IEEE Ukrainian Microwave Week

UkrMW-2026 Program

August 17–20, 2026

01. Opening ceremony

17.08.2026 10:00--10:20 · Room #1 (Mon.)

10:00--10:20 **Welcome notes to UkrMW 2026 participants**

02. Physics and Engineering of Microwaves, Millimeter and Submillimeter Waves (MSMW)

17.08.2026 11:00--18:45 · Room #1 (Mon.)

MSMW-01 CHAIRS:

11:00--11:15 **Spectral Mechanism of Interference Reflection in Multi-Slot Irises of a Circular Waveguide**
Steshenko, Sergiy; Kirilenko, Anatoly; Derkach, Vadim; Ostryzhnyi, Yevhenii*

11:15--11:30 **Output Characteristics of the 330 GHz Clinotron with Modified Cavity for Practical Applications**
Kuleshov, Oleksiy; Vlasenko, Sergey; Kovshov, Yurii; Kishko, Sergey; Kuleshova, Anna; Shumilin, Anton; Khutoryan, Eduard; Kirilenko, Anatoly; Steshenko, Sergiy*

11:30--11:45 **Enhancing the Efficiency of Ultralow-Temperature Photon-Magnon Conversion via Photonic-Crystal Waveguides**
Odarenko, Eugene; Polevoy, Sergey; Tarapov, Sergiy; Girich, Aleksey; Kalmykova, Tetiana*

11:45--12:00 **Using a Pair of Matched Inclined Dielectric Slabs for Mode Filtering in a Fabry-Perot Resonator**
Pazynin, Vadym; Veselovska-Maiboroda, Ganna; Sirenko, Kostyantyn; Maiboroda, Maksym; Makhanov, Kanat; Burambayeva, Nursuale; Keusgen, Wilhelm*

12:00--12:15 **Approximate Analysis of Scattering by a Finite Nanoscale Silver Tube Under E-Polarization**
Svezhentsev, Oleksandr; Senkevych, Olena; Volski, Vladimir; Vanderbosch, Guy*

12:15--12:30 **Intermodal Coupling in a Three-Dimensional THz Circuits of a Clinotron and Double Grating BWO**
Khutoryan, Eduard; Kuleshov, Oleksiy ; Steshenko, Sergiy*

MSMW-02 CHAIRS:

13:30--13:45 **3D-Printed Dielectric Waveguides: A Study for Millimeter-Wave Applications**
Mizrakhy, Sergey; Kolenov, Ivan; Nesterov, Igor ; Nesterov, Pavel; Lukash, Alexey; Vertiy, Alexey*

13:45--14:00 **Tight focusing of Terahertz Vortex Beams Formed by Radially Polarized Modes**
Dubinin, Mykola; Degtyarev, Andrey; Maslov, Vyacheslav; Muntean, Konstantin; Pronin, Yevhen*

14:00--14:15 **Grating-Induced Localized Surface Modes in a Grating-Dielectric-YIG Structure Above the Cutoff Frequency**
Melezhik, Peter; Poyedinchuk, Anatoliy; Brovenko, Andriy; Khutoryan, Eduard; Senkevych, Olena ; Yahina, Nataliya*

14:15--14:30 **Splitting of the Spectrum of Damon-Eshbach Spin Waves in a Structure "Strip Periodic Grating -- Yttrium Iron Garnet Film -- Gadolinium Gallium Garnet Substrate"**
Melezhik, Peter; Poyedinchuk, Anatoliy; Brovenko, Andriy; Khutoryan, Eduard; Senkevych, Olena; Yahina, Nataliya*

14:30--14:45 **Using Gradient Gratings for Efficiency Enhancement of THz Vortex Laser Beams Forming**
Odarenko, Eugene; Maslov, Vyacheslav; Dzyubenko, Mikhail; Radionov , Vladimir*

14:45--15:00 **Spin-Torque Microwave Detector Driven by Positive Rectangular Current Pulses**
Prokopenko, Volodymyr; Shtanko, Oleh; Sotnyk, Iryna; Prokopenko, Oleksandr*

15:00--15:15 **Compact 90-Degree Polarization-Plane Rotators in a Square Waveguide Based on Chiral Irises With Rectangular and L-Shaped Slots**
Kulik, Dmitriy; Steshenko, Sergiy; Kirilenko, Anatoly*

MSMW-03 CHAIRS:

15:30--15:45 **A Differential SOI-CMOS Stacked-MOSFET RF Switch with Monolithically-Integrated Balun**
Solomko, Valentyn; Zhang, Yiwen; Hsu, Ting-Li*

15:45--16:00 **Negative Dispersion and Resonant Mode Hybridization in a Six-Layer Metasurface-Dielectric-Semiconductor Structure**
Averkov, Yuriy; Averkov, Oleg; Beletskii, Mykola*

16:00--16:15 **Unsupervised Learning of Artificial "Neurons" Based on Josephson-like Antiferromagnetic Spin Hall Oscillator**
Sotnyk, Iryna; Prokopenko, Oleksandr*

16:15--16:30 **A Highly Linear 10 W Shunt Differential SOI-CMOS RF Switch**
Solomko, Valentyn; Zhang, Yiwen; Hsu, Ting-Li*

16:30--16:45 **Interaction Between a Tubular Electron Beam and Eigenwaves Fields of a Layered Superconductor of Cylindrical Configuration**
Averkov, Yuriy; Averkov, Oleg; Krakhmalova, Olena; Prokopenko, Yuriy; Williams, Nannette; Yampol'skii, Valery*

16:45--17:00 **A Long-Range Three-Position Network for Measuring Tweek-Atmospherics**
Shvets, Alisa; Shvets, Alexander; Koloskov, Oleksandr; Bogomaz, Oleksandr*

MSMW-04 CHAIRS:

17:15--17:30 **Limitation of High-frequency Generation in GaN Diodes under Self-heating and Impact Ionization**
Zozulia, Valerii; Khodachok, Yevhen; Botsula, Oleg; Tkachuk, Ludmila; Katrich, Volodymyr; Rusina, Oleksandra*

17:30--17:45 **The Impact of a DC Magnetic Field on the Microwave Properties of a Ferromagnetic Surface Electromagnetic Wave Resonator in the X-Band**
Malyshev, Oleksii; Prokopenko, Oleksandr; Malyshev, Volodymyr; Melkov, Gennadii*

17:45--18:00 **Ultrathin Quasi-Two-Dimensional Electronically Tunable Left-Handed Microwave Metamaterials Based on Titanium Dioxide--Ferrite Structures**
Girich, Aleksey; Polevoy, Sergey; Tarapov, Sergey*

18:00--18:15 **Optimization of the Deposition Technology of Thin Permalloy Films for Spin-Wave Generation**
Kalmykova, Tetiana; Krylov, Sergei; Ščepka, Tomáš; Neilinger, Pavol; Derer, Jan; Polevoy, Sergey; Tarapov, Sergiy; Cambel, Vladimir*

18:15--18:30 **Inverse Anapole Resonator for Hybrid Quantum Systems**
Nedukh, Sergiy; Girich, Aleksey ; Polevoy, Sergey ; Tarapov, Sergiy*

18:30--18:45 **Current-Driven Mutual Synchronization of Two Antiferromagnetic Spin Hall Oscillators**
Shtanko, Oleh; Prokopenko, Oleksandr*

03. Microwaves, Radar and Remote Sensing (MRRS)

17.08.2026 11:00--17:45 · Room #2 (Mon.)

MRRS-01 CHAIRS:

11:00--11:15 **Characterization of Helicopter Rotor Blade Modulation in UHF and Microwave Bands**
Keusgen, Wilhelm; Schultze, Alper; Schmieder, Mathis; Peter, Michael; Eichler, Taro*

11:15--11:30 **A Cost-Effective 3D Radar System with Frequency Beam Scanning for Security Applications**
Volkov, Vadym; Vavriv, Dmytro; Vinogradov, Volodymyr; Sekretarov, Stanislav; Kravtsov, Andriy*

11:30--11:45 **Multisensor UAV-Based Technique Development For Landmine Detection**
Mizrakhy, Sergey; Nesterov, Igor; Lukash, Alexey; Kolenov, Ivan*

11:45--12:00 **GNSS Reflectometric Ice Thickness Estimation Using Windowed Lomb-Scargle Spectral Analysis**
Trifanov, Vitalii; Lutsenko , Vladyslav; Soboliak , Oleksandr ; Lutsenko , Iryna ; Kryvenko , Olena ; Popov, Igor*

12:00--12:15 **Design of a UAV-Deployable GPR Sensor for Landmine Detection**
Mizrakhy, Sergey; Nesterov, Igor; Lukash, Alexey; Kolenov, Ivan*

12:15--12:30 **Modelling of Methods for Acoustic Direction Finding of Airborne Objects**
Trifanov, Vitalii; Soboliak, Oleksandr ; Lutsenko , Vladyslav ; Lutsenko, Iryna ; Luo , Yiyang; Kryvenko, Olena*

12:30--12:45 **Passive Coastal Sea Wave Monitoring Using Wavelet-Based Decomposition of Diffuse GNSS Reflections**
Trifanov, Vitalii; Luo , Yiyang; Lutsenko , Vladyslav ; Lutsenko , Iryna ; Soboliak , Oleksandr ; Xuan Anh, Nguyen*

MRRS-02 CHAIRS:

14:00--14:15 **Data Fusion of Multi-Frequency Radar, Radiometer, and In Situ Sensors for Rain and Cloud Research**
Yanovsky, Felix; Pitertsev, Aleksander; Unal, Christine M. H.; Russchenberg, Herman W.J.*

14:15--14:30 **Real-Time Atmospheric Sensing Using the Multiple UAVs**
*Averyanova, Yuliya; Sushych, Oleksii; Shostak, Oleksii; Znakovska, Yevheniia**

14:30--14:45 **A Low-Cost Portable DoA Estimation Equipment for UAV Detection and Tracking**
Zemlyaniy, Oleg; Tatyanko, Dmytro; Shostko, Ihor*

14:45--15:00 **Imitation Jamming to OFDMA Communication Line for Counter Small Remote Sensing UAVs**
Anatoly, Mogyla; Kantsedal, Valeri; Maltsev, Valentyn*

15:00--15:15 **Amplitude and Phase Scintillations of L-Band Radio Waves of GNSS**
Tkachenko, Maksym; Chernogor, Leonid*

15:15--15:30 **Remote Sensing of Extreme Storm-Time Ionosphere: Global Characteristics and Features**
Bessarabova, Valeriia; Chernogor, Leonid*

15:30--15:45 **Basis-Domain Signal Processing for Multi-Sensor UAV Remote Sensing**
Dudnik, Andriy; Fesenko, Andriy; Meleshko, Mykola; Rakytskyi, Vadym; Toroshanko, Olexandr; Mykolaichuk, Vira*

MRRS-03 CHAIRS:

16:15--16:30 **Remote Sensing of the Ionosphere: The Impact of Geomagnetic Storms on Global Electron Content**
Chernogor, Leonid; Shevelev, Mykyta; Tsymbal, Anatoliy; Zhdanko, Yevhen*

16:30--16:45 **Spatial Data Collection Using UAV Sensors and Their Application in Mine Action Operations**
Hutsul, Taras; Khobzei, Mykola; Tkach, Vladyslav*

16:45--17:00 **Representation of Complex Large Objects Using Isotropic Scatterers**
Legenkiy, Maxim; Riasnyi, Yevhenii*

17:00--17:15 **Radio Facility for Multi-Path Frequency-Angle Remote Sensing of the Ionosphere**
*Garmash, Kostyantyn; Chernogor, Leonid; Zhdanko, Yevhen**

17:15--17:30 **Remote Sensing of the Disturbed Ionosphere During May 10-11, 2024, Extreme Geospace Storm**
Hrabko, Tymofii; Chernogor, Leonid; Mylovanov, Yurii*

17:30--17:45 **Neural Network--Based Inversion of Radar Cross Section for a Three-Point Scatterer System**
Buhai, Maksym; Legenkiy, Maxim; Khrychov, Vladyslav*

04. Antenna Theory and Techniques (ICATT)

18.08.2026 11:00--14:30 · Room #3 (Tue.)

ICATT-01 CHAIRS:

11:00--11:15 **Formation of Radiation Patterns of Small-Element Antenna Arrays for GNSS Interference Suppression**
Konin, Valeriy ; Ishchenko, Oksana; Kondratiuk, Vasyl ; Kutsenko, Oleksandr*

11:15--11:30 **Narrow-Beam Antenna for the 8-mm Wavelength Range Based on an Azimuthally Inhomoheous Dielectric Resonator**
*Ostryzhnyi, Yevhenii**

11:30--11:45 **Single-Aperture Perforated Screen Providing Three-Passband Pseudo-Elliptic Frequency Response**
Mospan, Lyudmila; Zelenchuk, Dmitry*

11:45--12:00 **Suppression of Radio Interference in Satellite Navigation Equipment Using a Dual-Ring Antenna Array**
Konin, Valeriy; Ishchenko, Oksana; Kondratiuk , Vasyl ; Kutsenko , Oleksandr*

12:00--12:15 **Single-Port Quadrifilar Loop Antenna for Counter-UAV EW Applications**
Bokhan, Ivan; Lykhograi, Vasyl; Gavva, Dmytro; Gretskih, Dmytro; Bielousov, Oleksii*

12:15--12:30 **Compact Microwave Patch Antenna on Composite Substrate**
Rybin, Oleg; Shulga, Sergey; Khardikov, Vyacheslav; Vinnichenko, Sergey; Raza, Muhammad; Shevchenko, Anatolii*

12:30--12:45 **A Survey on Fractal Geometric Antennas for Multiband and Ultra-Wideband (UWB) Applications**
Mule, Dhanashri; Tambekar, Kshitija*

ICATT-02 CHAIRS:

13:00--13:15 **3D Printed Patch-Driven End-Fire Antenna**
Pochanin, Gennadiy; Pochanina , Iryna; Ruban, Vadym; Korzh, Vadym; Ogurtsova , Tetiana*

13:15--13:30 **Investigation of a Linear Antenna Array With Coaxial Sector Apertures**
Shtoda, Dmytro; Antonenko, Yevhenii; Berdnyk, Serhii; Gribovsky, Alexandr; Antonenko, Yuliia; Katrich, Victor*

13:30--13:45 **Radiation Patterns of Circular Polarized Multi-Band Corner Reflector Antenna**
Yeliseyeva, Nadezhda; Cherniavskyi, Vladyslav; Berdnyk, Serhii*

13:45--14:00 **Dual-Frequency Antenna Array with Combined Slot-Dipole Elements**
Berdnyk, Serhii; Katrich, Victor; Havrylenko, Dmytro; Pshenichnaya, Svetlana; Antonenko, Yevhenii; Garmash, Kostiantyn*

14:00--14:15 **Band Properties of Circular Polarized Corner Antenna under Maximum Directivity**
*Yeliseyeva, Nadezhda *; Berdnyk, Serhii; Cherniavskyi, Vladyslav*

14:15--14:30 **Investigation of a Microwave Rectifier for Pulsed LFM Signals**
Potapov, Maksym; Drobakhin, Oleg*

05. Ultra-wideband and Ultra-short Impulse Signals (UWBUSIS)

18.08.2026 15:30--16:45 · Room #3 (Tue.)

UWBUSIS-01 CHAIRS:

15:30--15:45 **Ground Penetrating Radar with a Chirp Signal Using a Vector Network Analyzer NanoVNA**
Pochanin, Gennadiy; Ruban, Vadym ; Pochanina, Iryna; Ogurtsova, Tetiana; Orlenko, Oleksandr; Kholod, Pavlo*

15:45--16:00 **Broadband Permittivity Estimation from Reflection Coefficients Using a Hybrid CNN-SVD Framework**
Prokhorov, Mykyta; Drobakhin, Oleg*

16:00--16:15 **Fractal Synchronization of Chaotic Modes**
Kurskyi, Yurii; Koluzanov, Oleksandr; Oseredchuk, Taras*

16:15--16:30 **Fractal and Multi-Fractal Analysis of the Infrasonic Ultra-Wideband Processes Propagating in the Atmosphere**
Lazorenko, Oleg; Chernogor, Leonid; Onishchenko, Andriy*

16:30--16:45 **Millimeter Waves Reflection in the Range from 38 till 52 GHz from a Water-Based Foam Layer of Various Thicknesses on a Metal Substrate**
*Filinskyy, Leonid**

06. Mathematical Methods in Electromagnetic Theory (MMET)

19.08.2026 11:00--15:15 · Room #4 (Wed.)

MMET-01 CHAIRS:

11:00--11:15 **Potential Threats to GNSS Equipment from Signals of Low-Earth-Orbit Satellite Communication System**
Konin, Valeriy ; Ishchenko, Oksana; Kondratiuk, Vasyl*

11:15--11:30 **Double-Band THz Inverse Polarizer Built on Graphene-Strip-on-Substrate Grating**
*Yevtushenko, Fedir**

11:30--11:45 **Comparative Analysis of the Accuracy of Estimating the Zeros of Frequency Characteristics Using Fractional-Rational Approximation Methods**
*Andreev, Mykhail; Drobakhin, Oleg**

11:45--12:00 **Radiation Efficiency of THz Antenna Made of Graphene Covered Nanowire Grating Fed by Modulated Electron Beam**
*Herasymova, Dariia**

12:00--12:15 **Directivity of Multilayered Microlasers Featuring Silver Film and Distributed Bragg Reflectors**
Herasymov, Serhii; Dukhopelnykov, Sergii ; Herasymova, Dariia*

12:15--12:30 **Selective Focusing of Light by Gridded Cylindrical Reflectors Made of Thin Silver and Gold Nanowires**
Natarov, Denys; Natarova, Anastasiia*

12:30--12:45 **Mathematical Models of the Plane E-Polarized Wave Scattering from Impedance Strip Systems Based on Terrible DS-Functions**
Vanin, Viktor; Koshovy, George*

MMET-02 CHAIRS:

13:30--13:45 **Backscattering Behavior of a Plane Wave Incident on a Partially Graphene-Coated Lüneburg Lens**
Mikhailikova, Iryna; Dukhopelnykov, Sergii; Lucido, Mario*

13:45--14:00 **A Mathematical Model of Seismic Wave Scattering on Underground Objects with a Non-homogeneous Boundary Condition**
Stiepanova, Kateryna; Dukhopelnykov, Sergii; Styahar, Andriy ; Rubino, Bruno; Pera, Donato; Di Michele, Federica*

14:00--14:15 **Physics-Informed Neural Networks for Temporal Electromagnetic Problems in Time-Varying Media**
*Sakhnenko, Nataliya**

14:15--14:30 **Electron-Beam Diffraction Radiation in Graphene Sheet-Dielectric Waveguide with Finite Graphene Strip Grating**
Kaliberda, Mstyslav; Pogarsky, Sergey; Biloshenko, Oleksandr*

14:30--14:45 **Integral Scattering Characteristics of Multilevel Impedance Strip Systems, Illuminated by the Plane E-Polarized Wave**
Vanin, Viktor; Koshovy, George*

14:45--15:00 **E-Wave Plane-Wave Scattering by Sinusoidal Open PEC Strips via the Method of Discrete Singularities**
Petryshyn, Andrii; Dukhopelnykov, Sergii; Zinenko, Tatiana*

15:00--15:15 **Multi-band Multi-post Resonant Waveguide Section with Independent Tuning of Passbands**
Mospan, Lyudmila; Zelenchuk, Dmitry*

07. Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED)

20.08.2026 11:00--16:15 · Room #5 (Thu.)

DIPED-01 CHAIRS:

11:00--11:15 **Electromagnetic Scattering of a Rounded-Corner Dielectric Cube Sandwiched Between Impedance Surfaces: Method of Auxiliary Sources Formulation**
*Iscan, Emre; Usman, Mustefa Badri ; Karacuha, Kamil; Tabatadze, Vasil**

11:15--11:30 **Assessment of the Potential Thermal Effects of Urban EM Fields on a Human Model Using FDTD-Based Simulations**
*Nozadze, Tamar**

11:30--11:45 **Domain Wall Dynamics in Cobalt Micropowders and Nanowires by NMR Inverse-echo in a Rotating Coordinate system**
Mamniashvili, Grigor; Gavasheli, Tsisana; Gegechkori, Tatiana; Ghvedashvili, Giorgi*

11:45--12:00 **Assessment of Cumulative Electromagnetic Field Exposure at Urban Bus Stops**
Nozadze, Tamar; Tchabashvili, Daviti*

12:00--12:15 **On the Synthesis of a Compact Multipole Source for a Two-Dimensional Scalar Field with a Rotating Wavefront**
Darsavelidze, Ivane; Zaridze, Revaz; Kakulia, David*

12:15--12:30 **Tunable Transmission Line Resonators with Stubs**
Avdeyenko, Gleb; Zakharov, Alexander; Litvintsev, Sergii*

12:30--12:45 **On New Structures of Multipole Sources of Monochromatic Scalar Fields Described by Spherical Wave Functions**
Darsavelidze, Ivane; Zaridze, Revaz; Kakulia, David*

12:45--13:00 **Frequency Stabilization of Transmission Line Resonators With Capacitive Load**
Avdeyenko, Gleb; Zakharov, Alexander; Litvintsev, Sergii*

13:00--13:15 **On the Synthesis of a Compact Multipole Source for a Three-Dimensional Scalar Field with a Rotating Wavefront**
Darsavelidze, Ivane; Zaridze, Revaz; Kakulia, David*

DIPED-02 CHAIRS:

14:00--14:15 **Optimization of Parameters of Quasioptical Transmission Line**
Andriychuk, Mykhaylo; Tkachuk, Viktor*

14:15--14:30 **Demasking of the Geomagnetism Influense on Tweek-Atmospheric Observation in Sub-Antarctic: the Seasonal Weather Variability Impact**
*Gorishnya, Yulia**

14:30--14:45 **A Thin Metagrating for Terahertz Wave Attenuation with Tunable/Switchable Absorption Bands**
*Perov, Andrey**

14:45--15:00 **Robust Real-Time Estimation of Dielectric Permittivity from Ultra-Wideband Reflection Coefficients Using Deep Learning**
Prokhorov, Mykyta; Drobakhin, Oleg*

15:00--15:15 **Eigenfrequencies of Loaded Ultrasonic Transducers**
Borulko, Valentyn; Gritsenko, Viktor*

15:15--15:30 **Patch Antenna with Complicated Aperture**
Pogarsky, Sergey; Mayboroda, Dmitry; Nesterenko, Mikhail; Kaliberda, Mstyslav; Biloshenko, Oleksandr; Mykhaliuk, Sergey*

15:30--15:45 **The Multi-Step Severe Geomagnetic Storm of March 21-26, 2024: A Comparative Analysis, Global Features and Energetics**
*Chernogor, Leonid; Zhdanko, Yevhen**

15:45--16:00 **Acoustic Effect of a Powerful Submarine Earthquake**
Shevelev, Mykyta; Chernogor, Leonid; Liashchuk, Oleksandr; Rudycheva, Olena*

16:00--16:15 **Severe Geomagnetic Storm in August 2024**
*Chernogor, Leonid; Holub, Mariia; Novytska, Daria**