# **International Workshop on Algorithms of Data Processing**





ADP - 2024

November 5, 2024

Kyiv, Ukraine In-person

# **Committees**

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<u>Prof. Maksym Zaliskyi</u> Telecommunication and Radioelectronic Systems Department, National Aviation University, Kyiv, Ukraine

Assistant Prof. Nina Rizun Department of Informatics in Management, Gdansk University of Technology, Poland

**Prof. Ivan Ostroumov** Air Navigation Systems Department, National Aviation University, Kyiv, Ukraine

<u>Assosiate Prof. Lidiia Tereshchenko</u> Department of software engineering, National Aviation University, Kyiv, Ukraine

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LDR Laboratory, Higher School of Computer Science, Electronics and Automation (ESIEA), Paris, France.

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SmartLynx Airlines Mazrudas, Marupes, Latvia

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Aviation Engines and Continuing Airworthiness Department of Flight Academy of the National Aviation University, Kropyvnytskyi, Ukraine

### Prof. Roman Volianskyi

Department of Electromechanical Systems Automation and Electrical Drives, National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute", Kyiv, Ukraine

#### **Prof. Nikolay Kiktev**

University of Life and Environmental Sciences of Ukraine, Ukraine

# WORKSHOP SCHEDULE

November 5, 2024 Start at 09:30 (GMT+3) Registration and welcome coffee 9:30-10:00 Conference time: 10:00 – 15:00 Coffee break: 12.00-12:20

Academic Building 3, room 3.109

Moderators – Ivan Ostroumov and Maksym Zaliskyi

Welcome

Kseniia Semenova (Acting rector at National Aviation University, Ukraine),

- 1. Airline crew scheduling automatic system

  <u>Oleg Ivashchuk (National Aviation University, Ukraine),</u>

  Ivan Ostroumov (National Aviation University, Ukraine)
- 2. Algorithms of data processing for costs reducing in the aviation enterprise Oleksandr Solomentsev (National Aviation University, Ukraine), <u>Maksym Zaliskyi (National Aviation University, Ukraine),</u> Zarina Poberezhna (National Aviation University, Ukraine), Oleksiy Zuiev (National Aviation University, Ukraine)
- 3. Adaptive filtration of gyroscopic sensor data with neural network <u>Olha Sushchenko (National Aviation University, Ukraine),</u> Yurii Bezkorovainyi (National Aviation University, Ukraine), Olexander Salyuk (National Aviation University, Ukraine)
- 4. Adaptive algorithms for the detection of radar signals against the background of broadband interferences

Igor Prokopenko (National Aviation University, Ukraine), Anastasiia Dmytruk (National Aviation University, Ukraine), Alina Osipchuk (National Aviation University, Ukraine)

- 5. Navigation aids network performance estimation with geospatial data analysis <a href="Ivan Ostroumov">Ivan Ostroumov (National Aviation University, Ukraine)</a>, <a href="Nataliia Kuzmenko">Nataliia Kuzmenko</a> (National Aviation University, Ukraine), <a href="Olena Kyzymchuk">Olena Kyzymchuk</a> (ITM Technische Universität Dresden, Germany)
- 6. Applications of Dempster-Shafer evidence theory to data processing in remote sensing

Igor Prokopenko (National Aviation University, Ukraine),
Sofiia Alpert (National Aviation University, Ukraine, Scientific Centre for
Aerospace Research of the Earth of the Institute of Geological Science of the
National Academy of Sciences of Ukraine, Ukraine),

Yuliia Petrova (National Aviation University, Ukraine)

7. Algorithms of chaotic data sequences processing

Roman Voliansky (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)

8. The influence of human factor on data processing algorithms during formation of enterprise's business processes

Serhii Smerichevskyi (National Aviation University, Ukraine),

Zarina Poberezhna (National Aviation University, Ukraine),

Maksym Zaliskyi (National Aviation University, Ukraine),

Oksana Chumak (National Aviation University, Ukraine),

Khadija Slimani (LDR Laboratory, Higher School of Computer Science,

Electronics and Automation, France)

9. Strategic management of the enterprise's business model based on innovative technologies of data processing

Zarina Poberezhna (National Aviation University, Ukraine),

Oleksandr Trukhan (Zhytomyr Institute PJSC "Higher Educational Institution "MAUP", Ukraine),

Oleksandr Lavrynenko (National Aviation University, Ukraine),

Anton Kniaziev (State University of Infrastructure and Technologies, Ukraine)

10. Automated data processing of aviation occurrences reporting <u>Maksym Liubarets (National Aviation University, Ukraine)</u>,

Ivan Ostroumov (National Aviation University, Ukraine)

11. Algorithm of wind-related hazards prediction for UAS flight and urban operations based on meteorological data fusion

Yuliya Averyanova (National Aviation University, Ukraine),

Olha Sushchenko (National Aviation University, Ukraine),

Yurii Bezkorovainyi (National Aviation University, Ukraine),

Viktoriia Ivannikova (Dublin City University, Ireland)

12. Data pre-processing for optimization of collaborative decision-making by aviation specialists during the practical training considering the factors' priority *Tetiana Shmelova (National Aviation University, Ukraine)*,

Yuliya Sikirda (Flight Academy of the National Aviation University, Ukraine), Maxim Yatsko (SmartLynx Airlines "Mazrudas", Latvia)

13. Frameworks for Testing and Monitoring in IoT Systems

Dmytro Prosvirin (Antonov Company, Ukraine),

Volodymyr Kharchenko (National Aviation University, Ukraine),

Oleg Ivashchuk (National Aviation University, Ukraine)

14. Algorithms of data processing for aviation equipment reliability estimation <u>Maksym Zaliskyi (National Aviation University, Ukraine),</u> Oleksii Holubnychyi (National Aviation University, Ukraine), Roman Voliansky (National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute", Ukraine)

15. Data analysis using OLAP and Data Mining technologies in the study of atmospheric air quality

Nikolay Kiktev (University of Life and Environmental Sciences of Ukraine), Bella Golub (University of Life and Environmental Sciences of Ukraine), Maryna Lendiel (University of Life and Environmental Sciences of Ukraine), Taras Lendiel (University of Life and Environmental Sciences of Ukraine), Vitalii Larin (National Aviation University, Ukraine),

Danylo Hradoboiev (Beetroot LLC, Sweden)

16. Synthesis and data processing of motion control system

Olha Sushchenko (National Aviation University, Ukraine),

Oleksii Holubnychyi (National Aviation University, Ukraine),

Roman Voliansky (National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute", Ukraine)

Olexiy Pogurelskiy (National Aviation University, Ukraine),

Yevheniia Znakovska (National Aviation University, Ukraine),

Svitlana Pavlova (Shanxi Agricultural University, China)

17. Automatic control for ensuring safety and compliance in air navigation systems: data processing algorithm of certification and regulatory standards *Vitalii Hrishnenko (National Aviation University, Ukraine)*,

Artem Riabko (National Aviation University, Ukraine),

Yuliya Averyanova (National Aviation University, Ukraine)

18. Fortifying the digital fortress: A multi-layered defense strategy with SIEM, mail gateway, and sandbox technologies

Maksim Iavich (Caucasus University, Georgia),

Giorgi Akhalaia (Caucasus University, Georgia),

Roman Odarchenko (National Aviation University, Ukraine),

Ana Imnadze (Liberty Bank, Georgia)

# **Excursion for workshop participants**

November 5, 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 12 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 ADP 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.



