

**International Workshop on Computational Methods in Systems Engineering**



# **CMSE – 2024**

June 17, 2024



Kyiv, Ukraine

In-person

# Committees

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# WORKSHOP SCHEDULE

June 17, 2024  
Start at 09:00 (GMT+3)  
Conference time: 10:00 – 15:00  
Coffee break: 12.00-12:20

## Track A. DEVELOPMENT OF CIVIL AVIATION SYSTEMS

Academic Building 11, room 11.323

*Moderators – Ivan Ostroumov and Maksym Zaliskyi*

1. Collaborative decision-making during pre-simulation training: Optimal approach and radar vectoring procedures  
*Tetiana Shmelova (National Aviation University, Ukraine),  
Yuliya Sikirda (Flight Academy of the National Aviation University, Ukraine),  
Maxim Yatsko (SmartLynx Airlines "Mazrudas", Latvia),  
Volodymyr Kolotusha (National Aviation University, Ukraine)*
2. Comparative analysis of SIFT and SURF methods for local feature detection in satellite imagery  
*Artem Riabko (National Aviation University, Ukraine),  
Yuliya Averyanova (National Aviation University, Ukraine)*
3. Information technologies of data processing for linear deterioration process during aviation equipment operation  
*Maksym Zaliskyi (National Aviation University, Ukraine),  
Oleksandr Solomentsev (National Aviation University, Ukraine),  
Zarina Poberezhna (National Aviation University, Ukraine),  
Onyedikachi Chioma Okoro (Vamoose Technologies, Canada),  
Bohdan Chumachenko (National Aviation University, Ukraine),  
Serhii Chumachenko (National Aviation University, Ukraine)*
4. Assessment of the availability of communication channels with UAVs  
*Georgiy Konakhovych (National Aviation University, Ukraine),  
Maksym Zaliskyi (National Aviation University, Ukraine),  
Serhii Tarasiuk (National Aviation University, Ukraine),  
Bohdan Chumachenko (National Aviation University, Ukraine),  
Viktor Bosko (Central Ukrainian National Technical University, Ukraine),  
Yuriy Parhomenko (Central Ukrainian National Technical University, Ukraine)*

5. 2D chaotic path planning for autonomous vehicles  
*Roman Volianskyi (National technical university of Ukraine «Igor Sikorsky Kyiv polytechnic institute», Ukraine),*  
*Nina Volianska (National technical university of Ukraine «Igor Sikorsky Kyiv polytechnic institute», Ukraine),*  
*Arief Bramanto Wicaksono Putra (Politeknik Negeri Samarinda, Indonesia)*
6. Modernizing complexes of scale and semi-scale simulation of disturbed flight  
*Olha Sushchenko (National Aviation University, Ukraine),*  
*Yurii Bezkorovainyi (National Aviation University, Ukraine),*  
*Olexander Zhdanov (National Aviation University, Ukraine),*  
*Svitlana Pavlova (Shanxi Agricultural University, China)*  
*Olha Ermolaeva (National Aviation University, Ukraine)*
7. Information technologies in logistics processes of enterprises in the aviation industry  
*Zarina Poberezhna (National Aviation University, Ukraine),*  
*Yuliia Petrova (National Aviation University, Ukraine),*  
*Khadija Slimani (Higher School of Computer Science, Electronics and Automation, France)*
8. Delays analysis in air transportation with ADS-B large dataset  
*Ivan Ostroumov (National Aviation University, Ukraine),*  
*Nataliia Kuzmenko (National Aviation University, Ukraine),*  
*Jargal Sukhbaatar (Mongol Air, Mongolia)*
9. Evaluation of the probability of the aircraft going beyond the lateral limits of the route for the airspace of Turkey  
*Oleg Ivashchuk (National Aviation University, Ukraine)*
10. Simulation of wind-related hazards avoidance when UAS operation in urban environment  
*Yuliya Averyanova (National Aviation University, Ukraine),*  
*Maxim Ivanytskyi (National Aviation University, Ukraine),*  
*Bohdan Shershen (National Aviation University, Ukraine),*  
*Yevheniia Znakovska (National Aviation University, Ukraine),*  
*Yaryna Zhdanova (Central University of Catalonia, Spain)*

11. Methodology for substantiating the infrastructure of aviation radio equipment repair centers  
*Maksym Zaliskyi (National Aviation University, Ukraine),  
Oleksandr Solomentsev (National Aviation University, Ukraine),  
Oleksii Holubnychyi (National Aviation University, Ukraine),  
Ivan Ostroumov (National Aviation University, Ukraine),  
Olha Sushchenko (National Aviation University, Ukraine),  
Viktoriia Ivannikova (Dublin City University, Ireland), et al.*
12. Research of aerodynamic characteristics of aviation profile model in conditions of artificial generation of large longitudinal vortices  
*Olha Sushchenko (National Aviation University, Ukraine),  
Valerii Orlianskyi (National Aviation University, Ukraine),  
Olexander Zhdanov (National Aviation University, Ukraine)*
13. Enhancing capabilities methods of the model of reflected radio altimeter signal based on Monte Carlo statistical modeling  
*Vitalii Larin (National Aviation University, Ukraine),  
Maksym Zaliskyi (National Aviation University, Ukraine),  
Yuliya Averyanova (National Aviation University, Ukraine),  
Ivan Ostroumov (National Aviation University, Ukraine),  
Olha Sushchenko (National Aviation University, Ukraine),  
Yurii Bezkorovainyi (National Aviation University, Ukraine)*
14. Ensuring the sustainable development of the aviation enterprise in the context of forming innovative potential using digital technologies  
*Serhii Smerichevskyi (National Aviation University, Ukraine),  
Zarina Poberezhna (National Aviation University, Ukraine),  
Oleksii Mykhalchenko (National Aviation University, Ukraine),  
Yuliia Petrova (National Aviation University, Ukraine),  
Vitalii Smilyanets (National Aviation University, Ukraine)*
15. Software detection and denying false GNSS data on open-source UAV autopilot  
*Bohdan Blazhei (National Aviation University, Ukraine),  
Vitalii Larin (National Aviation University, Ukraine)  
Nataliia Kuzmenko (National Aviation University, Ukraine)*

# Excursion for workshop participants

June 17, 2024  
Start at 15:00 (GMT+3)

Excursion for workshop participants around research facilities and campus of the  
National Aviation University  
(Ask your moderator about more information)

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Authors are expected to make oral reports using their presentations. Durations for the reports are as follows:

- presentation up to 15 minutes;
- discussion up to 5 minutes.

The presentations will be recorded. Papers not presented at the conference will not be submitted for indexing.

All times is local Ukrainian time (GMT+3).

Location: National Aviation University, Liubomyra Huzara ave., 1, Kyiv, Ukraine

**Geolocation code: CCQH+MX5 Kyiv**

**ATTENTION:** Due to the high risk of missile attacks workshop may be interrupted for duration of alarm in Kyiv region. Participants of CMSE have to follow rules, given by moderator to relocate to a secured safety area. Workshop schedule will be recovered in 10 min after alarm is off.

