

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

NATIONAL AVIATION UNIVERSITY

Young Scientists Associations of NAU

Faculty of Cybersecurity, Computer and Software Engineering

Faculty of Air Navigation, Electronics and Telecommunications

NAU Cybersecurity R&D Lab



Third International Conference on Cyber Hygiene & Conflict Management in Global Information Networks

PROGRAM

January 24–27, 2024

Kyiv

The main conference topics include:

- Management of Cyber Incidents, Warfare and Conflicts;
- Modern Information and Communication Technologies;
- Secure Digital Content Processing for Modern Applications;
- Intelligence Systems of Data Processing;
- Secure ICT and Social Services;
- AI-based Technologies in Cyber Space;
- Legal Aspects of Cyber Security and Digital Resilience;
- Conflict Management.

CONFERENCE ORGANIZING COMMITTEE

Conference Organizers and Co-Chairs

Sergiy Gnatyuk National Aviation University, Ukraine

Maksim Iavich Caucasus University, Georgia

Roman Odarchenko National Aviation University, Ukraine

Jamil Al-Azzeh Al Balqa Applied University, Jordan

Maksym Zaliskyi National Aviation University, Ukraine

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- **Haruna Chiroma**, University of Hafr Al Batin (Saudi Arabia)
- **Jugoslav Achkoski**, Military Academy (North Macedonia)
- **Zhengbing Hu**, Central China Normal University (China)

WORKSHOP SCHEDULE

January 24, 2024

Start at 10:30 (GMT+3)

Conference time: 10:30 – 13:00

Coffee break: 11.45 – 12:00

<https://meet.google.com/ikj-kwzq-fxd>

Moderator – Sergiy Gnatyuk

10:30

Welcome

Sergiy Gnatyuk, Maksim Iavich, and Roman Odarchenko

10:45

A comparative analysis of cyber threat intelligence models

Roman Odarchenko, Alla Pinchuk, Oleh Polihenko, and Anatolii Skurativskiy

11:00

Cloud shared hosting DDoS resistance and potential ways of protection

Alexander Chizhov, Andriy Fesenko, Vadym Ziuziun, and Dinara Basshykyzy

11:15

Protection of IoT networks: cryptographic solutions for cybersecurity management

Emil Faure, Inna Rozlomii, Andrii Yarmilko, and Serhii Naumenko

11:30

Development of a modified steganographic model of data transmission using IPv6 protocol

Olha Suprun, Oleksandr Provotar, Oleh Suprun, Olena Nechyporuk, Viktoriia Lukashenko, and Nataliia Zhuravel

11:45

Coffee break

12:00

Optimization of the integrated video surveillance system with elements of data analysis

Roman Odarchenko, Vladyslav Pevnev, Alla Pinchuk, and Oleh Polihenko

12:15

Ecological disasters as a result of cyber attacks in the energy sector

Alina Prokopieva, Lesya Pobochoenko, Tetiana Smirnova, Inna Nabok, Natalia Tatarenko, and Kateryna Sydorenko

12:30

Neural network approach to 5G digital modulation recognition

*Bohdan Kotyk, Denys Bakhtiiarov, Oleksandr Lavrynenko,
Bohdan Chumachenko, Veniamin Antonov, Vladyslav Fesenko,
and Volodymyr Chupryn*

12:45

Estimation of the aircraft's position based on optical channel data

Pylyp Prystavka and Olha Cholyskina

January 25, 2024

Start at 10:30 (GMT+3)

Conference time: 10:30 – 13:00

Coffee break: 11.45 – 12:00

<https://meet.google.com/ikj-kwzq-fxd>

Moderator – Sergiy Gnatyuk

10:30

Analysis of cross-sectional neural network recognition of satellite and aerial survey data

Valerii Zivakin, Oleksandr Kozachuck, and Pylyp Prystavka

10:45

Automation of aviation safety events investigation

Maksym Liubarets, and Ivan Ostroumov

11:00

Predictive control for failure risk assessment during navigation equipment operation

*Oleksiy Zuiev, Oleksandr Solomentsev, Maksym Zaliskyi, Olga Shevchenko,
and Alina Osipchuk*

11:15

AI-based user identification method for web services

*Ihor Zakutynskyi, Oleksandr Kalishuk, Maksim Iavich, Vitalii Nebylytsia,
and Vasyl Yehunko*

11:30

Adaptive user interfaces based on behavioral analysis

*Yevhen Artamonov, Tetyana Okhrimenko, Iurii Golovach, Daniil Krant,
Andriy Radchenko, Kostiantyn Radchenko, Taras Zaloznyi*

11:45

Coffee break

12:00

Models and algorithms for analyzing information risks during the security audit of personal data information system

Yuliia Kostiuk, Pavlo Skladannyi, Volodymyr Sokolov, Hennadii Hulak, and Nataliia Korshun

12:15

Methods of increasing the accuracy of determining the place of occurrence of out-of-state situations in multimedia data storage facilities of IoT systems

Andriy Dudnik, Dmytro Kvashuk, Andriy Fesenko, Larysa Myrutenko, and Vadym Rakytskyi

12:30

Linear operators for filtering digital images based on two-dimensional local spline of the fifth order

Pylyp Prystavka, Olha Cholyshkina, and Oleh Dyriavko

12:45

Algorithms for obtaining video and sound data of UAVs in real time

Andriy Dudnik, Serhii Vyhovskyi, Daryna Yaremenko, Dauriya Zhaksigulova, Andrii Kysil, Vadym Rakytskyi, and Andriy Fesenko

January 26, 2024

Start at 10:30 (GMT+3)

Conference time: 10:30 – 13:00

Coffee break: 11.30 – 12:00

<https://meet.google.com/ikj-kwzq-fxd>

Moderator – Roman Odarchenko

10:30

Protection of primary tangible media as evidence against cyberattacks

Oleksandr Bobarchuk, Oleh Briahin, Svitlana Halchenko, Rat Berdibayev, Maryna Holovatenko, and Iryna Les

10:45

Peculiarities of international legal regulation of combating international transport terrorism in modern conditions: cyber hygiene and cybersecurity

Yurii Voloshyn, Berik Akhmetov, Oksana Kaspruk, Sergii Kulyk, and Volodymyr Gavrylenko

11:00

Development of a decentralized voting system based on blockchain technology

Nazarii Savorona, Oleh Suprun, Oleksandr Provotar, Tetiana Savorona, Olha Suprun, and Vitalii Nechyporuk

11:15

A system for assessing the interdependencies of information system agents in information security risk management using cognitive maps

Yuliia Kostiuk, Pavlo Skladannyi, Yuliia Samoilenko, Karyna Khorolska, Bohdan Bebashko, and Volodymyr Sokolov

11:30

Coffee break

12:00

Balancing security and efficiency in deterministic random bit generators for post-quantum cryptography

Maksim Iavich, Sergiy Gnatyuk, Tamari Kuchukhidze, and Giorgi Iashvili

12:15

Risk forecasting of information-content-security

Oleksandr Korystin, Serhii Demediuk, Nataliia Sviridyuk, Olena Mitina, Marek Aleksander, and Yuriy Kardashevskyy

12:30

The method of increasing the security of IoT devices by implementing the dynamic change of the bluetooth address

Inna Mykhalchuk, Yurii Shcheblanin, Oleksandr Toroshanko, and Hanna Martyniuk

12:45

Analytical review of interactive technologies for teaching cybersecurity skills

Svitlana Klymenko, Vitaliy Konko, Oleksii Klymenko, Volodymyr Hnatushenko, and Marina Bychkova

January 27, 2024

Start at 10:30 (GMT+3)

Conference time: 10:30 – 13:00

Coffee break: 11.30 – 12:00

<https://meet.google.com/ikj-kwzq-fxd>

Moderator – Roman Odarchenko

10:30

Methodology for quantitative assessment of critical infrastructure resilience

Oleg Tretyakov, Batyr Khalmuradov, Maksym Pukha, Viktoriia Sydorenko, Larysa Chubko, and Vitaliy Nechiporuk

10:45

Enhancing aviation CRM security with salesforce data cloud

Ivan Steniakin, Dmytro Shevchuk, Kostiantyn Cherednichenko, Nazarii Liskovych, Olena Sokolova, and Maksym Gryshchenko

11:00

Analyzing the presence of a hidden message in an audio signal

Hanna Martyniuk and Ihor Martyniuk

11:15

Organizational and technical support of cyber security using a virtual assistant

Viktor Gnatyuk, Oleh Batrak, Roman Hamretskyi, and Mykhailo Golovan

11:30

Coffee break

12:00

Spline model of digital images based on moment characteristics

Anhelina Zhultynska and Pylyp Prystavka

12:15

Legal basis for cybersecurity in Ukraine under martial law

Mykola Legenkyi, Liudmyla Piankivska, and Andrii Tolbatov

12:30

Strategic adaptation of Ukrainian airlines to the challenges of post-war air traffic organization

Nazarii Liskovych, Dmytro Shevchuk, Kostiantyn Cherednichenko, Ivan Steniakin, Mykhailo Levchenko, and Maksym Gryshchenko

12:45

Calculation of city airport terminals capacity in the high missile alert risk environment of Ukraine

Maksym Gryshchenko, Dmytro Shevchuk, Kostiantyn Cherednichenko, Olena Harazha, and Maryna Boldyrieva