2017 IEEE First Ukraine Conference on Electrical and Computer Engineering (UKRCON)

CONFERENCE PROGRAM

May 29 – June 2, 2017 Kyiv, Ukraine

SCHEDULE OF CONFERENCE

| | 29.05.2017, | 30.05.2017, | 31.05.2017, | 01.06.2017, | 02.06.2017, |
|-------|---------------------------|---------------------------|---------------------------|------------------------------|-------------|
| Time | Monday | Tuesday | Wednesday | Thursday | Friday |
| 09:00 | Conference | | | Plenary | |
| 09:30 | Registration | Plenary | | Session | |
| 10:00 | Opening Ceremony | Session | Ceremony Registration | | |
| 10:30 | | | | Oral Sessions | |
| 11:00 | Plenary Session | Coffee breaks and Posters | IEEE | | |
| 11:30 | | | Milestone Ceremony | Coffee breaks and Posters | |
| 12:00 | Coffee break | Oral Sessions | ceremony | Oral Sessions | |
| 12:30 | Plenary | | | | Special |
| 13:00 | Session | | | | Social |
| 13:30 | | Lunch | Lunch | Lunch | Program |
| 14:00 | Lunch | | | | |
| 14:30 | Our L Court and | Oral Sessions | Oral Sessions | | |
| 15:00 | Oral Sessions | | | Tutorial | |
| 15:30 | Coffee breaks and Posters | Coffee breaks and Posters | Coffee breaks and Posters | | |
| 16:00 | | Oral Sessions | Oral Sessions | | |
| 16:30 | Oral Sessions | Oral Sessions | Oral Sessions | Museums | |
| 17:00 | | | Free time | Tours | |
| 17:30 | Free time | City Tour | A CC time | | |
| 18:00 | Welcome | City Tour | Section's 25th | | |
| 18:30 | Party | | Anniversary | | |
| 21:00 | | | Banquet | | |
| 22:00 | | | 2540.0 | | |

29.05.2017

OPENING CEREMONY

Academic Building #1,

Hall of Scientific Council of Igor Sikorsky Kyiv Polytechnic Institute (10:00 – 10:25)

Prof. Maksym Strikha,

Deputy Minister of Education and Science of Ukraine, V.Ye. Lashkaryov Institute of Semiconductor Physics of National Academy of Science of Ukraine, Kyiv, Ukraine

Prof. Michael Zgurovsky,

Rector of the Igor Sikorsky Kyiv Polytechnic Institute, Academician, IEEE Senior Member, Kyiv, Ukraine

Prof. Yuriy Yakymenko,

First Vice Rector of the Igor Sikorsky Kyiv Polytechnic Institute, Academician, IEEE Senior Member, Kyiv, Ukraine

Prof. Felix Yanovsky,

IEEE Ukraine Section Chair, Head of Electronics Department of the National Aviation University, IEEE Fellow, Kyiv, Ukraine

Prof. Vincenzo Piuri,

IEEE Vice President for Technical Activities (2015), Program Chair of the IEEE Sections Congress (2017), IEEE Fellow, University of Milan, Milan, Italy

Prof. Roberto Sorrentino,

EuMA Co-founder and President (1998 – 2009), IEEE Fellow, University of Perugia, Perugia, Italy

GROUP PHOTO

Hall of Scientific Council of Igor Sikorsky Kyiv Polytechnic Institute (10:25 – 10:35)

PLENARY SESSION

Hall of Scientific Council of Igor Sikorsky Kyiv Polytechnic Institute (10:35 – 12:00)

| 1 | Valeriya Gritsenko | Neural Engineering to the Rescue: Using Engineering Approaches to Understand How the Brain Controls Movement |
|---|------------------------|--|
| 2 | Vincenzo Piuri | Computational Intelligence for Industrial and Environmental Applications |
| 3 | Enrique Romero-Cadaval | Going Beyond of Connecting Converters: Cooperative Converters |

COFFEE BREAK

Academic Building #1, «Alma Mater» (12:00 – 12:15)

PLENARY SESSION

Hall of Scientific Council of Igor Sikorsky Kyiv Polytechnic Institute (12:15 – 13:45)

| 1 | Andrew Tirkel | Radar Retina or a Millimeter Wave Eye? |
|---|-----------------------|--|
| 2 | Svitlana A.Vitusevich | Low-Noise High-Speed Si Nanowire Field- Effect Transistors: Recent Advances and Opportunities in Biosensor Applications |
| 3 | Nikolay Cherpak | Microwave Physics and Technologies: History and Results of Collaboration of Ukraine, Germany and China Teams Started in the 2000s |

LUNCH

Academic Building #1, «Alma Mater» (13:45 – 14:30)

Track 1: Microwave Techniques, Antennas & Radar Systems ORAL SESSION

Hall #11 of Library (14:30 – 15:30)

| 1 | Gerard Rankin and Andrew Tirkel | Principal Modes on an Acupuncture-Like Needle with Low Loss |
|---|--|---|
| 2 | Tetyana Yatsenko and Kostyantyn Ilyenko | Scalar Potential Calculations for Relativistic Charged-Particle Beam in Unbounded Coaxial Drift Tube |
| 3 | Kostyantyn Ilyenko, Tetyana Yatsenko and Gennadiy Sotnikov | Space-Charge Limited Current of Relativistic Charged-Particle Beam in Coaxial Drift Tube of Finite Length |
| 4 | Sean Cashman, Olga Korostynska, Andy Shaw, Paulo Lisboa and Alex Mason | Detection of glyphosate in deionised water using machine learning techniques with microwave spectroscopy |

POSTER SESSION

| 1 | Kostyantyn Ilyenko, Yurii Novosel and Tetyana Yatsenko | Permanent Magnet Focusing System Optimization for SubMM-Waveband Clinotrons |
|---|---|---|
| 2 | Margarita Romanyuk, Oleg Petrischev and Ganna Vlasyuk | Mathematical model of contact excitation of ultrasonic waves by a disk piezoelectric transducer |
| 3 | Alexey Krivonos and Alexandr Shvets | Variations of the Effective Height of the Lower Ionosphere by Results of Analysis of Tweek-Atmospherics. Preliminary Results. |
| 4 | Alexey Galuza, Alla Belyaeva and Ivan Kolenov | Influence of parallelepiped surface defects on terahertz and optical ellipsometry measurements |
| 5 | Dmitry Tatarchuk, Yuriy Didenko, Vitalii Molchanov, Anton Franchuk and Yuriy Poplavko. | Thin Dielectric Resonators in Microwaves |
| 6 | Yuliya Gorishnya | Plasma Density Evaluation in the Sharply- bounded Ionosphere Model by Tweeks |
| 7 | Alexey Galuza, Alla Belyaeva, Ivan Kolenov and Sergey Mizrakhy | Spectral quasi-optical terahertz ellipsometer |

| 8 | V. P. Riabukha, D. I. Lekhovitskiy, A. V. Semenyaka, E. A. Katyushin | An Exploratory Model of the Hardware- Software Unit for Adaptive Digital Time Signal Processing Against the Background of Masking Clutters |
|---|---|---|
| 9 | M. Balaban, A. Kovorotniy, V. Gorobets, F. Kivva, Yu. Goncharenko, G. Farquharson, A. Jessup | Study of the ATI SAR Target Signature for Non-Linear Airborne Tracks |

Hall #11 of Library (16:00 – 17:30)

| 1 | Alex Mason, Olga Korostynska, Luis Eduardo Cordova-Lopez, Badr Abdullah, Julien Louis, Jacob Greene, Rob Connell and John Hopkins. | Non-Invasive Measurement of Blood Lactate in Humans using Microwave Sensors |
|---|---|--|
| 2 | Ilaria Frau, Olga Korostynska, Patrick Byrne and Alex Mason | Feasibility of in-situ quality assessment of zinc contamination in water |
| 3 | Davide Massaro and Riccardo Ardoino | Range Profiling of Vessels with Pseudo- Random Radar Waveforms |
| 4 | Serkan Yıldız, Ahmet Aksen and Sıddık Binboga Yarman | Quad-Band Matching Network Design with Real Frequency Technique Employing Frequency Transformation |
| 5 | Tamar Nozadze, Veriko Jeladze and Mariam Tsverava. | EM Exposure Study on an Inhomogeneous Child Model Considering Hand Effect |
| 6 | Zoya Eremenko and El Ganapolskii | Experimental detection of wave chaos in quasioptical cavity resonator with random bulk inhomogeneities |

Track 3: Energy Systems, Industry Application & Industry 4.0 ORAL SESSION

Hall #12 of Library (14:30 – 15:30)

| 1 | Carlos Roncero, Oleksandr Husev, Serhii Stepenko, Enrique Romero-Cadaval and Dmitri Vinnikov | Interleaved Single-Phase Quasi-Z-Source Inverter with Special Modulation Technique |
|---|--|---|
| 2 | Oleksandr Matiushkin, Oleksandr Husev, Ryszard Strzelecki, Sergey Ivanets and Artem Fesenko | Novel Single-Stage Buck-Boost Inverter with Unfolding Circuit |
| 3 | Maksym Khomenko, Oleksandr Veligorskyi, Oleksandr Husev, Kostiantyn Tytelmaier and Roman Yershov | Model Predictive Control of Photovoltaic Bidirectional DC-DC converter with coupled inductors |
| 4 | Kostiantyn Tytelmaier, Oleksandr Husev, Oleksandr Veligorskyi, Maksym Khomenko and Oleh Khomenko | Controller Design for Interleaved Bidirectional DC-DC Converter with Coupled Inductors |

POSTER SESSION

| 1 | Volodymyr Chemerys and Iren Borodiy | Effective Inductor Systems for Pulsed Accelerators and Actuators |
|---|---|---|
| 2 | Volodymyr Ivakhno, Volodymyr Zamaruiev, Bohdan Styslo, Roman Kosenko and Andrei Blinov | Bidirectional Isolated ZVS DC-DC Converter with Auxiliary Active Switch for High-Power Energy Storage Applications |
| 3 | Evgen Sokol, Volodymyr Zamaruiev, Serhiy Kryvosheev, Bohdan Styslo and Vadym Makarov | The Specificity of Electrical Energy Storage Unit Application |
| 4 | Mykhailo Artemenko, Serhii Polishchuk, Valerii Mykhalskyi and Ivan Shapoval | Apparent Power Decompositions of the Three-Phase Power Supply System to Develop Control Algorithms of Shunt Active Filter |
| 5 | Omelyan Plakhtyna and Oleksiy Kuznyetsov | Wound Rotor Induction Machine with an Excitation from Capacitor Energy Caused by Slip Power |

| 6 | Lezhniuk Petro, Komar Vyacheslav, Kravchuk Sergiy and Nanaka Olena. | Providing fixed level of electric energy supply quality in conditions of reno-vation of power distribution electrical networks with renewable energy sources |
|---|--|--|
| 7 | Serhii M. Lebedka, M.V. Petrovskyi and Yu.N. Veprik | Discrete models of the electric grid elements, obtained with using the second-order formula of implicit Gear method |
| 8 | Ihor Shchur and Volodymyr Klymko | Comparison of Different Types of Electromechanical Systems for Creating of Counter-Rotating VAWT |
| 9 | Vladyslav Mykhailenko, Sergey Buryan, Tetyana Maslova, Lyudmyla Naumchuk, Juliya Chunyak and Olga Charnjak | Mathematical Model of the Semiconductor Converter with Twelve-zone Regulation of Output Voltage |

Hall #12 of Library (16:00 – 17:30)

| 1 | Andrei Blinov, Roman Kosenko and Andrii Chub | Evaluation of Low- and High-Voltage GaN Transistors in Soft Switching DC-DC Converter |
|---|--|--|
| 2 | Kaspars Kroics, Janis Zakis, Aleksander Suzdaleno, Oleksander Husev, Kostiantyn Tytelmaier and Kamal Khandakji | Operation Possibility of Grid Connected Quasi- Z-Source Inverter Integrating Energy Storage and Renewable Energy Generation in Wide Power Range |
| 3 | Mousa Lahdo, Tom Ströhla and Sergej Kovalev | Design and Analysis of a Linear Actuator for Contactless Positioning Systems |
| 4 | Sergei Peresada, Serhii Kovbasa, Dmytro Pushnitsyn and Yurii Zaichenko | Two Nonlinear Controllers for Voltage Source AC-DC Converter |
| 5 | Navid Amiri, Seyyedmilad Ebrahimi and Juri Jatskevich | Efficient Simulation of Wind Generation Systems Using Voltage-Behind-Reactance Model of Doubly-Fed Induction Generators and Average-Value Model of Switching Converters |
| 6 | Sergei Peresada, Serhii Kovbasa, Mykola Zhelinskyi and Artem Duchenko | Speed Sensorless Direct Field Oriented Control of Induction Generator |

Track 4: Nanoelectronics & Photonics, Electron Devices & Embedded Systems

ORAL SESSION

Hall #10 of Library (14:30 - 15:30)

| 1 | Shyam Badu and Roderick Melnik | NMR Properties of Fenna-Matthews-Olson Light Harvesting Complex: Photosynthesis and its Biomedical Applications |
|---|--|---|
| 2 | Denys Natarov | Lasing Thresholds of Plasmonic Modes of a Silver Tube Nanolaser with Active Shell and Core |
| 3 | Volodymyr Byelobrov | Lasing Thresholds of Plasmon and Grating Modes of Coated Silver Nanowire Gratings |
| 4 | Vitalii Shcherbinin and Anton Hlushchenko | Self-Consistent Effect of Ohmic Losses on Output Power of Gyrotron |

POSTER SESSION

Library Floor (15:30 – 16:00)

| 1 | Elena Velichko | Resonance Scattering and Absorption of Light by a Silver Circular Cylinder with Diameter Larger Than the Wavelength |
|---|---|---|
| 2 | Alexander Ye. Svezhentsev, Vladimir Volski, Sen Yan and Guy A. E. Vandenbosch | Shaped Nanoantennas on Cylindrical and Planar Substrate |
| 3 | Vira Tkachenko and Aleksandr Lipinskii | Mathematical Model of Volume Optical Interconnection Reconfiguration Utilizing Acousto-Optic Beam Forming |
| 4 | Yuriy Poplavko and Alexandr Borisov | Impact of Magnetic and Electrical Ordering on Resistivity: New Incite |

ORAL SESSION

Hall #10 of Library (16:00 – 17:30)

| 2 | Arkadiy Prodeus | Late Reverberation Reduction and Blind Reverberation Time Measurement for Automatic Speech Recognition |
|---|--|--|
| 3 | Arkadiy Prodeus | Estimation of Speech Quality and Intelligibility for Some Models of Additive Noise |
| 4 | Vladimir Yachin and Tatiana Zinenko | Polarization Conversion by Metamaterial Composed of a Periodic Array of Metallic Square Helixes Embedded in a Dielectric Layer |
| 5 | Serhii Tsybulnyk and Diana Pivtorak | Method of Determining the Strain Value From the Output Signal of the Fiber Optical Sensor |
| 6 | Vitalii Artuhov and Oleksii Brytov | Analysis of Sigma-Delta Modulator with Distributed Feedback |

Track 5: Systems Analysis, Computer Science & Infocommunications

ORAL SESSION

Hall #1 of Library (14:30 – 15:30)

| 1 | Alexandra Oborina (Invited Talk) | Internet of Things: challenges and research opportunities across the industries |
|---|--|---|
| 2 | Vladimir Ulansky and Irina Terentyeva | Availability Assessment of a Telecommunications System with Permanent and Intermittent Faults |
| 3 | Vadim Ditlovich and Yuval Bistritz | Speaker Verification with Mostly Voiced Speech for GMM/UBM and GMM/IBM Systems |

POSTER SESSION

| 1 | Michael Zgurovsky, Andrii Boldak, Kostiantyn Yefremov and Ivan Pyshnograiev | Modeling and investigating the behavior of complex socio-economic systems |
|---|---|--|
| 2 | Victoria Bobichev, Olga Kanishcheva and Olga Cherednichenko | Sentiment Analysis in the Ukrainian and Russian News |
| 3 | Tetiana Kolpakova, Andrii Oliinyk and Valerii Lovkin | Improved method of group decision making in expert systems based on competitive agents selection |
| 4 | Anatoly Gaida, Tigran Grigorian, Elena Zarichuk and Konstantin Koshkin | The Decision Making Mechanisms in Sea Container Traffic Management |
| 5 | Yana Kremenetskaya, Elena Zhukova, Svetlana Morozova | Approaches to the evaluation of spectral and energy efficiency Millimeter Wave Cellular Networks |
| 6 | Zhengbing Hu, Vitaly Deibuk and Ivan Yuriychuk | Ternary Reversible/Quantum Latches |

Hall #1 of Library (16:00 – 17:30)

| 1 | Nataliya Pankratova | The Integrated System of Safety and Survivability Complex Technical Objects Operation in Conditions of Uncertainty and Multifactor Risks Institute for Applied System Analysis |
|---|---|--|
| 2 | Murat Pasa Uysal and Murat Karakaya | Ontology-Supported Enterprise Architecture Analysis |
| 3 | Peter Bidyuk, Tetyana Prosyankina-Zharova and Oleksandr Terentiev | Forecasting and risk estimation under uncertainty using DSS |
| 4 | Vitalii Mokin, Oleksii Kozachko, Victoria Rodinkova, Olena Palamarchuk and Tetyana Vuzh | The decision support system for the classification of allergenic pollen types based on fuzzy expert data of pollen features on the microscope images |
| 5 | Vitalii Mokin, Liubov Skoryna, Andrii Yascholt and Yevhenii Kryzhanivskiy. | Method for Selecting the Ranking Criteria for Monitoring Stations of the Status of Spatially Distributed Systems and for Defining the Priority of their Location |
| 6 | Vitalii Mokin, Ilona Varchuk, Kostiantyn Bondaletov and Olena Slobodianiuk | Method for Analyzing and Optimizing the Topologic Observability of Cognitive Maps of Complex Spatially Distributed Systems |

Track 6: Engineering Education & History

ORAL SESSION

Hall #2 of Library (14:30 - 15:30)

| 1 | Osama Saadeh and Moh'd Rashad Al-Mothafar | Power Electronics Laboratory Education: the JUST Experience |
|---|---|--|
| 2 | Mykhaylo Zagirnyak, Serhii Serhiienko and Oleksii Chornyi | Innovative Technologies in Laboratory Workshop for Students of Technical Specialties |
| 3 | Yuriy Poplavko and Yuriy Yakimenko | Electronic Materials Science: Teaching in Technical University |
| 4 | Anna Rudiakova and Felix Yanovsky | Hands-on Workshops Method in Embedded Electronic Systems' Classes |

ORAL SESSION

Hall #2 of Library (16:00 - 17:30)

| 1 | Yevhen Berkunskyi, Tetyana Farionova, Kateryna Knyrik and Tetiana Smykodub | Using Microservices in Educational Applications of IT-Company |
|---|--|--|
| 2 | Andrey Gnatov, Schasyana Argun and Olga Ulyanets | Joint Innovative Double Degree Master Program «Energy-Saving Technologies in Transport» |
| 3 | Sergey Mizrakhy | History and Perspectives of THz Components and Circuits Using Oversize Dielectric-Lined Waveguides |
| 4 | Volodymyr Sherstiuk and Marina Zharikova | Academic Integrity Support System for Educational Institution |
| 5 | Tatiana Zinenko | Yevgeny M. Kuleshov, Human Delta-Function in Ukrainian Microwave Science and Technology |
| 6 | Maxim Bolotov, Gennady Bolotov and Iryna Nahorna | Hollow Cathode Glow Discharge as a Heating Source in Welding and Brazing |

WELCOME PARTY

Academic Building #6 (18:00 - 21:00)

30.05.2017

PLENARY SESSION

Hall #12 of Library, Igor Sikorsky Kyiv Polytechnic Institute (09:00 – 11:00)

| 1 | Luca Faes | Information Theory for the Analysis of Physiological Signals: Methods and Applications |
|---|---|--|
| 2 | Vladimir Lukin , Oleksiy Rubel, Sergey Abramov and Aleksander Zemliachenko | Performance Prediction in Radar Image Filtering and Lossy Compression |
| 3 | Juri Jatskevich | Advancements and Challenges in Transient Simulation of Energy Grids and Power Electronic Systems |
| 4 | Sergei Gorlatch | Future Distributed Applications Based on Mobile Cloud Computing and Software- Defined Networks |

Track 1: Microwave Techniques, Antennas & Radar Systems POSTER SESSION

Library Floor (11:00 – 11:30)

| 1 | Lutz Angermann, Vasyl V. Yatsyk, Mykola V. Yatsyk | Generation Properties of Nonlinear Layered Objects and Eigen-Modes of the Linearized Problems |
|---|---|--|
| 2 | Vitalii Atamanyuk, Andrii Zvonko, Yuriy Kosovtsov and Yuriy Shabatura | Nonuniform Absorbing Coating as an Effective Way to Reduce Radar Visibility of an Object with the Surface Formed by Flat Conductive Plates |
| 3 | Maksym Popov, Igor Zavislyak and Gopalan Srinivasan | Passive ferrite resonator-based millimeter wave band components |
| 4 | Vladimir Sugak, Maxim Lohvinov and Alexandr Hlasunov | Usage of Radar Signal Phase Structure Entropy for Detection of Weakly Moving Ground Objects behind Foliage of Shrubs and Trees |
| 5 | Vladislav Meleshko, Sergiy Lakoza and Sergiy Sharov | Method of identifying and eliminating magnetic compass deviation |

Hall #11 of Library (11:30 – 13:00)

| 1 | Serhii Siden | Parameters of the patch antenna outside operating frequency range |
|---|---|---|
| 2 | Zoya Eremenko, Kateryna Kuznetsova, Alexander Shubnyi, Volodymyr Glamazdin and Mykhailo Natarov | Dielectrometry of Pharmaceutical Ingredient Solutions at Microwaves |
| 3 | I. Ivanchenko, M. Khruslov, N. Popenko, V. Plakhtii and S. Mykhaliuk | X-band resonator for studying the various axially symmetric inhomogeneities in the frequency band |
| 4 | Mykhaylo Andriychuk | Modeling the Non-homogeneous Media with Specific Refraction Coefficient |
| 5 | Vitalyy Koshevyy and Victoria Popova | Complementary coded waveforms sets in Marine Radar Application |
| 6 | Nadiia Babanska, Yurii Efremov and Vitalii Vovk | Radio Waves Interference above a Spherical Sea Surface |

LUNCH

Academic Building #1, «Alma Mater» (13:00 – 14:00)

ORAL SESSION

Hall #11 of Library (14:00 – 15:30)

| 1 | Mikhail Andreev, Oleg Drobakhin and Dmitry Saltykov | Complex reflection coefficient determination via digital spectral analysis of multiprobe reflectometer output signals |
|---|--|---|
| 2 | Mikhail Andreev, Valentyn Borulko, Oleg Drobakhin and Dmytro Sidorov | Multiple Reflections from Non-periodic Bragg Layered Structures |
| 3 | George Koshovy | Diffraction of H-polarized electromagnetic wave by pre-fractal system of splits in PEC screen |
| 4 | Oleksandr Dumin, Rolan Akhmedov, Viktor Katrich, Olga Dumina | Transient Radiation of Circle with Uniform Current Distribution |

| 5 | V.A. Plakhtii, O.M. Dumin and O.A. Prishchenko | Transient Radiation of System of Four Noncollinear Dipoles |
|---|--|---|
| 6 | Yuliya Averyanova, Anna Rudiakova and Felix Yanovsky | Simulation of Liquid Hydrometeors' Scattering Power Distribution in Multi-Polarization Radar |

POSTER SESSION

| 1 | Oleg Rybin and Sergey Shulga | RLC-Circuit Effective Medium Approach for Two-Component Non-Magnetic Metamaterials |
|----|---|---|
| 2 | Yurii Penkin, Victor Katrich, Mikhail Nesterenko, Sergey Berdnik and Natalya Blinova | Radiation Field of a Dipole Placed at Impedance Sphere |
| 3 | Igor V. Zavislyak and Hryhorii L. Chumak | Effect of modes frequencies splitting in ferrite resonators |
| 4 | Oleg Sukharevsky, Vitaly Vasilets, Sergey Nechitaylo and Ivan Ryapolov | The Radiation Characteristics of Antenna Systems with a Cone-Sphere Radome |
| 5 | Igor Tovkach and Serhii Zhuk | Adaptive filtration of parameters of the UAV movement on data from its location calculated on the basis the time difference of arrival method |
| 6 | Roman Dolia, Sergey Nosatiuk, Yevhen Shulha, Aleksandr Kogut, Igor Kuzmichev and He Zhaochang. | The Excitation of Whispering Gallery Modes in the High-Q Shielded Dielectric Disk |
| 7 | Oleg Kosiak, Volodymyr Bezborodov and Pavlo Nesterov | Wideband quasi-optical polarization phase shifter operating in the THz frequency range |
| 8 | Volodymyr Zamaruiev | The use of Kotelnikov-Nyquist-Shannon Sampling Theorem for designing of Digital Control System for a Power Converter |
| 9 | Mykola Zablodskiy, Andriy Zhiltsov, Igor Kondratenko and Volodymyr Gritsyuk | Conception of efficiency of heat electromechanical complex as hybrid system |
| 10 | Natalia Nazarova and Dmitriy Vinnichenko | Electrotechnical System of the Current Protection in the High-Voltage Pulse- Current Generators |
| 11 | Vladimir Sivetskyy, Oleksiy Khalimovskyy, Olexandr Sokolskyy and Ihor Ivitskyy. | Automation of Intelligent Sensor Injection Inlet In Polymer Moldings By Using Vector Controlled Electric Drive |

Hall #11 of Library (16:00 – 17:00)

| 1 | Ievgen Gorovyi and Dmytro Sharapov | Pattern Detection and Recognition in SAR images |
|---|--|---|
| 2 | Valeriy Volosyuk and Simeon Zhyla | Optimal Radar Cross Section Estimation in Synthetic Aperture Radar |
| 3 | Nadezhda Yeliseyeva, Victor Katrich, Mikhail Nesterenko and Aleksey Gorobets | Synthesis of Circularly Polarized Radiation by Inphase Crossed Impedance Wire Dipoles with Screen |
| 4 | Mstislav Kaliberda, Sergey Pogarsky and Leonid Lytvynenko | Diffraction by Two Semi-Infinite Gratings Placed in the Same Plane |
| 5 | Alexander Maslovskiy, Maxim Legenkiy, Nikolay Kolchigin and Mariya Antyufeyeva | Decompsition method for complex target RCS measuring |

Track 2: Bioengineering & Robotics

ORAL SESSION

Hall #9 of Library (14:00 - 15:30)

| 1 | Patrick Henaff (Invited Talk) | From the control of biological complex systems toward the control of robotic complex systems |
|---|---|--|
| 2 | Andrii Shachykov, Patrick Henaff, Alexander Shulyak and Anton Popov | Neuro-musculoskeletal simulator of human rhythmic movements |
| 3 | Cécilia Lindig-Leon, Sébastien Rimbert, Oleksii Avilov and Laurent Bougrain | Scalp EEG activity during simple and combined motor imageries to control a robotic arm |
| 4 | Mykhailo Fryz | Conditional Linear Random Process and Random Coefficient Autoregressive Model for EEG Analysis |
| 5 | Ramazan Coban | Adaptive Backstepping Control Design for Electromechanical Systems |

POSTER SESSION

Library Floor (15:30 – 16:00)

| 1 | Anna Poreva, Anastasiia Makarenkova and Mykola Slozko | Efficiency evaluation of electroacoustic sensors for auscultation devices of human body life-activity sounds |
|---|--|--|
| 2 | Sergey Krivenko, Anatolii Pulavskyi and Stanislaw Krivenko | Determination of low hemoglobin level in human using the analysis of symbolic dynamics of the heart rate variability |
| 3 | Sergey Naida and Olha Pavlenko | The Ratio of Standard Ear Tympanogram and the Area of the Eardrum |
| 4 | Illia Fedorin, Vladimir Tuz, Sergii Gryshchenko, Jong Min Choi and So Hyun Chung | Development of a Simulation Tool for Optimal Design of a Mobile Photoplethysmography Sensor |

ORAL SESSION

Hall #9 of Library (16:00 – 17:00)

| 1 | Dmytro Shtoda, Yurii Arkusha and Mykola Mustetsov | The microwave imaging method for express diagnostic of cancer |
|---|--|---|
| 2 | Oleg Chertov and Volodymyr Malchykov | Determining Optimal Dilation Factor of Non- Dyadic Wavelet Transform |
| 3 | Serhiy Batachenko and Roman Tomashevskyi | The Technical Inspection of Device for Integrated Evaluation of the Antioxidant Activity of Foods |
| 4 | Illia Kukharenko and Volodimir Romanenko | Picking a Human Fall Detection Algorithm for Wrist-Worn Electronic Device |

Track 3: Energy Systems, Industry Application & Industry 4.0 POSTER SESSION

Library Floor (11:00 – 11:30)

| 1 | Ievgen Verbytskyi, Anna Kyselova and Gennadiy Kyselov | Power Grid Converter Control Improvement Based On Contextual Data |
|---|---|---|
| 2 | Nataliia Suprunovska and Anatolii Shcherba | Parametric Synthesis of Reservoir Capacitor Circuits in the Thyristor Generator of Discharge Pulses with the Controllable Voltage Feedback |
| 3 | Mykhaylo Zagirnyak, Roman Manko, Viktoriya Kovalchuk and Tetyana Korenkova. | Assessment of Pipeline Network Leakage Influence on Dynamic Characteristics of the Pump Complex |
| 4 | Ievgen Verbytskyi | A Double Fourier Series Implementation for Modulated Signal with the Arbitrary Modulation |
| 5 | Oleksandr Mokin, Borys Mokin and Oleksandr Kryvonis | Synthesis of Mathematical Models for One Class of Electromechanical Systems With Variable Parameters |
| 6 | Serhii Korol, Sergey Buryan, Mykola Pushkar and Mykhola Ostroverkhov | Investigation the Maximal Values of Flux and Stator Current of Autonomous Induction Generator |
| 7 | Mykola Pushkar, Nataliya Krasnoshapka, Mykola Pechenik and Vitalii Bovkunovych | Method of Approximation the Magnetizing Inductance Curves of Self-Excited Induction Generators |
| 8 | Anton Kylymchuk, Petro Lezhnyuk and Alexandr Rubanenko | Impact of Linear Regulator, Installed in the Electric Grid of Energy Supply Company, on Power Losses |
| 9 | György Morva, Vitalii Volokhin, Illia Diahovchenko and Zsolt Čonka | Analysis of the impact of nonlinear distortion in voltage and current curves on the errors of electric energy metering devices |

ORAL SESSION

Hall #12 of Library (11:30 – 13:00)

| 1 | Maksym Shcherba | Modeling of Water Tree Growth Between Micro-Inclusions in XLPE Cable Isolation and its Effect on Electric Field Distribution |
|---|-----------------|--|
| 2 | Maksym Shcherba | Three-Dimensional Modeling of Electromagnetic and Temperature Fields in the Inductor of Channel-Tipe Furnace for Copper Heating |

| 3 | Pavlov Gennadiy, Irina Vinnichenko and Pokrovskiy Mikhail | Research of the Interrelationship between the Frequency Converter on the Basis of the Resonant Inverter with Nonlinear Control Power Unit Parameters and its Load |
|---|---|---|
| 4 | Alexander Kuznietsov and Tilman Happek | On-board diagnostics of Li-Ion battery packs for electric vehicles using a combination of spectroscopy and identification methods |
| 5 | Volodymyr Rozov and Volodymyr Grinchenko | Simulation and Analysis of Power Frequency Electromagnetic Field in Buildings Closed to Overhead Lines |
| 6 | Vladislav Kuchanskyy | The prevention measure of resonance overvoltages in extra high voltage transmission lines |

LUNCH

Academic Building #1, «Alma Mater» (13:00 – 14:00)

ORAL SESSION

Hall #12 of Library (14:00 – 15:30)

| 1 | Dmytro Danylchenko and Sergey Shevchenko. | Development of the method for determining the number of direct lightning strikes in overhead lines with protected wires. |
|---|---|--|
| 2 | Olga Tolochko and Mykola Sopiha | Heat Loss Minimization Field Control of Motionless Induction Motors in Pause of Intermittent Duty |
| 3 | Boiko Juliy, Igor Kovtun and Svetlana Petrashchuk | Vibration transmission in electronic packages having structurally complex design |
| 4 | Andrey Gnatov, Schasyana Argun and Natalia Rudenko | Smart Road as a Complex System of Electric Power Generation |
| 5 | Oleg Shutenko | Determine the boundary value of the concentration of gases dissolved in oil of method minimum risk. |

POSTER SESSION

Library Floor (15:30 – 16:00)

| 1 | Ihor Shchur, Yurii Biletskyi and Vsevolod Shchur | Energy Efficient and Simple Control of Stand-Alone Combine Heat-Power Generation Small Wind Turbine |
|----|--|---|
| 2 | Ihor Shchur, Yurii Biletskyi and Ihor Holovach | Improving of IDA-PBC Systems by Forming Additional Regulatory Actions on Directly Uncontrollable System Loops |
| 3 | Iurii Zubiuk | The application of power-law distribution for capacitor banks selection in the electrical supply systems and networks |
| 4 | Vasyl Kostiuk | Economic and mathematic modeling to optimize competitive renewable technologies expansion plan |
| 5 | Evgen I. Bardyk and Nickolai P. Bolotnyi | Electric Power System Simulation for Risk Assessment of Power Transformer Failure at an External Short-Circuit Fault |
| 6 | Mykhaylo Zagirnyak, Andrii Kalinov and Viacheslav Melnykov | Variable-Frequency Electric Drive with a Function of Compensation for Induction Motor Asymmetry |
| 7 | Bogdan Pryymak and Manuel Moreno-Eguilaz | Characteristics of Induction Motor Drives with Torque Maximization in Field Weakening Region |
| 8 | Volodymyr Kochan, Anatoliy Sachenko, Orest Kochan and Vasyl Yatskiv | Energy-Efficient Method for Controlling the Transmitters Power of Wireless Sensor Network |
| 9 | Ievgen O. Zaitsev, Anatolii S. Levytskyi and Bogdan A. Kromplyas | Characteristic of capacitive sensor for the air gap control system in the hydrogenerator |
| 10 | Pavlo Herasymenko, Viacheslav Hutsaliuk, Volodymyr Pavlovskyi and Oleg Yurchenko | A Software Phase-Locked Loop of Control System of a Series-Resonant Voltage- Source Inverter for Induction Heating Equipment |

ORAL SESSION

Hall #12 of Library (16:00 – 17:00)

| 1 | Vadim Lobodzinskiy and Yurii Tsyban | The Investigation of Wave Process During Propagation of Plate Voltage Pulse on Three-Phase Performance Cable Line |
|---|---|---|
| 2 | Roman Zaitsev, Michail Kirichenko, Gennadiy Khrypunov, Dmitriy Prokopenko and Lilia Zaitseva | Development of hybrid solar generating module for high-efficiency solar energy station |

Track 4: Nanoelectronics & Photonics, Electron Devices & Embedded Systems

POSTER SESSION

Library Floor (11:00 – 11:30)

| 1 | Oleg Gurin, Andrey Degtyarev, Maxim Legenkiy, Vyacheslav Maslov, Valeriy Ryabykh, Vladislav Senyuta and Aleksandr Topkov | Mode Selective Properties of the Multi-ring Diaphragms in a Dielectric Waveguide |
|---|--|--|
| 2 | Alexandr Slobodyan, Andrey Vasin, Dariya Savchenko, Vyacheslav Gorshkov, Stanislav Tiagulskyi, Yuri Stubrov, Petro Lytvyn and Oleksiy Nazarov | Effect of Electron Beam Irradiation on Structural and Electrical Properties of Graphene-SiO2-Si Structures |
| 3 | Andriy Semenov and Oleksandr Osadchuk | Modeling the Deterministic Chaos Microelectronic Oscillator Based on the Bipolar Transistor Structure with Negative Resistance |
| 4 | V.D. Yeryomka and V.P. Dzyuba | X-band Pulse Coaxial Magnetron with Field and Secondary Emitters |
| 5 | Vasyl Varyshchuk and Yaroslav Bobitski | Algorithm for automated diagnosis of object technical state with multimode fiber sensor |
| 6 | Volodymyr Marasanov and Artem Sharko | Discrete Models Characteristics of the Forerunners of Origin of the Acoustic Emission Signal |
| 7 | Halyna Klym | Study of phase composition in the technologically modified MgO-Al2O3 nanoceramics using XRD and XPS mehods |
| 8 | Halyna Klym, Roman Dunets, Andriy Ivanusa, Yuriy Kostiv and Ivanna Vasylchyshyn | Modified humidity-sensitive ceramics for microelectronics studied by PALS system |

ORAL SESSION

Hall #10 of Library (11:30 – 13:00)

| 1 | r Korol r Borysov evlyakova | evych, and | Relationship Function And | | | Work |
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| 2 | Petro Yu. Artemchuk and Oleksandr V. Prokopenko. | Microwave Signal Frequency Determination Using Multiple Spin-Torque Microwave Detectors |
|---|---|---|
| 3 | Roman Melnyk, Yurii Nikolaenko, Yevheniy Alekseik and Vladimyr Kravets | Heat Transfer Limitations of Heat Pipes for a Cooling Systems of Electronic Components |
| 4 | Alexander Sokolovsky, Sergiy Lyagushyn, Sergey Sokolovsky and Volodymyr Yarlik | Basic Ideas of Quantum Mechanics of Open Systems in Application to Electron and Optic Processes |
| 5 | Olga Shcherbyna, Yuriy Bacherikov, Olga Okhrimenko, Anton Zhuk, Roman Kurichka, Andriy Gilchuk and Olexander Musharovsky | Elemental composition and luminescent characteristics of ZnS:Cu powders, obtained by self-propagating high-temperature synthesis using NaCl as a flux |
| 6 | Michail Kirichenko, Roman Zaitsev, Andrey Dobrozhan, Gennadiy Khrypunov and Mykola Kharchenko | Properties of CdTe Films Prepared By DC Magnetron Sputtering |

LUNCH

Academic Building #1, «Alma Mater» (13:00 – 14:00)

POSTER SESSION

| 1 | Iryna Yaremchuk, Halyna Petrovska, Volodymyr Fitio, Yaroslav Bobitski, Eugeniusz Sheregii and Renata Wojnarowska | Sensors element on base of relief Aucoated GaAs grating |
|---|--|--|
| 2 | Volodymyr Fitio, Iryna Yaremchuk, Andrii Bendzyak and Yaroslav Bobitski | Application RCWA for studying plasmon resonance under diffraction by metal gratings |
| 3 | Oleksander Osadchuk, Andriy Semenov, Oleksander Zviahin and Anton Savytskyi | Numerical Method for Processing Frequency Measuring Signals from Microelectronic Sensors Based on Transistor Structures with Negative Resistance |
| 4 | Gusieva and Oksana Gorobets | Nonlinear spin wave excitation at the interface between two ferromagnets with broken spatial inversion symmetry |

| 5 | Vasyl Tereshchenko, Tania Kolianova and Yaroslav Tereshchenko | An approach for triangulating an area bounded simple polygons |
|---|---|--|
| 6 | Iryna Yaremchuk, Halyna Petrovska, Yaroslav Bobitski, Eugenius Sheregii and Renata Wojnarowska-Nowak | Gold-Coated Polycarbonate Grating-based Substrates for Raman Spectroscopy |
| 7 | Andriy Stelmashchuk, Ivan Karbovnyk, Dmytro Chalyy, Dmytro Lukashevych and Halyna Klym | Parametric modeling of conductivity in percolating nanotube network |

Track 5: Systems Analysis, Computer Science & Infocommunications

POSTER SESSION

Library Floor (11:00 – 11:30)

| 1 | Yurii Rashkevych, Dmytro Peleshko, Olena Vynokurova, Ivan Izonin and Natalia Lotoshynska | Single-Frame Image Super-Resolution based on Singular Square Matrix Operator |
|---|---|---|
| 2 | Roman Odarchenko, Anastasiia Abakumova, Yurii Kochergin and Dmitry Vergeles | Transport Network Optimization Methods of Mobile Operators in Ukraine |
| 3 | Taras Panchenko and Ievgen Ivanov | A Formal Proof of Properties of a Presentation System using Isabelle |
| 4 | Roman Bak, Orest Lavriv and Bohdan Koval | Load Balancing Based on Multi-Hop Handover for Wireless Cellular Networks |
| 5 | Olena Semenova and Andriy Semenov | The Neuro-Fuzzy Controller for Handover Operation in Mobile Networks |
| 6 | Leonid Lyubchyk and Galina Grinberg | Pairwise Kernel-Based Preference Learning for Multiple Criteria Decision Making |
| 7 | Artem Izmailov and Lubomyr Petryshyn | Symmetric ternary functions and their application in orthogonal transforms |
| 8 | Olesia Voitovych, Olga Shulyatitska, Leonid Kupershtein and Viktor Malyushytskyy | The authentication method in wireless sensor network based on trust model |
| 9 | Mykhailo Petryshyn | Modeling of TIF processes in additive positional numeral systems based on the vector-branching diagrams |

Hall #1 of Library (11:30 - 13:00)

| 1 | Mykola Lavreniuk, Nataliia Kussul, Mykola Meretsky, Vladimir Lukin, Sergey Abramov and Oleksii Rubel | Impact of SAR data filtering on crop classification accuracy |
|---|---|---|
| 2 | Zhengbing Hu, Yevgeniy Bodyanskiy and Oleksii Tyshchenko. | A Deep Cascade Neural Network Based on Extended Neo-Fuzzy Neurons and its Adaptive Learning Algorithm |
| 3 | Alexander Makarenko | Toward Development of Neural Networks With Strong Anticipation |
| 4 | Oleksandra S. Yeremenko, Oleksandr V. Lemeshko and Nadia Tariki | Fast ReRoute Scalable Solution with Protection Schemes of Network Elements |
| 5 | Oleksandra S. Yeremenko, Oleksandr V. Lemeshko, Olena S. Nevzorova and Ahmad M. Hailan | Method of Hierarchical QoS Routing Based on the Network Resource Reservation |
| 6 | Mykhailo Klymash, Vasyl Romanchuk and Mykola Beshley | Investigation and Simulation of System for Data Flow Processing in Multiservice Nodes Using Virtualization Mechanisms |

LUNCH

Academic Building #1, «Alma Mater» (13:00 – 14:00)

ORAL SESSION

Hall #1 of Library (14:00 - 15:30)

| 1 | Viktor Hozhyi and Bart Lamiroy | Clustering of Users in Social Networks by Their Activity |
|---|--|--|
| 2 | Maksym Fedorchuk and Bart Lamiroy | Statistic Metrics for Evaluation of Binary Classifiers Without Ground-Truth |
| 3 | Nadezhda Nedashkovskaya and Nataliya Pankratova | A decision support system for evaluation of decision alternatives on basis of a network criteria model |
| 4 | Nataliia Kussul, Andrii Kolotii, Tatiana Adamenko, Bohdan Yailymov, Andrii Shelestov and Mykola Lavreniuk | Ukrainian Cropland through decades: 1990- 2016 |

| 5 | A. Varfolomieiev and Oleksandr Lysenko | A simple way to broaden object's search area for tracking methods based on discriminative correlation filters |
|---|--|---|
| 6 | Roman Shaptala, Anna Kyselova and Gennadiy Kyselov | Exploring the vector space model for online courses |

POSTER SESSION

| 1 | Yuriy Milyavsky and Victor Romanenko | Systematization of Methods of Automated Control in Cognitive Maps' Impulse Processes for Complex Systems |
|----|---|--|
| 2 | Oleksandr Manko and Vyacheslav Vakas | Demultiplexing of optical channels based on the effect of light scattering |
| 3 | Vyacheslav Vakas, Oleksandr Manko, Dmytro Domin and Oleksii Kulinskyi | Evolution of stability of synchronization parameters in packet networks |
| 4 | Vitaly Pochernyaev and Victoria Povhleb | Analysis of the frequency parameters of the new combined microwave radio system |
| 5 | Roman Galagan and Andriy Momot | The use of ART-2 neural network for processing information signals of non-destructive testing |
| 6 | Amal Mersni, Andriy Ilyashenko and Tetiana Vavenko | Model of Multicast Routing With Support of Shared Explicit Reservation of Link Resources |
| 7 | Elena Yelmanova and Yuriy Romanyshyn | No-reference Metric of Generalized Contrast for Complex Images |
| 8 | Mariya Nazarkevych, Ivanna Klyujnyk, Roman Oliarnyk, Yurii Kynash and Hanna Nazarkevych. | Application Wave Tracing Algorithm For Image |
| 9 | Elena Yelmanova and Yuriy Romanyshyn | Automatic Histogram-based Contrast Enhancement for Low-contrast Images with Small-sized Objects |
| 10 | Lyubomyr Bartkiv and Yaroslav Bobitski | Application of Concave Diffraction Grating for Increasing Data Capacity of Polymer Optical Fiber |

Hall #1 of Library (16:00 – 17:00)

| 1 | Leonid Zhiteckii and Klavdiya Solovchuk | Analysis of Multivariable Regulation Systems Using Pseudoinverse Model-Based Controllers |
|---|---|--|
| 2 | Yurii Kuts, Iuliia Lysenko, Oleksandr Dugin, Anatoliy Protasov, Valentin Uchanin and Olena Bliznuk | Using Multidifferential Transducer for Pulsed Eddy Current Object Inspection |
| 3 | Kostyantyn Kharchenko, Oleksandr Beznosyk and Valeriy Romanov | A Set of Instructions for Data Flow Virtual Machine |
| 4 | Ievgen Gorovyi, Alexey Roenko, Alexander Pitertsev, Ievgen Chervonyak and Vitalii Vovk | Real-Time System for Indoor User Localization and Navigation using Bluetooth Beacons |

CITY TOUR

(17:00 - 21:00)

31.05.2017

IEEE MILESTONE CEREMONY

Hall "Bilka" of Library, Igor Sikorsky Kyiv Polytechnic Institute

(10:30 - 13:00)

Mr. Costas Stasopoulos,

Past Director of the IEEE Region 8 (Europe, Middle East and Africa), Director Member of the IEEE Board of Directors, Nicosia, Cyprus

Prof. Jozef Modelski,

2009-2010 Director of IEEE Region 8 (Europe, Africa and Middle East), IEEE Fellow, Warsaw University of Technology, Warsaw, Poland

Prof. Roberto Sorrentino,

EuMA Co-founder and President (1998 – 2009), IEEE Fellow, University of Perugia, Perugia, Italy

Prof. Andrew Tirkel,

Scientific Technology Co., East Brighton, Australia

Prof. Felix Yanovsky,

IEEE Ukraine Section Chair, Head of Electronics Department of the National Aviation University, IEEE Fellow, Kyiv, Ukraine

Prof. Alexander Nosich,

O. Ya. Usikov Institute for Radiophysics and Electronics of the NASU, IEEE Fellow, Kharkiv, Ukraine

IEEE MILESTONE

Zenit Parabolic Reflector L-band Pulsed Radar, 1938

The 1938 Zenit radar test at the Laboratory of Electromagnetic Oscillations of the Ukrainian Institute of Physics and Technology was a major advance in the development of radar. Designed by Abram Slutskin, Alexander Usikov, and Semion Braude, microwave scientists and magnetron pioneers, Zenit established the practicality of combining the pulsed method and a shorter wave band for determining precisely all three coordinates of airborne targets.

May 2017



LUNCH

Academic Building #1, «Alma Mater» (13:00 – 14:00)

Track 5: Systems Analysis, Computer Science & Infocommunications

ORAL SESSION

Hall #1 of Library (14:00 – 15:30)

| 1 | Besik Dundua (Invited Talk) | Combining Logic Programming and Second- Order Conditional Rewriting |
|---|--|---|
| 2 | Besik Dundua, Mikheil Rukhaia and Lia Kurtanidze | Unranked Tableaux Calculus for Web Related Applications |
| 3 | Volodymyr Posuvailo and Iryna Ivasenko | Corrosion Damage Estimation of Microstructure of Electric Arc Coating of Al- Mn Alloy in the Initial State and with PEO Coatings |
| 4 | Roman Vorobel, Iryna Ivasenko and Olena Berehulyak | Automatized Computer System for Evaluation of Rust Using Modified Single- Scale Retinex |
| 5 | Francesca Ortolani, Michele Scarpiniti, Danilo Comminiello, Aurelio Uncini | Advances in Hypercomplex Adaptive Filtering for 3D Audio Processing |
| 6 | Oleh Kovaliuk and Dmytro Kovaliuk | Information systems development for open data analysis |

POSTER SESSION

| 1 | Konstantin V. Koshkin, Natalia R. Knyrik, Viktor K. Partas and Pavel V. Nikitin | Portfolio management model of IT- projects |
|---|---|--|
| 2 | Mykhailo Granik and Volodymyr Mesyura | Fake News Detection Using Naive Bayes Classifier |
| 3 | Tetiana Hovorushchenko | Forming the Logical Conlcusion about Sufficiency of Information of Software Requirements Specification for Software Quality Assessment by ISO 25010:2011 |
| 4 | Oleksandr I. Marchenko and Oleksii O. Marchenko | Monte-Carlo Tree Search with Tree Shape Control |

| 5 | Mykola Pavlenko and Alexander Kalyuzhny | Analysis of quantization noises in multistage signal processing systems: a case study of Digital Down Converters (DDC) |
|---|---|---|
| 6 | Ivan Myroniv, Sergey Ostapov and Volodymyr Zhiharevich | The use of asynchronous cellular automata models to remove noise from an image |
| 7 | O.A. Sushchenko and Y.V. Beliavtsev | Robust Synthesis of Two-degree-of- freedom System for Ground Vehicle Equipment Stabilization |

Hall #1 of Library (16:00 - 17:00)

| 1 | Artem Potebnia | Formation of the Multifractal Hypergraph Structure Reflecting the Self-Similarity Properties of the Computational Complexity Classes |
|---|---|---|
| 2 | Tatiana Shmeleva | Automated Composition of Petri Net Models for Cellular Structures |
| 3 | Vladyslav Kucher | RDMA-based Dataflow Management System |
| 4 | Oksana Pichugina and Sergey Yakovlev | Optimization on Polyhedral-Spherical Sets: Theory and Applications |

SECTION'S 25th ANNIVERSARY BANQUET

(18:00 - 22:00)

Premier Hotel Rus: 4 Hospitalna str., Kyiv, 01601, Ukraine

01.06.2017

PLENARY SESSION

Hall #1 of Library, Igor Sikorsky Kyiv Polytechnic Institute (09:00 – 09:50)

| 1 | Andrejs Romanovs | Experience of the first joint master program in Latvia in logistics and supply chain management |
|---|--|---|
| 2 | Urban Burnik , Janez Zaletelj and Andrej Košir | Kinect based System for Student Engagement Monitoring |

Track 5: Systems Analysis, Computer Science & Infocommunications

ORAL SESSION

Hall #1 of Library (10:00 - 11:30)

| 1 | Vasyl Alieksieiev, Yuliia Synytsia, Elena Sharapova, Olena Ivanova and Denis Gorelov | Web-based application to collect and analyze users data for keystroke biometric authentication |
|---|---|--|
| 2 | Kseniia Yashyna and Katerina Yalova | Improvement of the Method of Building Dynamic Models of Technological Processes |
| 3 | Olha Tolochko | Analysis of observer-based control systems with unmeasured disturbance |
| 4 | Anatolij Sergiyenko, Anastasia Serhienko and Andrij Simonenko | A Method for Synchronous Dataflow Retiming |
| 5 | Yuriy Kondratenko, Galyna Kondratenko and Ievgen Sidenko | Two-Stage Method of Fuzzy Rule Base Correction for Variable Structure of Input Vector |
| 6 | Lev Korshevniuk | Generalized Formalization of Risks for Dynamic Risk Management Problems |

POSTER SESSION

Library Floor (11:30 – 12:00)

| 1 | Sergiy Prykhodko, Natalia Prykhodko, Lidiia Makarova and Kateryna Pugachenko | Detecting Outliers in Multivariate Non- Gaussian Data on the basis of Normalizing Transformations |
|---|--|---|
| 2 | Vasyl Yatskiv and Taras Tsavolyk. | Improvement of Data Transmission Reliability in Wireless Sensor Networks on The Basis of Residue Number System Correcting Codes Using the Special Module System |
| 3 | Alexander Soloviev and Victor Bondarenko | Optimization of VoIP network performance based on voice call routing and network reorganisation |
| 4 | Hryhoriy Barylo, Roman Holyaka, Volodymir Virt, Fedir Vezyr and Zenon Hotra | Parametric analysis of the input circles of measuring transducers of galvanostatic type impedance |
| 5 | Volodymyr Baliar | Estimation of LTE performance for delivery of multimedia broadcasting signals |
| 6 | Volodymyr Sherstiuk, Marina Zharikova and Igor Sokol | Approximate Spatial Model Based on Fuzzy-Rough Topology for Real-Time Decision Support Systems |

ORAL SESSION

Hall #1 of Library (12:00 - 13:00)

| 1 | Oleksandr Rolik, Eduard Zharikov, Valerii Kolesnik and Maxim Yasochka | Rule-based Algorithmic Approach for Solving Problems of Impact Analysis in Access Networks |
|---|---|--|
| 2 | Murat Karakaya, Gokhan Sengul and Erhan Gokcay | An IoT Application for Locating Victims Aftermath of an Earthquake |
| 3 | Teodor Mandziy | Pipe Weld X-ray Image Distortion Removal |
| 4 | Viktor Putrenko | Data Mining of Relationship in Croudsoursing Projects and Social Activities of Citizens |

LUNCH

Academic Building #1, «Alma Mater» (13:00 – 14:00)

TUTORIAL

Hall "Bilka" of Library (14:00 – 16:00)

Title of Tutorial: Preparing and Reviewing Manuscripts for IEEE Journal Publications: IEEE Transactions on Energy Conversion

Abstract:

This tutorial aims at helping the IEEE UKRCON-2017 attendees interested in publishing or reviewing for IEEE journals to become more successful authors and productive reviewers. The current Editor-In-Chief (EIC) of the IEEE Transactions on Energy Conversion will present this tutorial and discuss the scope and emphasis of journals in IEEE Power & Energy Society (PES) to help prospective authors select the most appropriate venue for publishing their work. After an overview of journal's history and current status, the EIC will further discuss the review process from initial submission to actual publication, and explain the criteria and considerations behind the forms and questions used in the review process. The EIC will also share best practices and common mistakes from his experience of working with authors as well as reviewers, and discuss frequently asked questions, such as the relationship to conference publications, importance of experimental validation, and potential causes for plagiarism.

Presenter' Bio:

Dr. Juri Jatskevich received the Electrical Engineering Degree (B.S.E.E.) from Ukrainian National Agricultural University, Kyiv, in 1994. He received the M.S.E.E. and the Ph.D. degrees in Electrical Engineering from Purdue University, West Lafayette, USA, in 1997 and 1999, respectively. He is presently a Professor of Electrical and Computer Engineering at the University of British Columbia, Vancouver, Canada.

Dr. Jatskevich is active in IEEE Power & Energy Society (PES), Circuits and Systems Society (CAS), and Power Electronics Society (PELS), and is an IEEE Fellow for contributions to modeling of electric machines and switching converters. He has authored/co-authors over 80 journal articles and over 100 conference papers. He chaired the IEEE CAS Power Systems & Power Electronic Circuits Technical Committee in 2009-2010. He has served as an Associate Editor for the IEEE Transactions on Power Electronics for the period 2008 - 2013, and is presently the Editor-In-Chief of IEEE Transactions on Energy Conversion, and Editor of IEEE Power Engineering Letters. He was the general chair of the Sixteenth IEEE Workshop on Control and Modeling for Power Electronics (COMPEL 2015), which is a flagship event in Power Electronics society. He is also chairing the IEEE Task Force on Dynamic Average Modeling, under Working Group on Modeling and Analysis of System Transients Using Digital Programs. His research interests include power electronic systems, electrical machines and drives, modeling and simulation of electromagnetic transients.

RULES FOR PARTICIPATION

Official Language: English Size of the poster: A0 or A1.

Duration of oral presentation: 10 min. **Duration of plenary presentation:** 30 min.

LOCAL ORGANIZING COMMITTEE:

Igor Sikorsky Kyiv Polytechnic Institute,

Faculty of Electronics, Department of Physical & Biomedical Electronics

Polytekhnichna Str., 16/9, Block 12, off.423, 03056, Kyiv, Ukraine

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