

TUESDAY

AUGUST 26, 2014

9:15 – 9:30

Opening Ceremony

9:30 – 11:00

Invited Talks 1

1. EXPLICIT SOLUTIONS IN SOLITON THEORY USING MATRIX BOUNDARY RIEMANN PROBLEM
I. Dmitrieva, *Ukraine* 9:30 – 10:00
2. ELECTROMAGNETIC FIELD EQUATIONS FOLLOWING FROM THE RELATIVISTIC CANONICAL QUANTUM MECHANICS
V. Simulik, *Ukraine* 10:00 – 10:30
3. THEORY OF IRREGULAR IMPEDANCE WAVEGUIDES: GENERALIZED METHOD OF SEPARATION OF VARIABLES
G. Zaginaylov, A. Maksimenko, V. Shcherbinin, K. Schünemann, *Ukraine-Germany* 10:30 – 11:00

11:30 – 14:00

Session ET - Electromagnetic Theory

1. EVOLUTIONARY APPROACH FOR THE PROBLEMS OF TRANSIENT ELECTROMAGNETIC FIELD PROPAGATION IN NONLINEAR MEDIUM
A. Dumin, V. Katric, **R. Akhmedov**, O. Tretyakov, O. Dumina, *Ukraine-Turkey* 11:30 – 11:45
2. ANGLE DEPENDANCE REFLECTION PROPERTIES OF STRATIFIED ANISOTROPIC STRUCTURE WITH ARBITRARY ANISOTROPY AXIS ORIENTATION
O. Belimenko, K. Vitovtov, *Ukraine* 11:45 – 12:00
3. VARIABLE ORDER DIFFERENTIAL FORMS AND MAXWELL EQUATIONS HOMOGENIZATION FOR FRACTAL STRUCTURED MEDIA
V. Onufriyenko, **A. Kuzemko**, *Ukraine* 12:00 – 12:15
4. TWO TYPES OF OPTICAL RESONANCES IN THE SCATTERING OF VISIBLE LIGHT BY DISCRETE METAL NANOWIRE SCATTERERS WITH PERIODICITY
D. Natarov, *Ukraine* 12:15 – 12:30
5. WEAK NONEQUILIBRIUM STATES OF PHOTONS IN EQUILIBRIUM PLASMA
G. Orlovsky, A. Sokolovsky, A. Pevzner, *Ukraine* 12:30 – 12:45
6. COEXISTENCE OF ANDERSON AND GEOMETRIC-TYPE LOCALIZATION OF CURRENT CARRIERS IN MULTIMODE WIRES WITH SURFACE DISORDER
Yu. Tarasov, **L. Shostenko**, *Ukraine* 12:45 – 13:00
7. TIME DOMAIN GREEN'S FUNCTION FOR A SEMI-PENETRABLE CIRCULAR CONE WITH LONGITUDINAL SLOTS
V. Doroshenko, **O. Strelnytskyi**, *Ukraine* 13:00 – 13:15
8. EXPERIMENTAL STUDY OF THERMAL DEGRADATION INFLUENCE ON CARBON FIBER REINFORCED PLASTICS REFLECTIVITY IN SUB-TERAHERTZ FREQUENCY RANGE
P. Nesterov, T. Zinenko, **V. Yachin**, *Ukraine* 13:15 – 13:30
9. NONLINEAR DIFFRACTION BY MULTILAYER DIELECTRIC
A. Lerer, **I. Donets**, S. Tsvetkovskaya, *Russia* 13:30 – 13:45
10. EQUILIBRIUM ELECTROMAGNETIC FIELD FREQUENCY IN PLASMA IN THE QUASICLASSICAL CASE
A. Stupka, *Ukraine* 13:45 – 14:00

15:00 – 17:15

Session IE -Integral Equation

1. SEMIASYMPTOTIC METHOD FOR QUASIPERIODIC IMPEDANCE ROD
V. Borulko, *Ukraine* 15:00 – 15:15
2. MODELING OBJECT RECOGNITION BY THE STRUCTURE OF THE REFLECTED WAVE
D. Lyasota, V. Magro, V. Morozov, *Ukraine* 15:15 – 15:30
3. THE BOUNDARY ELEMENTS MODELLING OF EDDY CURRENTS IN THE ORTHOTROPIC COMPOSITE
V. Pashchenko, *Ukraine* 15:30 – 15:45
4. INVESTIGATION OF PLASMONIC PROPERTIES OF COUPLED METAL WIRES IN THE CLUSTER WITH TRIANGULAR OR SQUARE CONFIGURATION
N. Stognii, N. Sakhnenko, *Ukraine* 15:45 – 16:00
5. ITERATIVE ALGORITHM FOR CALCULATION OF SCATTERING CHARACTERISTICS OF AERIAL RADAR OBJECTS OF RESONANT SIZES WITH COMPLEX SHAPE
G. Zalevsky, O. Sukharevsky, V. Vasilets, *Ukraine* 16:00 – 16:15
6. ELECTROMAGNETIC EXCITATION OF BICONE: ANALYSIS OF CONICAL MONOPOLE AND DISC-CONICAL SCATTERER
D. Kuryliak, **O. Sharabura**, *Ukraine* 16:15 – 16:30
7. ANALYSIS OF THIN DIELECTRIC CYLINDRICAL REFLECTOR HAVING AN ARBITRARY CONIC SECTION PROFILE ILLUMINATED BY COMPLEX LINE SOURCE: H-POLARIZATION CASE
T. Oguzer, **F. Kuyucuoglu**, I. Avgin, A. Altintas, *Turkey* 16:30 – 16:45
8. RADIATION PERFORMANCE OF METAMATERIAL AND ARBITRARY PROFILE CYLINDRICAL REFLECTOR ANTENNA ILLUMINATED BY AN E-POLARIZED COMPLEX SOURCE LINE BEAM
T. Oguzer, **F. Kuyucuoglu**, I. Avgin, *Turkey* 16:45 – 17:00
9. ELECTRODYNAMIC ANALYSIS OF CIRCULAR NANOARRAYS
I. Ivanova, **E. Golovacheva**, A. Lerer, *Russia* 17:00 – 17:15

18:00 – 20:00

Welcome party

9:00 – 10:00

Invited Talks 2

4. POLYNOMIAL APPROACH TO LINEAR ANTENNA ARRAY SYNTHESIS PROBLEM
ACCORDING TO POWER RADIATION PATTERN WITH RESTRICTION ON ITS NORM
M. Andriychuk, O. Bulatsyk, N. Voitovich, *Ukraine* 9:00 – 9:30
5. METHODS OF ANALYTICAL REGULARIZATION IN THE SPECTRAL THEORY OF OPEN
WAVEGUIDES
E. Karchevskii, A. Nosich, *Russia-Ukraine* 9:30 – 10:00

10:30 – 12:15

Session CT - Computational Techniques

1. DETERMINATION OF PARAMETERS OF CLOSELY SPACED RESONANCES USING
FRACTIONAL-RATIONAL APPROXIMATION OF RESONATOR FREQUENCY RESPONSE
M. Andreev, O. Drobakhin, D. Saltykov, *Ukraine* 10:30 – 10:45
2. ON DPT REPRESENTATIONS OF SOLUTIONS TO THE HELMHOLTZ EQUATION IN A CONVEX
N-GON
V. Chumachenko, *Ukraine* 10:45 – 11:00
3. ELECTRODYNAMIC CHARACTERISTICS CALCULATION OF METAMATERIAL IN CIRCULAR
WAVEGUIDE PERIODICALLY FILLED BY DIELECTRIC DISCS
M. Kaliberda, S. Pogarsky, *Ukraine* 11:00 – 11:15
4. ELECTROMAGNETIC WAVE SCATTERING BY PERIODICALLY STRUCTURED CHAINS OF
CLOSELY SPACED SUB-WAVELENGTH WIRES
Yu. Menshikov, *Ukraine* 11:15 – 11:30
5. SINGULARITY EXPANSION METHOD FOR MODELING OF TRANSIENTS IN DYNAMIC OPEN
RESONATORS AND WAVEGUIDES
N. Sakhnenko, *Ukraine* 11:30 – 11:45
6. DUAL METHOD OF MINIMUM SPATIAL EXTENT
S. Vovk, V. Borulko, *Ukraine* 11:45 – 12:00
7. THE WEIGHTED EDGE FINITE ELEMENT METHOD FOR TIME-HARMONIC MAXWELL
EQUATIONS WITH STRONG SINGULARITY
V. Rukavishnikov, A. Mosolapov, *Russia* 12:00 – 12:15

13:00 – 14:45

Session WG - Waveguide Circuits

1. COMPUTED DIELECTRIC PROPERTIES OF FOAM SPECIMENS MEASURED IN RECTANGULAR WAVEGUIDES
L. Filinskyy, *Ukraine* 13:00 – 13:15
2. THE PHYSICAL PROCESSES IN A WAVEGUIDE-DIELECTRIC STRUCTURE
I. Grymaljuk, O. Drobakhin, *Ukraine* 13:15 – 13:30
3. ELECTROMAGNETIC MODELING OF THE E-CROSS DIVIDER-CONVERTER
V. Karlov, *Ukraine* 13:30 – 13:45
4. PROPERTIES OF COMPLEX PARAMETERS OF FIVE-PORT REFLECTOMETER WITH E-PLANE OBLIQUE X- AND T-JUNCTIONS
V. Karlov, M. Andreev, V. Borulko, *Ukraine* 13:45 – 14:00
5. CUTOFF FREQUENCIES OF A WAVEGUIDE FILLED WITH RADIALY NON-UNIFORM MAGNETIZED PLASMA: AN EFFICIENT COMPUTING METHOD
V. Shcherbinin, G. Zaginaylov, *Ukraine* 14:00 – 14:15
6. ON THE STUDY OF THE RESONANT PROPERTIES OF A BICONICAL CAVITY WITH A DIELECTRIC ROD USING THE QUASIREGULAR APPROXIMATION METHOD
P. Zabolotnyy, *Ukraine* 14:15 – 14:30
7. H-PLANE TEE JUNCTION OF RECTANGULAR WAVEGUIDES: THE THREE-DIMENSIONAL CASE
S. Kutsak, L. Logachova, *Ukraine* 14:30 – 14:45

15:00 – 17:00

Session AE -Applied Electromagnetics

1. RAMAN SCATTERING AMPLIFICATION PARAMETERS STUDY IN PHOTONIC CRYSTALS
A. Akopov, A. Lerer, *Russia* 15:00 – 15:15
2. PLASMA LOOP ANTENNA - COMPUTING AND EXPERIMENTAL RESEARCH
S. Buharov, L. Filinskyy, *Ukraine* 15:15 – 15:30
3. POLARIZATION AND SPECTRAL PROPERTIES OF A PHOTONIC CRYSTAL WITH A FERRITE-SEMICONDUCTOR METAMATERIAL INCLUSION
O. Vdovychenko, I. Fedorin, A. Bulgakov, *Ukraine* 15:30 – 15:45
4. SYNTHESIS OF CIRCULARLY POLARIZED FIELD RADIATED BY FOUR ELECTRIC DIPOLES LOCATED OVER SQUARE SCREEN
N. Yelisheva, **N. Gorobets**, *Ukraine* 15:45 – 16:00
5. OPTICAL BISTABILITY IN A METALLIC GRATING WITH SLITS FILLED A KERR-TYPE MEDIUM
L. Kochetova, S. Prosvirnin, V. Tuz, *Ukraine* 16:00 – 16:15
6. ELECTRODYNAMIC CHARACTERISTICS OF IMPEDANCE DIPOLE LOCATED OVER IDEALLY CONDUCTING RECTANGULAR SCREEN
N. Yelisheva, *Ukraine* 16:15 – 16:30
7. SUBSTRATE APPLICATION OF ELECTRICALLY ENHANCED MICROWAVE METAMATERIALS
O. Rybin, S. Wang, *China* 16:30 – 16:45

17:15-19:45

Museum Excursion

20:00-22:00

Banquet

9:00 – 10:00

Invited Talks 3

6. 2D ELECTRON AND ELECTROMAGNETIC WAVES IN GRAPHENE METAMATERIALS.
GRAPHENE SOLID-STATE ELECTRON OPTICS
Yu. Rapoport, V. Grimalsky, C. Castrejon-M., S. Koshevaya, *Ukraine-Mexico* 9:00 – 9:30
7. REFLECTION OF WAVE BEAMS AND PULSES FROM NON-PERIODIC BRAGG LAYERED
STRUCTURES
V. Borulko, O. Drobakhin, D. Sidorov, *Ukraine* 9:30 – 10:00

10:30 – 12:45

Session BP - Beams and Particles

1. THE ENERGY LOSS OF HIGH-VELOCITY CHARGES IN THE STRUCTURES WITH TWO-
DIMENSIONAL ELECTRON GAS
A. Dormidontov, Yu. Prokopenko, S. Khankina, V. Yakovenko, *Ukraine* 10:30 – 10:45
2. TWO-PROBE DISPLACEMENT MEASUREMENT BY MICROWAVE INTERFEROMETRY
O. Pylypenko, A. Doronin, **N. Gorev**, I. Kodzheshirova, *Ukraine* 10:45 – 11:00
3. RELAXATION PHENOMENA IN A HOMOGENOUS PLASMA
V. Gorev, A. Sokolovsky, *Ukraine* 11:00 – 11:15
4. LANDAU EQUATION MODES OF A COULOMB PLASMA
V. Gorev, A. Sokolovsky, *Ukraine* 11:15 – 11:30
5. EXCITATION OF THE LOW-VOLTAGE CRM OSCILLATIONS AT THE SECOND HARMONIC OF
CYCLOTRON FREQUENCY
S. Kishko, S. Ponomarenko, A. Kuleshov, B. Yefimov, L. Zavertannaya, *Ukraine* 11:30 – 11:45
6. TORCH DISCHARGE RESISTANCE
A. Puzanov, **A. Kuleshov**, B. Yefimov, *Ukraine* 11:45 – 12:00
7. THE EXTENSION OF THE OPERATION FREQUENCY RANGE OF THE RESONANT BWOS BY
USE OF THE MULTISTAGE GRATINGS
S. Ponomarenko, S. Kishko, A. Kuleshov, E. Khutoryan, B. Yefimov, *Ukraine* 12:00 – 12:15
8. RELAXATION DAMPING OF PLASMA OSCILLATIONS
V. Gorev, **A. Sokolovsky**, *Ukraine* 12:15 – 12:30
9. LONG-WAVE LONGITUDINAL OPTICAL PHONONS AS QUANTA OF ELECTROMAGNETIC
FIELD IN CUBIC IONIC CRYSTALS
A. Stupka, *Ukraine* 12:30 – 12:45

13:30 – 15:15 Session PRS - Propagation and Remote Sensing

1. POLARIMETRIC APPROACH TO IMPROVE ESTIMATION OF DROP SIZE DISTRIBUTION AND WIND RELATED PHENOMENA
Yu. Averyanova, F. Yanovsky, *Ukraine* **13:30 – 13:45**
2. TUNNELING OF RECTANGULAR WAVE PACKAGES THROUGH RESONANT QUANTUM SYSTEMS
N. Ivanov, V. Skalozub, *Ukraine* **13:45 – 14:00**
3. THE COMPARATIVE ANALYSIS OF MODELS FOR ESTIMATION OF THE TOTAL MOISTURE CONTENT OF THE TROPOSPHERE THROUGH THE GPS MEASUREMENTS OVER KHARKOV
A. Kovorotniy, F. Kivva, V. Gorobets, *Ukraine* **14:00 – 14:15**
4. EVALUATION OF ON-GROUND OBJECT RADAR DETECTABILITY REDUCTION
M. Legenkiy, A. Butrym, M. Antyufeyeva, *Ukraine* **14:15 – 14:30**
5. RADAR CROSS-SECTION CALCULATION FOR UNMANNED AERIAL VEHICLE
I. Ryapolov, O. Sukharevsky, V. Vasilets, *Ukraine* **14:30 – 14:45**
6. POLYDISPERSE MEDIUM OF RAINDROPS
G. Khlopov, **G. Veselovska**, *Ukraine* **14:45 – 15:00**
7. PREDICTIVE MAP OF GEOELECTRIC SECTIONS OF NORTH AND SOUTH AMERICA FOR THE CALCULATION OF THE GROUND WAVE FIELD PROPAGATION
Yu. Bashkuev, V. Advokatov, L. Angarkhaeva, *Russia* **15:00 – 15:15**

15:30 – 16:00

Closing Ceremony

17:00-20:00

Boat Trip