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**TECHNICAL PROGRAM**

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**Monday, September 24<sup>th</sup>****9<sup>00</sup>-18<sup>00</sup>: *Arrival and Registration***

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**Tuesday, September 25<sup>th</sup>****9<sup>00</sup>-10<sup>00</sup>: *Registration*****10<sup>00</sup>-10<sup>30</sup>: *Opening and Welcome*****10<sup>30</sup>-13<sup>00</sup>: *Plenary Session***

- MoM Solution to Scattering Problem on Multi-Region Composite Structures with Various Type Material Junctions *F. G. Bogdanov, L. Svanidze, R. Jobava, Tbilisi, Georgia*
- A Beam De-Broadening Algorithm for Atmospheric Radar *K. Nishimura, M. Kohma, K. Sato, T. Sato, Tachikawa, Japan*
- Accessing UXO Classification Technologies at a Challenging Live-UXO *I. Shamatava, G. Schultz, F. Shubitidze, New Hampshire, USA*
- Localization of the Scattered Field's Singularities Using the Method of Auxiliary Sources *I. Petoev, V. Tabatadze, R. Zaridze, S. Invia, Tbilisi, Georgia*

**13<sup>00</sup>-14<sup>00</sup>: *Lunch*****14<sup>00</sup>-16<sup>20</sup>: *Diffraction and Scattering***

- Electromagnetic Internal Gravity Waves in an Ideally Conducting Medium *T. D. Kaladze, L. V. Tsamalashvili, D. T. Kaladze, Tbilisi, Georgia*
- Analysis of Pulse Signal Reflection in Bragg-Type Layered Structures *M. V. Andreev, V. F. Borulko, O. O. Drobakhin, Dnipro, Ukraine*
- Optical Diffraction Radiation of a Beam of Particles Flowing Near a Circular Silver Nanowire *D. O. Yevtushenko, Kharkiv, Ukraine*
- Numerical Specifics in Nonlinear Layer Computation Near Eigen Frequencies of Scattering and Generation *L. Angermann, Clausthal-Zellerfeld, Germany, V. V. Yatsyk, M. V. Yatsyk, Kharkiv, Ukraine*
- Control of Backscattering of H-polarized Plane Wave by a Circular Dielectric Rod with Partial Graphene Cover *S. V. Dukhopelnykov, Kharkiv, Ukraine*
- Dual-Symmetric Form of Integral Equations for Antenna Currents *Yu. M. Penkin, V. A. Katrich, M. V. Nesterenko, S. L. Berdnik, Kharkiv, Ukraine*

- Characteristics of Resonant Impedance Dipole Placed Inside Dihedral Corner Reflector *N. P. Yeliseyeva, V. A. Katrich, M. V. Nesterenko, S. L. Berdnik, Kharkiv, Ukraine*

### 16<sup>20</sup>-16<sup>40</sup>: *Coffee Break*

### 16<sup>40</sup>-18<sup>00</sup> *Waveguides and Transmission Lines*

- Transient Radiation of Charged Particle in a Waveguide Completely and Partially Filled with an Anisotropic Magnetodielectric Medium *E. A. Gevorkyan, Moscow, Russia*
- Features of Scattering of a Cylindrical Wave by an Impedance Strip Using the Method of Fractional Derivatives *E. I. Veliev, K. Karaçuha, E. Karaçuha, Istanbul, Turkey*
- Analysis of Eigen Modes of Lasers Based on Nanowire Gratings *D. Natarov, Kharkiv, Ukraine*
- Electrodynamics Model of a Wireless Power Transmission System *D. V. Gretsikh, A. I. Luchaninov, J. V. Vishniakova, V. A. Katrich, M. V. Nesterenko, Kharkiv, Ukraine*

## Wednesday, September 26<sup>th</sup>

### 10<sup>00</sup>-11<sup>40</sup>: *Analytical and Numerical Techniques*

- The Electromagnetic Field and Radiation Reaction Force for Point Charged Particle with Magnetic Moment *I. Lomidze, N. Chachava, Tbilisi, Georgia*
- Integral Equation for Non-Directional Radiators *B. M. Levin, Holon, Israel*
- Solutions to Fokker-Planck Equations for Non-Gaussian White Noise in FET Undergoing Weak Inversion *A. J. Samson, Calamba, Philippines*
- Modified Prony Method for Integration of Highly Oscillating Functions *V. F. Borulko, Dnipro, Ukraine, G. P. Zouros, Athens, Greece*
- A Numerically Stable Algorithm for Resonance Frequency Analysis of Circular Cylinders *E. Sever, F. Dikmen, M. E. Hatipoğlu, Y. A. Tuchkin, Kocaeli, Turkey*
- Numerical Stabilization of Recursive T Matrix Method in 2D for TM-z Scattering from Circular Boundaries *M. E. Hatipoğlu, F. Dikmen, E. Sever, Y. A. Tuchkin, Kocaeli, Turkey*
- A New Solution Method for Third Kind Modified Wiener-Hopf Equations Having Different Kernel Functions Related to the Diffraction of Electromagnetic Waves *A. Alkumru, K. Durgut, S. Gedikli, H. A. Ülkü, Kocaeli, Turkey, M. Doğan, Istanbul, Turkey*

**11<sup>40</sup>-12<sup>00</sup>: Coffee Break**

**12<sup>00</sup>-13<sup>20</sup>: Inverse Problems and Synthesis**

- In Memory of Prof. G. Sh. Kevanishvili *F. Bogdanov*, Tbilisi, Georgia
- Some Generalizations of the Synthesis Problem for Plane Arrays  
*M. I. Andriychuk, Y F. Kuleshnyk*, Lviv, Ukraine
- Shape Reconstruction of Body of Revolution at Resonant Frequencies  
*O. Kusyi, N. N. Voitovich*, Lviv, Ukraine
- The Nonuniqueness of Solutions to the Synthesis Problems of Plane Array by the Prescribed Amplitude Directivity Pattern *P. Savenko*, Lviv, Ukraine

**13<sup>20</sup>-14<sup>00</sup>: Lunch**

**14<sup>00</sup>-17<sup>00</sup>: Acoustics and Applications**

- Mathematical Models of Acoustic Wave Scattering by Finite Flat Impedance Strip Grating *G. Koshovy, A. Nosich*, Kharkiv, Ukraine
- Acoustic Plane Wave Diffraction by an Aperture in a Soft Infinite Screen  
*V. Lysechko, D. Kuryliak*, Lviv, Ukraine
- Acoustic Filtering Properties of 3D Elastic Metamaterials Structured by Crack-Like Inclusions *I. Ya. Zhabadynskyi, V. V. Mykhas'kiv*, Lviv, Ukraine
- Cracks Interaction in the Elastic Composite under Action of the Harmonic Loading Field *V. Z. Stankevych, I. O. Butrak, V. V. Kovalchuk*, Lviv, Ukraine
- Effective Dynamical Parameters of Piezoelectric Medium with Randomly Distributed Piezoelectric Inclusions *R. V. Rabosh, Ya. I. Kunets, Yu. I. Maksymiv*, Lviv, Ukraine
- Waves of Pressure in Gas Pipeline: a Telegraph-Type Model *V. Chekurin, O. Khymko*, Lviv, Ukraine
- Wave Displacement Field on an Elastic Bi-Material Surface due to a Mode III Crack Opening *O. M. Stankevych*, Lviv, Ukraine
- SketchUP to Catt-Acoustic Converter of Interior Design 3D Models  
*M. Melnyk, A. Kernytskyy*, Lviv, Ukraine, *J. Rubacha, T. Kamisinski*, Krakow, Poland
- Investigation of the Crack's Effect on SH-Waves Propagation Based on the Regularized Formula of Inverse Laplace Transform *T. Solyar*, Lviv, Ukraine

**17<sup>00</sup>-17<sup>20</sup>: Coffee Break**

**17<sup>00</sup>-19<sup>00</sup>: Antenna Design**

- Directed Circular Polarized Antenna *V. Barbakadze, V. Tabatadze, I. Petoey, R. Zaridze*, Tbilisi, Georgia
- Reconfigurable Band-Notched Compact C-shaped Printed Antenna for UWB Applications *A. Toktas, E. Yigit, D. Ustun, K. Sabanci, M. Yerlikaya*, Karaman, Turkey
- An UWB Antenna Design Having Band–Reject Characteristic by Y–Shaped Strip *D. Ustun, A. Toktas, K. Sabanci, E. Yigit, F. Toktas*, Karaman, Turkey
- Dual–Band Microstrip Quasi–Yagi Antenna Design for Free Band and 5G Mobile Communication *F. T. Çelik*, Ankara, Turkey, *K. Karaçuha*, Istanbul, Turkey
- Modeling of the Hybrid Dielectric Rod Surface Mount Antenna *S. V. Bukharov, L. A. Filins'kiy, O. O. Lysychnyy, P. V. Krasnoshlyk*, Dnipro, Ukraine

**19<sup>00</sup>-21<sup>00</sup>: DIPED-2017 Dinner**

**Thursday, September 27<sup>th</sup>**

**10<sup>00</sup>-12<sup>00</sup>: Medical and Geophysical Applications**

- Mobile Phone Antenna's EM Exposure Study on a Homogeneous Human Model Inside the Car *T. Nozadze, V. Jeladze, V. Tabatadze, I. Petoey, R. Zaridze*, Tbilisi, Georgia
- The Crank-Nicolson FDTD Method in Cylindrical Coordinates and Its Application to Underwater UXO Detection and Classification Problems *T. Shubitidze, B. E. Barrowes, M. Prishvin, K. O'Neill, Fr. Shubitidze*, New Hampshire, USA *E. Chapman*, Claremont, CA, NH, USA
- Heat Production During mNP Hyperthermia – Applied on a Deep Seated Tumors *A. Lomia, L. Shoshiashvili, D. Kakulia, B. Baratashvili, G. Chaganava, G. Ghvedashvili*, Tbilisi, Georgia *F. Shubitidze*, New Hampshire, USA
- Tbilisi State University Extremely Low Frequency Radiation Research Net (ELFTSU Net): the Concept and Structure of ELF Observation Station *L. Gheonjian, T. Paatashvili, M. Oragvelidze, P. Tsotskolauri*, Tbilisi, Georgia
- Tbilisi State University Extremely Low Frequency Radiation Research Net (ELFTSU Net): Earthquake Triggering and Synchronization Concept for the Net Operation *L. Gheonjian, T. Paatashvili, M. Oragvelidze, P. Tsotskolauri*, Tbilisi, Georgia
- Grain Moisture Detection by Using A-Scan Radar Measurement *E. Yiğit, K. Sabanci, A. Toktaş, D. Ustun, H. Duysak*, Karaman, Turkey

**XXIII<sup>rd</sup> International Seminar/Workshop DIPED-2018, September 24-27, 2018  
Tbilisi, Georgia**

**12<sup>00</sup>-12<sup>20</sup>: *Coffee Break***

**12<sup>20</sup>-14<sup>00</sup>: *Modeling in Electronics***

- Modeling and Validation of the Basic EMC Filter at Different Simulation Levels *D. Eremyan, A. Gheonjian, D. Imnadze, Z. Kut Chadze, M. Oragvelidze, R. Jobava, Tbilisi, Georgia , H. Ben Htira, Waldenburg, Germany*
- Magnetometry and NMR Study of Carbon Nanopowders Doped with Cobalt Nanoclusters and Self-assembly of their Polymer Nanocomposites under Magnetic Field *T. Gavasheli, Z. Shermadini, G. Ghvedashvili, S. Suladze, G. Mamniashvili, T. Gegechkori, L. Rukhadze, Tbilisi, Georgia*
- Optimally Synthesizing Multilayer Radar Absorbing Material (RAM) Using Artificial Bee Colony Algorithm *A. Toktas, D. Ustun, E. Yigit, K. Sabanci, M. Tekbas, Karaman, Turkey*
- GPR Image Focusing Using Matched Filter Algorithm *D. Ustun, K. Sabanci, A. Toktas, E.Yigit, H. Duysak, Karaman, Turkey*
- WiFi Based Indoor Localization: Application and Comparison of Machine Learning Algorithms *K. Sabanci, E. Yigit, D. Ustun, A. Toktas, M. F. Aslan, Karaman, Turkey*

**14<sup>00</sup>-15<sup>00</sup>: *Lunch***

**15<sup>00</sup>-15<sup>30</sup>: *DIPED-2018 Closing***