

**NINETEENTH WORKSHOP ON
“NONSTATIONARY SYSTEMS AND THEIR
APPLICATIONS”**

February 16 – 18, 2026, Opole University of Technology, Poland

Offline mode:

Faculty of Informatics of the Opole University of Technology

Room P3-211, Prószkowska 76 St. 45-758 Opole, Poland

Online mode:

Serhii Lupenko's Personal Meeting Room

Join Zoom Meeting

<https://auk-edu-ua.zoom.us/j/9934289497?pwd=aVYwNnEzUmIwdEJ5T09LMURodjZRUT09>

Meeting ID: 993 428 9497

Passcode: 715974

Tentative organization of the workshop

DAY 0. Sunday, February 15, 2026, evening

Arrival to Opole.

18:30 – Welcome dinner. Hotel Weneda Wellness and Restaurant (1 Maja 77, 45-355 Opole)

DAY 1. Monday, February 16, 2026

8:00 – Breakfast

8:40 – Transfer to the Faculty of Informatics of the Opole University of Technology

9:10 Opening of the workshop (room P3-211, Prószkowska 76 St. 45-758 Opole, Poland)

9:30 Morning session. Chair: Agnieszka Wyłomańska

09:30 – 10:30 Plenary Lecture no 1.

Antonio Napolitano, University of Parthenope, Napoli, Italy

«Passive detection and localization of high-speed radio-frequency sources: A cyclostationary approach»

10:30 – 11:30 Plenary Lecture no 2.

Jacek Leskow, American University, Kyiv, Ukraine, Cracow University of Technology, Krakow, Poland

«Periodically correlated functional time series. Statistical inference and applications»

11:30 – 12:00 Coffee break

12:00 Morning session II. Chair: Antonio Napolitano

12:00– 13:00 Plenary Lecture no 3.

Dominique Dehay, Université de Rennes France

«Cyclic FOT analysis of a nonstochastic signal»

13:00 – 14:00 Plenary Lecture no 4.

Agnieszka Wyłomańska, Wrocław University of Science and Technology

«Recent advances in non-Gaussian signal processing for condition monitoring»

14:00 – 15:00 Lunch break

15:00 Afternoon session I. Chair: Jacek Leskow

15:00 – 16:00 Plenary Lecture no 5.

Christiana Drake, Department of Statistics, University of California, Davis

Oskar Knapik, Aarhus University, Denmark

Stanislaw Leskow, Warsaw School of Economics

«*Discussion of parametrizations of PARMA models with outliers and missing observations*»

16:00 – 17:00 Plenary Lecture no 6.

Oleh Lychak, Karpenko Physico-mechanical Institute of the NAS of Ukraine

Ihor Javorskyj, Karpenko Physico-mechanical Institute of the NAS of Ukraine

Roman Yuzefovych, Karpenko Physico-mechanical Institute of the NAS of Ukraine

«*Hilbert transform for processing nonstationary wide band signals*»

17:00 – 17:30 Coffee break

17:30 Afternoon session II. Chair: Serhii Lupenko

17:30 – 18:00

Roman Sliepko, Karpenko Physico-mechanical Institute of the NAS of Ukraine

Ihor Javorskyj, Karpenko Physico-mechanical Institute of the NAS of Ukraine

Roman Yuzefovych, Karpenko Physico-mechanical Institute of the NAS of Ukraine

«*Periodically nonstationary random process as a model of friction pair behavior*»

18:00 – 18:30

Evhenia Yavorska, Halyna Tsupryk, Bohdan Yavorskyi, Ternopil Ivan Puluj National Technical University

«*Detection of Stress States Using Nonstationary Biomedical Signal Analysis*»

18:30 – 19:00

Bartosz Majewski, AGH University of Krakow, Faculty of Applied Mathematics

Anna Dudek, AGH University of Krakow, Faculty of Applied Mathematics

Łukasz Lenart, AGH University of Krakow, Faculty of Applied Mathematics

«*Statistical Properties of Oscillatory Processes with Stochastic Modulation in Amplitude and Time*»

19:00 Transfer to the hotel

19:30 Dinner

DAY 2. Tuesday, February 17, 2026

8:00 – 9:30 Breakfast

9:30 – Transfer to the historic center of Opole

10:00 –11:30 Tour of the historical center of Opole

11:30 –12:00 Transfer to the Opole University of Technology

12:00 –13:00 Tour of the Opole University of Technology

13:30 – 14:30 Lunch

15:00 Afternoon session I. Chair: Ihor Javorskyj

15:00 – 15:30

Roman Butsii, Institute of Telecommunications and Global Information Space of the National Academy of Sciences of Ukraine

Serhii Lupenko, Opole University of Technology, Poland, EPAM School of Digital Technologies,

American University Kyiv, Institute of Telecommunications and Global Information Space, Ukraine

Andriy Zozulia, Institute of Telecommunications and the Global Information Space of the National Academy of Sciences of Ukraine

«Modeling and Methods for Effective Rhythm-Adaptive Processing of Cyclic Biomedical Signals in Non-Invasive Neurointerface, Cardiodiagnostic, and Biometric Systems»

15:30 – 16:00

Andrii Horkunenko, I. Horbachevsky Ternopil National Medical University

Serhii Lupenko, Opole University of Technology, Poland, EPAM School of Digital Technologies,

American University Kyiv, Institute of Telecommunications and Global Information Space, Ukraine

«Rhythm-Adaptive Stochastic Technologies for Statistical Processing of Cyclic Economic Processes»

16:00 – 16:30

Iaroslav Lytvynenko, Ternopil Ivan Puluj National Technical University

Andrii Kondratiuk, Ternopil Ivan Puluj National Technical University

Serhii Lupenko, Opole University of Technology, Poland, EPAM School of Digital Technologies,

American University Kyiv, Institute of Telecommunications and Global Information Space, Ukraine

«Web-based system for processing and computer modeling of signals with a cyclic structure»

16:30 – 17:00

Mykhailo Fryz, Ternopil Ivan Puluj National Technical University

«Conditional Linear Cyclostationary Random Processes and Their Applications»

17:00 – 17:30 Coffee break

17:30 Afternoon session II. Chair: Roman Yuzefovych

17:30 – 18:00 Jakub Rutkowski, AGH University of Krakow

«*Mean-square consistency of Fourier coefficients estimators with unknow lag-dependent cycle frequencies for generalized almost-cyclostationary processes*»

18:00 – 18:30

Andrii Voloshchuk, Halyna Osukhivska, Ternopil Ivan Puluj National Technical University, Ternopil, Ukraine

«*Application of a Cyclic Stochastic Process Model for Analyzing Electricity Consumption*»

18:30 – 19:00

Valerij Zvaritch, Institute of electrodynamics of National Academy of Sciences of Ukraine

«*Some peculiarities of linear AR processes in the application of vibration diagnostics for rotating power equipment units*»

19:00 Transfer to the hotel

19:30 Dinner

DAY 3. Wednesday, February 18, 2026

8:00 – 9:00 Breakfast

9:00 Transfer to the Faculty of Informatics of the Opole University of Technology

9:30 Morning session I. Chair: Agnieszka Wyłomańska

9:30 – 10:00

Katarzyna Skowronek, Politechnika Wrocławska, Wydział Matematyki

«*Applications of the modified Greenwood statistic in statistical testing for univariate and multivariate distributions*»

10:00 – 10:30 Hubert Woszczek, Wrocław University of Science and Technology

«*Hurst exponent randomization in fractional Brownian motions*»

10:30 – 11:00 Justyna Witulska, Wrocław University of Science and Technology

«*Tracking structural transitions in non-Gaussian cyclostationary signals with applications in machine monitoring*»

11:00 – 11:30 Coffee break

11:30 Morning session II. Chair: Serhii Lupenko

11:30 – 12:00 Daniel Kuzio, Wroclaw University of Science and Technology

«*Nonlinear signal transformations for CSC map improvement dedicated to signals with non-Gaussian noise*»

12:00 – 12:30 Aleksandra Grzesiek, Wrocław University of Science and Technology

«*Statistical testing-based framework for differentiating anomalous diffusion models with constant and random parameters*»

12:30 – 13:00. Summary of the workshop. Research plans for the future.

13:00 – Departure from the conference center