromagnetic field shields

  o **Yurii Maslyiak, Andriy Pukas, Nataliya Porplytsya and Nataliya Kasatkina**, Computer Model for Controlling the Drywall Drying Process

  o **Pavel Karban, Vaclav Kotlan and Ivo Dolezel**, Optimization of Process of Induction Clamping

  o **Volodymyr Brygilevych, Denis Afanasyev, Vasyl Rabyk and Ivan Katerynchuk**, Measurement of complex signals by quadrature sampling with filtering

• **17:00 – 17:30 Committee Meeting**

• **17:30 – 18:00 Closing Ceremony**

• **18:00 Dinner**

CPEE 2016 – Saturday, September 17

• **8:00 – 9:00 Breakfast**