
TECHNICAL PROGRAM

Monday, September 25th**9⁰⁰-18⁰⁰: *Arrival and Registration***

Tuesday, September 26th**9⁰⁰-10⁰⁰: *Registration*****10⁰⁰-10²⁰: *Opening and Welcome*****10²⁰-13⁰⁰: *Plenary Session***

- Dramatic History and Impact of Decimeter-Wave Radar “Zenit” Developed in Kharkiv in the 1930s *A. I. Nosich, Kharkiv, Ukraine*
- Timeline of Department of Applied and Computer Radiophysics of Oles Honchar Dnipro National University (50-year anniversary) *O. O. Drobakhin, Dnipro, Ukraine*
- Low-frequency inverse-source algorithms for spherical media *P. Prokopiou, N. L. Tsitsas, Thessaloniki, Greece*
- Tunnel Detection and Visualization Using the Method of Auxiliary Sources *V. Tabatadze, B. Baratashvili, I. Petoev, R. Zaridze, Tbilisi, Georgia*
- ELF Radio Emission Associated With Strong M6.0 Earthquake *L. Gheonjian, T. Paatashvili, G. Kapanadze, Tbilisi, Georgia*

13⁰⁰-14⁰⁰: *Lunch***14⁰⁰-16²⁰: *Diffraction and Scattering***

- Basic Ideas and Advantages of the Method of Analytical Regularization in Computational Optics – (invited) *A. I. Nosich, M. V. Balaban, V. O. Byelobrov, D. M. Natarov, T. L. Zinenko, Kharkiv, Ukraine*
- Method of Partial Overlapping Regions for Solving Electromagnetic Problems *A. B. Gnilenko, V. I. Magro, Dnipro, Ukraine*
- Resonant Characteristics of Impedance Monopole Placed on Flat Infinite Metal Screen *N. P. Yeliseyeva, V. A. Katrich, M. V. Nesterenko, Kharkiv, Ukraine*
- Calculating Fields of Three-dimensional Structures *B. Levin, Holon, Israel*
- Fractional-Rational Representation of the Frequency Spectrum of the Scattered Field for a Drude-Metal Nanowire Resonating on Localized Surface Plasmons *M. V. Andreev, O. O. Drobakhin, Dnipro, Ukraine, N. P. Stognii, N. K. Sakhnenko, Kharkiv, Ukraine*

- Analysis of Terahertz Wave Reflection by an Array of Double Dielectric Elements Placed on a Reflective Substrate *N. Sydoruk, S. Prosvirnin, Kharkiv, Ukraine*
- Diffraction Radiation of a Slot into a Space over an Impedance Screen *S. L. Berdnik, Yu. M. Penkin, V. A. Katrich, M. V. Nesterenko, Kharkiv, Ukraine*

16²⁰-16⁴⁰: Coffee Break

16⁴⁰-18²⁰ Acoustics and Applications

- Mathematical Models of Acoustic Wave Scattering by Impedance Strip *G. I. Koshovy, Kharkiv, Ukraine*
- Diagnosis Methods of Cardiovascular Disease, Based on the Acoustic-Mechanotron Principle of Pulse Wave Sensing *A. Taranchuk, S. Pidchenko, Khmelnytsky, Ukraine*
- A Mathematical Model for Propagation of Long Acoustic Waves in The Flow of a Gas Pipeline *V. Chekurin, O. Khymko, Lviv, Ukraine*
- Synthesis of Cobalt Ferrite Nanoparticles by Ultrasonic Wave-Assisted Technology *L. A. Frolova, O. I. Kushnerov, A. V. Derimova, Dnipro, Ukraine*
- SH-Wave Diffraction on a Crack in Two-Layer Composite *V. Z. Stankevych, I. O. Butrak, Lviv, Ukraine*

Wednesday, September 27th

9⁰⁰-12⁰⁰: Waveguide and Layered Structures

- Methods for the Analysis of Wave Scattering and Generation by Layered and Periodic Structures *L. Angermann, Clausthal-Zellerfeld, Germany, V. V. Yatsyk, M. V. Yatsyk, Kharkiv, Ukraine*
- Application of the Method of Auxiliary Sources to Toroidal Resonator Study *I. Petoev, V. Tabatadze, M. Prishvin, R. Zaridze, G. Afridonidze, Tbilisi, Georgia*
- On the Theory of Propagation of Electromagnetic Waves in a Waveguide with Multiperiodically Modulated Filling *E.A. Gevorkyan, Moscow, Russia*
- Electromagnetic Pulses Compression in Helically Coiled Dielectric Waveguide *M. V. Maiboroda, V. L. Pazynin, H. O. Sliusarenko, Kharkiv, Ukraine*

10²⁰-10⁴⁰: Coffee Break

- The Fabry-Perot Resonator with Coaxial-Sector Apertures and Waveguide Loads *Y. V. Antonenko, A. V. Gribovsky, Kharkiv, Ukraine*

- The Research of Eigenmodes of Magnetodielectric Layer, Screened by an Isotropic Impedance Surface *V. M. Kochin, D. V. Mayboroda*, Kharkiv, Ukraine
- 1D Inverse Problems of Electromagnetic Theory of Layered Inhomogeneous Anisotropic Media *N. Yashina, A. Brovenko, N. Melezhik, P. Melezhik, A. Poyedinchuk, O. Troshchylo*, Kharkiv, Ukraine
- T-junction of Rectangular Waveguides with Monopole-Slot Coupling Structure and Elements Coated by a Metamaterial *S. L. Berdnik, V. A. Katrych, V. I. Kiyko, M. V. Nesterenko, Yu. M. Penkin*, Kharkiv, Ukraine

13⁰⁰-14⁰⁰: *Lunch*

14⁰⁰-16²⁰: *Inhomogeneous Media*

- Interaction a Tube Beam of Charged Particles with a Dispersive Medium of Cylindrical Configuration – (invited) *Yu. O. Averkov, Yu. V. Prokopenko, V. M. Yakovenko*, Kharkiv, Ukraine
- Quantum Statistical Approach to Electromagnetic Wave Propagation in Dissipative Media *K. G. Zloshchastiev*, Durban, South Africa
- On the Kinetics of a Many-Body Dissipative System Placed in a Random Field *V. N. Gorev, A. I. Sokolovsky*, Dnipro, Ukraine
- Dissipative Losses at Nonstationary Electromagnetic Probing of Orthotropic Low-conducting Composites *V. O. Pashchenko, V. S. Khandetskyi, N. V. Karpenko*, Dnipro, Ukraine
- Mathematical Model of the Compensating High Frequency Line Reactor *V. O. Brzhezytskyi, M. Y. Laposha, V. V. Mykhailenko, Y. V. Peretyatko*, Kharkiv, Ukraine
- Electromagnetic Near-Field of Arc Slot, Cut in Coaxial Line Shield *V. A. Katrich, V. A. Lyashchenko, N. V. Medvedev, A. V. Olefir*, Kharkiv, Ukraine
- Interaction of Eigen Oscillations in a Cylindrical Cavity with Composite Material *E. Shulga, A. Poedinchuk, I. Kuzmichev, A. Popkov*, Kharkiv, Ukraine

16²⁰-16⁴⁰: *Coffee Break*

16⁴⁰-18⁴⁰: *EM Field Application*

- Tbilisi State University Extremely Low Frequency Radiation Research Net (ELFTSU Net): the First Measurements at Station Locations *L Gheonjian, T. Paatashvili, G. Kapanadze, L. Bebiava, R. Kereselidze, A. Rikadze, D. Samkharadze, P. Tsotskolauri, I. Buzaladze, T. Dighmelishvili, G. Dolidze, S. Evajian, S. Gachechiladze, L. Giorgobiani, I. Kuprashvili, G. Lomidze, M. Oragvelidze, Sh. Rakviashvili, A. Tkhinvaleli, I. Ubiria*, Tbilisi, Georgia

- Microwave Subsurface Imaging of Inhomogeneous Dielectrics and Composite Structures *V. Dzhala, A. Synyavskyy*, Lviv, Ukraine
- Study of Self-healing and Self-assembly Processes in Polymer Nanocomposites Synthesized with Carbon Nanoparticles Doped by Magnetic Nanoclusters *T. Gavasheli, T. Gegechkori, G. Ghvedashvili, G. Mamniashvili*, Tbilisi, Georgia
- Human Exposure Analysis for Several Different Human Voxel Models *E. Yavolovskaya, G. Gabriadze, G. Chiqovani, R. Jobava*, Tbilisi, Georgia
- Functional Neutralization of Small-size UAVs by Focused Electromagnetic Radiation *A. V. Gomozov, D. V. Gretskih, V. A. Katrich, M. V. Nesterenko*, Kharkiv, Ukraine
- Iterative Algorithm for Simulation of EM Scattering by Objects, Contained Constructive Elements of Different Electric Sizes *O. I. Sukharevsky, G. S. Zalevsky, V. A. Vasilets*, Kharkiv, Ukraine

19⁰⁰-21⁰⁰: *Closing Session and Dinner*

Thursday, September 28th

10⁰⁰-12⁰⁰: *Antenna Design*

- Two-Probe Displacement Measurement Technique Accounting for the Antenna Reflection Coefficient *O. V. Pylypenko, A. V. Doronin, N. B. Gorev, I. F. Kodzhespirova*, Dnipro, Ukraine
- Array of the Four Arc Monopoles on a Sphere with Surface Impedance *V. M. Dakhov, S. L. Berdnik, N. K. Blinova, Yu. M. Penkin*, Kharkiv, Ukraine
- Small-size Antenna Array of Cylindrical Dielectric Radiators *Ye. A. Antonenko, A. I. Karpov*, Kharkiv, Ukraine
- Base Station Antenna's EM Exposure Study on a Homogeneous Human Model Located Inside the Car *T. Nozadze, V. Jeladze, V. Tabatadze, I. Petoey, M. Prishvin, R. Zaridze*, Tbilisi, Georgia
- Effect of Concentrated Loads on Characteristics of Antennas with Different Currents Distribution *B. Levin*, Holon, Israel
- Reduction of the Side-lobe Level of the Radiation Pattern of the Multielement Linear Radiator Based on a Trough Waveguide *M. V. Andreev, O. O. Drobakhin, A. L. Makarov, V. O. Sydoruk*, Dnipro, Ukraine

12⁰⁰-12²⁰: *Coffee Break*

12²⁰-15²⁰: Numerical Computational Techniques

- Complex Zeros of Solutions to the Synthesis Problem of Irregular Linear Antenna Array by Amplitude Radiation Pattern *O. O. Bulatsyk, N. N. Voitovich*, Lviv, Ukraine
- Investigation of Nonunique Solutions in the Synthesis Problems of Radiating Systems with a Flat Aperture According to the Prescribed Amplitude Directivity Pattern *P. Savenko, M. Tkach*, Lviv, Ukraine
- On Theory Nonlinear Relaxation in Polaron Sybsystem of Polar Semiconductors *S. A. Sokolovsky*, Dnipro, Ukraine
- Application Notes on a Lossy Medium Model in the Method of Auxiliary Sources and Solving of Eigenvalue Problems *D. Kakulia, N. Sazandrishvili, G. Ghvedashvili*, Tbilisi, Georgia

13⁰⁰-14⁰⁰: Lunch

- Analysis of Input Pulse Parameters for Numerical Solutions of Maxwell Equations by Finite Difference Method *A. A. Breslavets*, Kharkiv, Ukraine
- Solving the Electromagnetic Wave Scattering Problem by Integral Equation Method *M. I. Andriychuk, Y. F. Kuleshnyk*, Lviv, Ukraine
- Investigation of the Regularization Procedures in Synthesis Problems of Radiating Systems According to Power Radiation Pattern *Yu. P. Topolyuk*, Lviv, Ukraine
- Polynomial and Rational Approximate Models of Microwave Elements *M. V. Andreev, V. F. Borulko*, Dnipro, Ukraine
- Computation Scheme for Collective Spontaneous Radiation in a Medium of Two-Level Emitters *S. F. Lyagushyn, A. I. Sokolovsky*, Dnipro, Ukraine

15³⁰-16⁰⁰: DIPED-2017 Closing