

# INTERNATIONAL WORKSHOP ON ADVANCES IN CIVIL AVIATION SYSTEMS DEVELOPMENT

**A DAY**

March 18, 2025

## **Opening ceremony**

*Start –17:00 (EET UTC+2, Kyiv Time)*

*10:00 (EST UTC-5, Lafayette Time)*

## **In-sides events**

# INTERNATIONAL WORKSHOP ON ADVANCES IN CIVIL AVIATION SYSTEMS DEVELOPMENT

## B DAY

March 19, 2025

On-line: <https://www.youtube.com/live/rA5OQTraTR4>

### Welcome Words

*Start – 12:00 (EET UTC+2, Kyiv Time)*

*05:00 (EST UTC-5, Lafayette Time)*

### Aerodynamics

*Moderator – Ivan Ostroumov*

*Start – 12:20 (EET UTC+2, Kyiv Time)*

*05:20 (EST UTC-5, Lafayette Time)*

1. Analysis of Measuring Errors during Aerodynamic Research in Wind Tunnel  
*Oleksander Zhdanov, Olha Sushchenko, and Valerii Orlianskyi*

### Air Transportation

*Moderator – Ivan Ostroumov*

*Start – 12:35 (EET UTC+2, Kyiv Time)*

*05:35 (EST UTC-5, Lafayette Time)*

2. Advanced IoT Sensor Network for Continuous Cargo Condition Surveillance During the Flight  
*Dmytro Prosvirin, Volodymyr Kharchenko, and Pavel Krents*
3. Simulation Modelling for Supply Chain Optimization with a Logistics Hub Based at an Airport Complex  
*Kostiantyn Cherednichenko, Viktoriia Ivannikova, and Olena Sokolova*

4. ----

## **Management and Economics**

*Moderator – Maksym Zaliskyi*

*Start – 13:15 (EET UTC+2, Kyiv Time)*

*06:15 (EST UTC-5, Lafayette Time)*

5. Modeling of Integration Business Processes for Aviation Enterprise in the Context of Sustainable Development  
*Zarina Poberezhna and Maksym Zaliskyi*
6. Experimental Study of the Method for Cyber Incidents Management in Aviation Critical Infrastructure  
*Sergiy Gnatyuk, Viktoria Sydorenko, Artem Polozhentsev, and Serhii Sydorenko*
7. Strategic Diagnostics for Optimization of Aviation Enterprises Activity in the Condition of Digital Transformations  
*Serhii Smerichevskyi, Oleksandr Truhan, Zarina Poberezhna, and Oksana Chumak*

## **Interference in Global Navigation Satellite System**

*Moderator – Ivan Ostroumov*

*Start – 13:50 (EET UTC+2, Kyiv Time)*

*06:50 (EST UTC-5, Lafayette Time)*

8. Research of the Influence of Retransmission Radio Interference on SBAS Characteristics  
*Valery Konin, Tetiana Maliutenko, David Duchet, and Natali Caccioppoli*
9. AIM Technology Experimental Testing with Different Types of Antennas  
*Oleksandr Kutsenko, Volodymyr Kharchenko, and Valeriy Konin*

## **Impact of Russian-Ukrainian war on Global Air Transportation System and Recovery of Ukrainian Civil Aviation**

*Moderator – Ivan Ostroumov*

*Start – 14:15 (EET UTC+2, Kyiv Time)*

*07:15 (EST UTC-5, Lafayette Time)*

10. Area Analysis of DME/DME Positioning Method in Ukrainian Airspace  
*Ivan Ostroumov and Nataliia Kuzmenko*
11. Mental Health of University Students in Wartime  
*Elvira Luzik, Valentyna Semychenko, Nataliia Ladohubets, Anzhelika Kokarjeva, and Lesia Konoplianyk*
12. Military Impact on Civil Aviation: Case Study of AHY8243 Flight Based on ADS-B Data Processing  
*Ivan Ostroumov, Denys Kolesnichenko, Daria Tkachuk, and Olena Kyzymchuk*

## **Aircraft Noise**

*Moderator – Ivan Ostroumov*

*Start – 15:05 (EET UTC+2, Kyiv Time)*

*08:05 (EST UTC-5, Lafayette Time)*

13. Reference Aircraft Noise Model for the New Supersonic Airplane Design with Corrected Noise Propagation and Engine Installation Effect Contributions  
*Oleksandr Zaporozhets, Vitalii Makarenko, Vadim Tokarev, and Kateryna Kazhan*
14. Local Air Quality Assessment for SENECA Aircraft  
*Kateryna Synylo, Andrii Krupko, and Oleksandr Zaporozhets*

## **Communication Systems for Civil Aviation Systems**

*Moderator – Maksym Zaliskyi*

*Start – 15:30 (EET UTC+2, Kyiv Time)*

*08:30 (EST UTC-5, Lafayette Time)*

15. Antennas Combination for Ground and Airborne Segments of UAV Communication Systems  
*Olga Shcherbyna, Oleksandr Zadorozhnyi, and Fedir Katushonok*
16. Frequency Synthesizer of X Band  
*Leonid Sibruk and Yaroslav Gritsev*
17. Analysis of the Quality of Service Indicators for Aviation Communication Systems  
*Georgiy Konakhovych, Maksym Zaliskyi, Serhii Tarasiuk, Anzhela Lelechenko, Veniamin Antonov, and Oleksandr Bondarev*
18. Antenna Feed by Several Sources of Waveforms  
*Ludvig Ilnitskiy, Ihor Zakutynskiy, Leonid Sibruk, and Olga Shcherbyna*

## **Surveillance Data Processing in Civil Aviation**

*Moderator – Ivan Ostroumov*

*Start – 16:20 (EET UTC+2, Kyiv Time)*

*09:20 (EST UTC-5, Lafayette Time)*

19. Object Coordinate Determination Based on Dempster-Shafer Evidence Theory  
*Igor Prokopenko, Sofiia Alpert, Maksym Alpert, and Yuliia Petrova*
20. Estimation of Mid-Air Collision Risk Based on ADS-B Trajectory Data  
*Oleg Ivashchuk and Ivan Ostroumov*
21. Classification of Flight Situation Based on Risk of Flight Level Loss for Improved Airspace Safety  
*Ivan Ostroumov, Yurii Bezkorovainyi, Oleksii Holubnychyi, Olha Sushchenko, Oleksandr Solomentsev, and Maksym Zaliskyi*

## **Methods of Operational Efficiency Improvement for Civil Aviation Systems**

*Moderator – Maksym Zaliskyi*

*Start – 17:00 (EET UTC+2, Kyiv Time)*

*10:00 (EST UTC-5, Lafayette Time)*

22. Algorithms for Selecting the Optimal Filter in the Architecture of a Multi-Channel Passive Interference Compensation System  
*Ihor Prokopenko and Anastasiia Dmytruk*
23. Predictive Analytics of Decision-making for Aviation Operation Enterprise  
*Oleksandr Solomentsev, Maksym Zaliskyi, Zarina Poberezhna, and Oleksiy Zuiev*
24. The Determination of the Probability of Failure-Free Operation for System Operated in Two Modes  
*Petro Yablonskyi, Oleksandr Avramenko, Valentyn Dyptan, Pavlo Openko, Serhii Pustovyi, and Volodymyr Klymchuk*

## **Sensors in Civil Aviation**

*Moderator – Maksym Zaliskyi*

*Start – 17:40 (EET UTC+2, Kyiv Time)*

*10:40 (EST UTC-5, Lafayette Time)*

25. Features of Stability Analysis of Complex Nonlinear Dynamic Systems in Phase Space  
*Petro Snitsarenko, Rimvidas Khrashchevskyi, Olga Ivanets, Maryna Arkhyrei, and Nataliia Bilak*
26. Design of Robust Tracking System for Combined Control of Information and Measuring Devices of Aircraft  
*Olha Sushchenko*
27. Chaos-based Secured Data Transmission Scheme for Civil Aviation Applications  
*Roman Voliansky, Nina Volianska, and Yunifa Miftachul Arif*
28. Model the geometric characteristics determining of spatial landmarks for survey-comparative navigation system  
*Oleksii Chuzha, Yurii Hryshchenko, Olena Tachinina, and Oleksandra Bankova*

## **Human Factor in Civil Aviation**

*Moderator – Maksym Zaliskyi*

*Start – 18:30 (EET UTC+2, Kyiv Time)*

*11:30 (EST UTC-5, Lafayette Time)*

29. Optimization of Cross-Professional Interaction “Pilot-Air Traffic Controller” during Collaborative Practical Training  
*Tetiana Shmelova, Yuliya Sikirda, Maxim Yatsko, and Volodymyr Kolotusha*
30. Collaborative Decision-Making During the Rescue Operation by the Unmanned Aerial Vehicle Group  
*Tetiana Shmelova, Illia Marienkov, Stepan Simchenko, and Peter Dischler*

## **Unmanned Aircraft Systems**

*Moderator – Ivan Ostroumov*

*Start – 18:50 (EET UTC+2, Kyiv Time)*

*11:50 (EST UTC-5, Lafayette Time)*

31. UAS Communication Links and Protocols Analysis to Ensure Wind Information Obtaining and Exchange  
*Yuliya Averyanova, Oleksii Sushych, Irina Pryhodko, and Yevheniia Znakovska*
32. Method for Correcting Unreliable Readings of a GNSS Receiver when Using a Cost-Efficient Autopilot  
*Vitalii Larin and Bohdan Blazhei*

# INTERNATIONAL WORKSHOP ON ADVANCES IN CIVIL AVIATION SYSTEMS DEVELOPMENT

## C DAY

March 20, 2025

### Unmanned Aircraft Systems (On-line)

*Moderator – Ivan Ostroumov*

*Start – 16:00 (EET UTC+2, Kyiv Time)*

*09:00 (EST UTC-5, Lafayette Time)*

33. [Short Packets Transmission Modelling in UAV Systems](#)  
*Volodymyr Kharchenko, Andrii Grekhov, and Vasyl Kondratiuk*
34. [Management of Unmanned Aerial Vehicles Swarm: An Overview](#)  
*Dmytro Krytskyi*
35. [Visual Positioning of the UAV in Conditions of Impossibility of Using External Navigation Signals](#)  
*Oleksii Hurtovyi, Kostiantyn Dergachov, and Anatolii Yaremenko*
36. [Simulation Platform for Testing and Validating of UAV Visual Guidance Algorithms](#)  
*Kostiantyn Dergachov, Vladyslav Dubinin, Eugene Ovdiyuk, Iryna Bychkova, and Denys Puhach*
37. [Theory of Subjective Preferences Entropy in Application to Air Transportation Technologies: Rational Recombination of Resources](#)  
*Andriy Goncharenko*
38. [Assessment of the Impact of Variable Mass of an Unmanned Aerial Vehicle on Flight Range and Endurance](#)  
*Andrii Hnashuk, Valentina Konovaliuk, Gennadiy Yun, and Kristina Marintseva*