

INTERNATIONAL CIVIL AVIATION ORGANIZATION  
NATIONAL ACADEMY OF SCIENCES OF UKRAINE  
MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE  
NATIONAL AVIATION UNIVERSITY

# **PROGRAM**

**THE SIXTH WORLD CONGRESS  
“AVIATION IN THE XXI-st CENTURY”**

**Safety in Aviation  
And Space Technologies**

September 23-25, 2014

Kyiv

## **COFOUNDER**

- ➔ National Aviation Academy State “Azerbaijan Hava Yollari” Closed Joint-Stock Company, Azerbaijan
- ➔ Georgian Aviation University, Georgia
- ➔ JSC “Civil Aviation Academy”, Kazakhstan
- ➔ Nanchang Hangkong University, China
- ➔ Vilnius Gediminas Technical University, Lithuania
- ➔ The State School of Higher Education in Chelm, Poland
- ➔ The International University of Logistics and Transport in Wroclaw, Poland
- ➔ Polish – Ukrainian Research Institute, Poland-Ukraine

## **SCHEDULE**

of the Sixth World Congress  
“**AVIATION IN THE XXI-st CENTURY**”  
Safety in Aviation and Space Technology

### **23.09.2014**

- 8.00-10.00 Registration of participants
- 10.00-12.00 Plenary session
- 13.30-18.00 Symposia sessions

### **24.09.2014**

- 9.00-13.00 Symposia sessions
- 13.00-14.00 Lunch
- 14.15-18.00 Symposia sessions

### **25.09.2014**

- 9.00 – 12.00 Symposia sessions

SYMPOSIUM 1  
**MODERN SPACE AND AVIATION TECHNOLOGIES**

**1.1. Modern tribotechnologies in aircraft and general purpose  
mechanical engineering**

Chairman – **M. Kindrachuk**, National Aviation University, Ukraine.

Secretary – **O. Tisov**, National Aviation University, Ukraine.

24 September, 13<sup>30</sup>,  
room 2.406

1. System analysis of discrete-oriented structure surface properties.

***V. Marchuk, National Aviation University, Ukraine.***

2. Factors of crack initiation and microcrack propagation in aluminum.

***O.V. Bashta, National Aviation University, Ukraine.***

3. The mechanism of friction between surfaces with regular micro grooves under boundary lubrication.

***M. Kindrachuk, National Aviation University, Ukraine.***

***O. Radionenko, Pryazovskyi State Technical University, Ukraine.***

***A. Kryzhanovskiy, V. Marchuk, National Aviation University, Ukraine.***

4. Nickel-based eutectic alloy for composite electrolytic coatings.

***A.O. Kornienko, S.V. Fedorchuk, National Aviation University, Ukraine.***

5. Gradient composite coatings for working surfaces of braking devices.

***M. Kindrachuk, O. Tisov, National Aviation University, Ukraine.***

6. Wear resistant protective materials for rotor blades of aircraft gas turbine engines.

***T. Cherepova, G. Dmitrieva, Institute for Metal Physics NASU, Ukraine.***

***A.Duhota, M. Kindrachuk, O. Tisov, National Aviation University, Ukraine.***

7. Wear resistance of vacuum-arc and electroplated coatings in the condition of fretting-corrosion.

***M.S. Khimko, National Aviation University, Ukraine.***

8. Formation of wear resistant surface layers quality by electric-strengthening of sprayed coatings.

***N.A. Miedviedieva, O.V. Radko, National Aviation University, Ukraine.***

9. Biogeochemical aspects of tribology.

***V. Shmarov, V. Labunets, O. Samkov, National Aviation University, Ukraine.***

***I. A. Kozlova, Zabolotny Institute of Microbiology and Virology, NAS Ukraine, Ukraine.***

***R.Y. Belevtsev, Institute of Geochemistry earth environment NAS Ukraine, Kyiv, Ukraine.***

10. Tribological properties of polymer composite materials.

***O.V. Radko, V.F. Labunets, L.S. Bratitsa, V.V. Zagrebelnyi, National Aviation University, Ukraine.***

***O.V. Andreev, SE «Antonov», Ukraine.***

11. The influence of external factors on the laws of initial running in of antifrictional systems.

***M.V. Kindrachuk, J.L. Khlevna, National Aviation University, Ukraine.***

12. Self-reinforced heat-resistant organoplastics: advanced materials of tribological purpose.

***A.I. Burya, O.A. Naberezhnaya, Dneprodzerzhynsk State Technology University, Ukraine.***

13. Regularities of friction and wear amorphous-crystalline coating on the basis of zirconium.

***E.V. Kharchenko, National Aviation University, Ukraine.***

14. Resistance to wear of detonation coatings Cr-Si-B in a vacuum which contains molybdenum disulfide.

*S.D. Nedayborshch, SE «PLANT 410CA», Ukraine.*

*E.V. Kharchenko, National Aviation University, Ukraine.*

## **1.2. Aerodynamics and flight safety**

Chairman – **S. Ischenko**, National Aviation University, Ukraine.

Secretary – **A. Bondar**, National Aviation University, Ukraine.

24 September, 10<sup>00</sup>,  
room 11.229

1. The experimental equipment for wind tunnel TAD - 2 NAU.

*S.A. Ischenko, A.V. Bondar, National Aviation University, Ukraine.*

2. The assessment of the effectiveness wing with soft skin.

*G. Ortamevzi, D.N. Zinchenko, Kyiv Polytechnic Institute, Ukraine.*  
*V.V. Zilinka, National Aviation University, Ukraine.*

3. Calculation research of aerodynamic characteristics of the wings small elongation for layout the aircraft with high bearings properties.

*A. Rahmati, D.N. Zinchenko, Kyiv Polytechnic Institute, Ukraine.*  
*V.V. Zilinka, National Aviation University, Ukraine.*

4. Research of technological parametres of manufacture of polymeric pipelines of aircrafts for increase of safety of flights.

*S.V. Kopylov, National Aviation University, Ukraine.*

5. Features of experimental research of production of aviation polymeric pipelines are for the increase of reliability of exploitation of air ships.

*S.V. Kopylov, National Aviation University, Ukraine.*

### **1.3. Fatigue and fracture of aircraft structures**

Chairmen – **S. Ignatovich**, National Aviation University, Ukraine.

Secretary – **T. Maslak**, National Aviation University, Ukraine.

24 September, 9<sup>00</sup>,  
room 11.220.

1. Negative side effects caused by corrosion preventive compounds.

***V.N. Shmarov, S.R. Ignatovich, M.V. Karuskevich, National Aviation University, Ukraine.***

2. Studying of steel 12H18N10T physical-mechanical properties changes by resonance method of inelasticity controlling.

***S.S. Yutskevych, Rao De, Liu Yong, National Aviation University, Ukraine.***

***G.G. Pisarenko, A.M. Maylo, Institute of Problems of Strength NASU, Ukraine.***

3. Influence of local fatigue damage on the crack propagation rate.

***S.V. Shchepak, O.P. Linnik, V.M. Oleksiuk, National Aviation University, Ukraine.***

4. Analysis of the plastic zone size and shape for the aluminium alloys.

***T.P. Maslak, D.N. Kostenuik, National Aviation University, Ukraine.***

5. Fatigue crack growth modelling in thin plate under asymmetrical cyclic loading allowing for damage accumulation.

***A.V. Plashchynska, V.P. Golub, Institute of mechanics by S.P. Timoshenko NASU, Ukraine.***

***M.V. Karuskevich, National Aviation University, Ukraine.***

6. Damage of fiber reinforced polymer matrix composites from a drop-weight impact event.

***O.A. Schevchenko, O.I. Olefir, O.E. Skrypnikov, National Aviation University, Ukraine.***

#### **1.4. Problems of recovery controllability of the aircrafts**

Chairman – **V. Kazak**, National Aviation University, Ukraine.

Secretary – **D. Shevchuk**, National Aviation University, Ukraine.

25 September, 15<sup>20</sup>,  
room 10.117.

1. Perspective of ion-marker methods in wing diagnosis.

**V. Kazak, I. Zharin, National Aviation University, Ukraine.**

2. Problem of increasing the lifetime of wireless sensor networks.

**O. Lysenko, National Aviation University, Ukraine.**

**V. Novikov, National Technical University «KPI», Ukraine.**

3. Automation of project management of modernization aviation equipment.

**Y. Zakharchenko, National Aviation University, Ukraine.**

4. Wavelet transform for estimating the technical state aviation gas turbine engine.

**S. Enchev, S. Tovkach, National Aviation University, Ukraine.**

5. Dynamic uninterruptible power supply.

**N. Krasnoshapka, V. Tikhonov, T. Mazur, National Aviation University, Ukraine.**

6. The mathematical formulation of movement optimization of flying robots group based on unmanned aerial vehicles.

**O. Lysenko, E. Tachinina, H. Panchenko, National Aviation University, Ukraine.**

7. Mathematical model of reliability wireless sensor network node.

**P. Lazarchuk, National Aviation University, Ukraine.**

**A. Zarutskya, T. Pryshepa, I. Alekseeva, National Technical University «KPI», Ukraine.**

8. Reliability and operation characteristics of civil aviation airfield automated light signal systems.

***S. Ilienکو, National Aviation University, Ukraine.***

9. Integration of modern smart control systems in aircraft power distribution system.

***V. Zakharchenko, V. Kozub, National Aviation University, Ukraine.***

10. Probabilistic and classical approaches to routing algorithms in sensor networks.

***P. Lazarchuk, V. Novikov, National Aviation University, Ukraine.***

***V. Volovik, I. Alekseeva, National Technical University «KPI», Ukraine.***

11. Decisions making support system for pilots in extra situation.

***M. Vasilyev, National Aviation University, Ukraine.***

12. Methods of intellectualization control of self-organizing radio networks.

***E. Tachinina, National Aviation University, Ukraine.***

***D. Harkavyi, L. Afanaseva, National Technical University «KPI», Ukraine.***

13. Method of improving the efficiency of wireless sensor networks.

***S. Galchenko, National Aviation University, Ukraine.***

***O. Kafidova, V. Petrova, National Technical University «KPI», Ukraine.***

14. Automatic wing leading edge airplane aerodynamic diagnostics system in flight condition.

***D. Shevchuk, M. Levchenko, O. Pavlenko, National Aviation University, Ukraine.***

15. Methods of peer review of quality indicators of elecommunication systems the disaster zone in terms of destructive influences.

***S. Galchenko, National Aviation University, Ukraine.***



***O. Velykyi, T. Prischepa, National Technical University «KPI», Ukraine.***

16. The organizational structure of airport electrical energy consumption efficiency management.

***A. Aslanyan, V. Zakharchenko, N. Sokolova, National Aviation University, Ukraine.***

17. Mathematical model of energetic object.

***A. Aslanyan, O. Belska, National Aviation University, Ukraine.***

18. Stabilization of height hovering of helicopter in conditions of discrete external perturbations.

***V. Kazak, N. Tymoshenko, National Aviation University, Ukraine.***

### **1.5. Engines and Power Installations**

Chairmen – ***M. Kulyk***, National Aviation University, Ukraine.

Secretary – ***I. Kinaschuk***, National Aviation University, Ukraine.

23 September, 13<sup>30</sup>,  
room 1.131.

1. Experimental diagram of boundary stresses in thermocyclic testing of heat resisting materials and analytical estimation of durability.

***M. Kulyk, M. Kovesnikov, L. Volyanska Y. Petruk, National Aviation University, Ukraine.***

2. Method for determination of gas turbine engine main parameters.

***V.V. Panin, Kyiv State Maritime Academy, Ukraine.***

***L.G. Volyanska, O.I. Chumak, National Aviation University, Ukraine.***

3. Radial clearances influence on gas turbine engines of air and ground application main parameters.

***A.P. Voznyuk, National Aviation University, Ukraine.***

4. Integral method of gas ejectors calculating in mixing chamber with uneven flow by sections.  
***K.I. Kapitanchuk., P.I. Grekov, N.M. Andriyishyn, M.Y. Bogdanov, National Aviation University, Ukraine.***
5. Modeling of flow on the plate.  
***Yu.Yu. Tereshchenko, A. Tehrani, J. Abolhassanzade, National Aviation University, Ukraine.***
6. Numerical simulation of flow at compressor stage.  
***Yu.M. Tereschenko, K.V. Doroshenko, Yu.Yu. Tereschenko, National Aviation University, Ukraine.***
7. Gas turbine engines diagnosing with neural network: data for static network training.  
***O.S. Yakushenko, O.V. Popov, K.V. Doroshenko, Y.Y. Tereshchenko, V.E. Miltsov, P.O. Vlasenko, National Aviation University, Ukraine.***
8. Solution of inverse problems of dynamics of an aircraft engine turbopump to reduce its vibration.  
***A.V. Goroshko, V.P. Royzman, Khmelnsky National University, Ukraine.***
9. Operative control of technical state of gas turbine units.  
***V.V. Kozlov, National aviation university, Ukraine.***
10. Method of consumption determination through secondary flow of TFE.  
***I.I. Gvozdetskiy., I.F. Kinaschuk, F.I. Kirchu, M.I. Kinaschuk, National Aviation University, Ukraine.***
11. Control system of valves gas compressor unit (GPU).  
***E.P. Yasinitskiy, National Aviation University, Ukraine.***

## **1.6. Latest technologies for maintaining aircraft airworthiness**

Chairman – **S.O. Dmitriev**, National Aviation University, Ukraine

Secretary – **E.A. Sapeluk**, National Aviation University, Ukraine

24 September, 10<sup>00</sup>,  
room 11.229

1. Formalization of procedures and determining the optimal maintenance of aircraft and aircraft engines programs.

**S. Dmitriev, V. Burlakov, O. Popov, D. Popov, National Aviation University, Ukraine.**

2. Improving of aircraft ground handling management system at the airport.

**A.A. Tamargazin, I.I. Linnik, T.Y. Kramarenko, National Aviation University, Ukraine.**

3. Estimation of kinetic characteristics and modification activation energy of "ИХХ15" in aviation fuel "TC-I".

**A.I. Bogdanovych, National Aviation University, Ukraine.**

4. Transient response of hydraulic pressure regulators.

**V.S. Butko, National Aviation University, Ukraine.**

5. Fuzzy model for diagnostics of GTE state.

**L.A. Zhuravlova, E.A. Sapeluk, National Aviation University, Ukraine.**

6. Effect of magnetic abrasive machining of gas turbine engine blades in repair process on their service life.

**Yu.S. Nalimov, G.S. Pysarenko Institute for Problems of Strength, NAS of Ukraine, Ukraine.**

**E.I. Yurchenko, A.S. Tugarinov, National Aviation University, Ukraine.**

7. Gas turbine engine blades fatigue strength test after welding repair for the purpose of their airworthiness maintenanc.

***Yu.S. Nalimov, G.S.Pysarenko Institute for Problems of Strength, NAS of Ukraine, Ukraine.***

***E.I. Yurchenko, A.S. Tugarinov, National Aviation University, Ukraine.***

8. Increasing small electromagnetic valves reliability and service life.

***Y.N. Rikunich, Y.B. Fedorichko, Public Company «Kiev central bureau of valve design», Ukraine.***

***E.I. Barilyuk, G.I. Zayonchkovskiy, National Aviation University, Ukraine.***

### **1.7. Methods and tools for technical and medical diagnostics**

Chairmen – **Y. Kuts**, National Aviation University, Ukraine.

Secretary – **E. Suslov**, National Aviation University, Ukraine.

23 September, 14<sup>00</sup>,  
room 11.311.

1. Measurement systems of characteristics of radio emission on the basis of acoustooptic spectrum analyzer.

***G. Sokolovska, National Aviation University, Ukraine.***

2. Using NDT methods for maintenance diagnosing.

***I.P. Bilokur, National Aviation University, Ukraine.***

3. Procedure of statistical data processing in non-destructive testing.

***S.R. Sunetchiieva, National Aviation University, Ukraine.***

4. Method of measurement the human operator professional fitness to the extreme activity.

***E. Volodarsky, National Technical University of Ukraine "KPI", Ukraine.***

***L. Kosheva, O. Bulyhina, National Aviation University, Ukraine.***

5. Application of artificial neural networks for prognosis in medicine.

***M. Burichenko, M. Dvornik, O. Ivanets V. Kucherenko, National Aviation University, Ukraine.***

6. Hardware and software system of evaluation criteria of the additional information CNS.

***V.D. Kuzovyk, Y.Y. Onykienko, National Aviation University, Ukraine.***

7. Hardware-software system for evaluation operator's psychophysiological state.

***V.D. Kuzovyk, A.D. Gordiev, National Aviation University, Ukraine.***

8. Uncertainly Estimation in Phase Ultrasound Method.

***O.V. Monchenko, National Aviation University, Ukraine.***

### **1.8. Automated process control systems**

Chairman – **V.Sineglazov**, National Aviation University, Ukraine.

Secretary – **R.Bohdan**, National Aviation University, Ukraine.

24 September, 9<sup>00</sup>,  
room 5.411.

1. Algorithm of Gaussian particle filter for the trajectory estimation in correlation extreme navigation system.

***M.P. Mukhina, National Aviation University, Ukraine.***

2. Comparative analysis of data fusion algorithms in inertial-satellite navigation systems.

***M.K. Filyashkin, National Aviation University, Ukraine.***

3. Stability borders and regions of stabilization systems of inertial control objects.

***A. Ablesimov, National Aviation University, Ukraine.***

4. Optimal choice of the technical means of heading, pitch and bank channel subsystems of navigation equipment simulation table.

***V.M. Sineglazov, S.O. Dolgorukov, National Aviation University, Ukraine.***

5. Increase of effectiveness of hardware-in-the-loop test bench.  
***B.V. Roman, National Aviation University, Ukraine.***
6. The methodic of cleanroom ventilation and air conditioning system design.  
***V.V. Kalinichenko, V.N. Fedosenko, E.I. Andrienko, National Aviation University, Ukraine***
7. Effectiveness improvement of cleanroom design.  
***V.V. Kalinichenko, V.N. Fedosenko, N.S. Voropaev, National Aviation University, Ukraine.***
8. Integration design complex of cad systems.  
***V.M. Sineglazov, A.P. Godny, National Aviation University, Ukraine.***
9. Dynamic data integration in the design of wind-power plant.  
***A.V. Kulbaka, National Aviation University, Ukraine.***
10. Geometric sizes determination of clean zones.  
***M.I. Krynetskyi, V.N. Fedosenko, E.N. Radko, National Aviation University, Ukraine.***
11. An intelligence image processing system.  
***Yu.M. Kemeniash, O.I. Chumachenko, KPI, Ukraine.***
12. The optimal redistribution time of simulator training.  
***Ju.M. Shmelev, National Aviation University, Ukraine.***
13. Algorithm of inertial navigation system correction by means of correlation extreme navigation system.  
***M.P. Mukhina, I.V. Seden, National Aviation University, Ukraine.***
14. On stability-providing method of continued fraction approximation.  
***O.V. Melnikov, National Aviation University, Ukraine.***  
***O.V. Glushko, R.Yu. Tkachev, Donbass State Technical University, Alchevsk, Ukraine.***

15. Software control system of solar power plant.  
*D.P. Karabetsky, National Aviation University, Ukraine.*

### **1.9. Specialized Computer Systems and CALS – Technology in Aviation**

Chairman – **P. Pavlenko**, National Aviation University, Ukraine.

Secretary – **V. Tretyak**, National Aviation University, Ukraine.

24 September, 14<sup>00</sup>,  
room 11.207.

1. Development of information system of the assessment of complexity of project works.

*P. Pavlenko, S. Tolbatov, National Aviation University, Ukraine.*

2. Information technology of consolidation and synchronization of production and normatively certificate information.

*V. Tretyak, National Aviation University, Ukraine.*

3. Analysis of the amplitude parameters of acoustic emission by friction composites.

*S. Filonenko, T. Nimchenko, National Aviation University, Ukraine.*

4. Using cloud services in educational process.

*V.V. Gavrylenko, National Transport University, Ukraine.*

*P. Pavlenko, National Aviation University, Ukraine.*

*O.A. Galkin, O.P. Kovalchuk, National Transport University, Ukraine.*

5. 3D modeling of experimental stand for research n-mass chain transmission.

*O.I. Pilipenko, A.V. Poluyan, Chernihiv National Technological University, Ukraine.*

*D. Barannik, National Aviation University, Ukraine.*

6. Vehicle traffic safety control in non-stationary environment.  
***G.L. Baranov, National Transport University, Ukraine.***  
***P.Pavlenko, National Aviation University, Ukraine.***  
***I.V. Tyhonov, Kyiv State Academy of Water Transport, Ukraine.***  
***V.L. Mironova, O.M. Prohorenko, National Transport University, Ukraine.***
7. The method of analysis and performance management of dispersed production planning.  
***A. Khlevnyy, National Aviation University, Ukraine.***
8. Using ARIS SIMULATION toolset for modeling the process of evaluating IT-specialists' motivation to work.  
***S.V. Koziyakov, National Aviation University, Ukraine.***
9. Method of estimating the IntegratZed competence of an it-specialist.  
***Y.V. Vlasenko, National Aviation University, Ukraine.***
10. The realibility model of information security systems.  
***N.S. Pelikh, National Aviation University, Ukraine.***
11. Developing analysis of job complexity for needs of national trade market.  
***O. Zaritskyi, Firma "T.M.M." Ltd, Ukraine.***  
***P. Pavlenko, National Aviation University, Ukraine.***  
***V. Sudik, Allbau Software Competence Center in Ukraine.***
12. Determination of efficiency of functioning of the integrated informative system.  
***M.V. Dvoieglazova, Chernigiv State Institute of Economic and Management, Ukraine.***  
***T. Zaharchuk, National Aviation University, Ukraine.***
13. Computer design of finish processing of non-rigid details.  
***V.I. Kalchenko, V.V. Kalchenko, A.M. Yeroshenko,***  
***A.V. Kolohoida, ChNTU, Ukraine.***



14. 3D-modeling design of main and rod journals with crossed axes crankshaft and circle grinding process.

***V.I. Kalchenko, D.V. Kalchenko, ChNTU, Ukraine.***

15. The geometry mathematical modelling of the overhauled valve-seat surfaces in the valve timing gear.

***Y.Zharii, H.Veremei, Chernihiv National University Of Technology, Ukraine.***

16. Mathematical model of «grain-bundle» system under strain.

***V.Y. Solod, D.G. Muzychka, A.Y. Gorshkov, DSTU, Ukraine.***

17. The transformation of the methodology of the «production-realization-consumption» system influenced by information technologies.

***O. Cherednikov, M. Yurchenko, V. Tolkachew, Chernihiv National Technological University, Ukraine, Chernihiv Public organization: «Institute of Standardization of the Trade and Accounting Nomenclature».***

***A. Sereda, National Aviation University, Ukraine.***

18. Information analysis aspects spatial dimension relations.

***A.A. Borisov, S.G. Bondarenko, Chernihiv National Technological University, Ukraine.***

***V. Kudryakov, National Aviation University, Ukraine.***

### **1.10. The intellectual robot-technical measuring complexes and systems**

Chairman – **V. Kvasnikov**, National Aviation University, Ukraine.

Secretary – **O. Osmolovsky**, National Aviation University, Ukraine.

24 September, 10<sup>00</sup>,  
room 11.403.

1. Vibrating-string accelerometer for robotics complexes on air- and spacecraft.

***O.M. Bezvesilna, National Technical University of Ukraine “Kyiv Polytechnic Institute”, Ukraine.***

***L.O. Chepiuk, Zhytomyr State Technological University, Ukraine.***

***A.D. Nalyvaiko, National Aviation University, Ukraine.***

2. Informative safety economic control system.

***O. V. Boychenko, Tavricheskiy National University, Simferopol', Russian Federation.***

***A. D. Nalyvaiko, National Aviation University, Ukraine.***

3. Information technology of adaptive formation overlapping levels of monitoring systems.

***S. V. Holub, Cherkasy National University CNU, Ukraine.***

***V. Y. Nemchekno, Cherkasy State Technological University, Ukraine.***

***A.V. Dzyubanenکو, National Aviation University, Ukraine.***

4. The task of tracking a mobile robotic systems on a route.

***B.P. Ivanov, Central Reserch of Armament of Armed Forces of Ukraine, Ukraine.***

***D.P. Kucherov, National Aviation University, Ukraine.***

5. Formation's procedure of the nanoclusters: heterotransitions and heterosystems at the information technology.

***V.V. Kovalchuk, State Environmental University, Odessa, Ukraine.***

***V.P. Kvasnikov, National Aviation University, Ukraine.***

***V.L. Kostenko, State Polytechnic University, Odessa, Ukraine.***

***O.O. Panchenko, State Computer Science Technology College, Odessa, Ukraine.***

6. Research of the «determined chaos» phenomenon in the RL-diode electric circuit of sinusoidal current.

***V.Y. Kucheruk, S.Sh. Katsyv, V.S. Mankovska, Vinnytsia National Technical University, Ukraine.***

***M.V. Mykhalko, National Aviation University, Ukraine.***

7. Gravimetry for robotics complexes on air- and spacecraft.  
***V.P. Kvasnikov, National Aviation University, Ukraine.***  
***O.M. Bezvesilna, National Technical University of Ukraine "Kyiv Polytechnic Institute", Ukraine.***  
***A.H. Tkachuk, Zhytomyr State Technological University, Ukraine.***
8. Semiconductor strain transducers for control systems deflected mode.  
***V.P. Kvasnikov, National Aviation University, Ukraine.***  
***T.I. Ganeva, Odessa State Academy of Technical Regulation and Quality, Ukraine.***
9. Implementation algorithm of diagnostic engine performance for mobile robot.  
***S.V. Marchenkova, V.P. Kvasnikov, National Aviation University, Ukraine.***
10. Voltage control system of magnetoelectric generator.  
***V.S. Martyniuk, National Aviation University, Ukraine.***  
***V.O. Grishin, College of National Aviation University, Kryvyi Rig, Ukraine.***
11. Approaches to the automation of the processes of acoustic drying and to the design of sound generators.  
***K.J. Okhrimenko, V.A. Koretskyi, Cherkasy State Technological University, Ukraine.***  
***O.I. Osmolovskyi, National Aviation University, Ukraine.***
12. Influence of intrasystem perturbations on gradient adaptation process of information system to the external environment.  
***V.V. Skachkov, H.D. Bratchenko, A.N. Efimchikov, Odessa State Academy of Technical Regulation and Quality, Ukraine.***  
***V.M. Ilchenko, National Aviation University, Ukraine.***
13. Elements of the theory of construction of methods assessment of dynamic uncertainty in measurement of parameters motion robotic complexes.  
***O. M. Vasilevskyi, Ministry of Education and Science of Ukraine.***  
***O.I. Osmolovskyi, National Aviation University, Ukraine.***

14. Investigation of knitted soldered copper wire meshes for lightning protection of carbon fiber composite skin of aircraft  
***L.R. Vishnyakov, V.J. Kokhaniy, Institute for Problems of Materials Science NASU, Ukraine.***  
***V.P. Kvasnikov, National Aviation University, Ukraine.***  
***I.I. Chernyavskiy, ASTC «Antonov», IPMS NASU, Ukraine.***  
***O.V. Zubkov, Institute for Problems of Materials Science NASU, Ukraine.***

### **1.11. Information security in aviation**

Chairman – ***O. Korchenko, National Aviation University, Ukraine.***

Secretary – ***S. Gnatyuk, National Aviation University, Ukraine.***

24 September, 14<sup>00</sup>,  
room 11.111.

1. Complex approach to mitigate cyberthreats in civil aviation.

***O.G. Korchenko, S.O. Gnatyuk, National Aviation University, Ukraine.***

2. Mutual control based on quantum secret sharing for remote access in electoral process automation system.

***Ye.V. Vasiliu, I.V. Limar, O.S. Popov Odesa National Academy of Telecommunications, Ukraine.***

3. Integer representation with delayed carry.

***V.Yu. Kovtun, A.O. Okhrimenko, National Aviation University, Ukraine.***

***O.L. Stokipniy, Kharkiv National University of Economic, Ukraine.***

4. Dynamic ontology of air traffic management systems: networking and modelling.

***A.L. Antipov, Eastern Siberia Air Navigation, FSUE ATM Corporation, Russia.***

***N.A. Kinash, A.I. Trufanov, Irkutsk State Technical University, Russia.***

***A.A. Tikhomirov, INHA University, Republic of Korea.***

***S.O. Gnatyuk, R.A. Umerov, National Aviation University, Ukraine.***

5. Comparative analysis of methods of post-quantum cryptography based on lattice theory.

*M.O. Ryabyy, European University, Ukraine.*

*V.M. Kinzeryavyy, National Aviation University, Ukraine.*

6. Adaptive mechanisms using in information resources security systems.

*O.G. Korchenko, National Aviation University, Ukraine.*

*M.V. Zakharova, Cherkasy State Technological University, Ukraine.*

7. Basic criteria of CERT's working efficiency.

*V.O. Gnatyuk, National Aviation University, Ukraine.*

8. System and models for computer networks and systems penetration testing.

*Yu.B. Kovalenko, E.O. Sokolov, National Aviation University, Ukraine.*

9. Quantum game theory in classification of quantum information security methods.

*S.O. Gnatyuk, T.O. Zhmurko, National Aviation University, Ukraine.*

10. Base parameters of forecasting and identification of computer attacks in information and communication systems.

*A.I. Hizun, S.I. Topcheev, National Aviation University, Ukraine.*

*M.O. Ryabyy, European University, Ukraine.*

11. Bugs searching device.

*Z.O. Samosud, National Aviation University, Ukraine.*

12. Method of template hiding data in vector image structure.

*V.M. Kinzeryavyy, O.M. Kinzeryavyy, National Aviation University, Ukraine.*

13. Choice of methods of optimal search of information protecting tools from unauthorized access to computerized systems

***O.V. Gavrylenko, D.S. Matviiv, National Aviation University, Ukraine.***

14. Modern analytical fraud detection systems.

***Ya.B. Khanko, National Aviation University, Ukraine.***

15. Economic component of information security of aviation infrastructure .

***V.V. Kozlovskiy, A.V. Mischenko, National Aviation University, Ukraine.***

16. Metrological reliability of technical information protection.

***T.L. Scherbak, National Aviation University, Ukraine.***

17. Criteria for the identification of critical infrastructures of the state.

***S.O. Gnatyuk, V.M. Sidorenko, National Aviation University, Ukraine.***

18. Modern methods and neural network model parameter estimation of information systems security.

***O.G. Korchenko, I.A. Terejkowski, National Aviation University, Ukraine.***

### **1.12. Computer systems**

Chairman – ***O. Litvinenko***, National Aviation University, Ukraine.

Secretary – ***Y. Artamonov***, National Aviation University, Ukraine.

23 September, 15<sup>00</sup>,  
room 6.200.

1. Software for automated booktext manipulation.

***Y.B. Artamonov, National Aviation University, Ukraine.***

***O.M. Glazok, National Aviation University, Ukraine.***

2. Analysis of method defends from DDOS attack.  
*M.N. Duraid, I.F. Kashkevich, National Aviation University, Ukraine.*
3. Model wireless networks as a queueing system with flow of demands of a complex structure.  
*O.M. Dyshliuk, National Aviation University, Ukraine.*
4. Computer appliance implementation of load distribution in neural-like systems.  
*Y.B.Artamonov, O.O. Zholdakov, G.N. Kremenetskiy, National Aviation University, Ukraine.*
5. Computational mathematical method of fluid dynamics problems solving.  
*O.M. Glazok, National Aviation University, Ukraine.*
6. An algorithm for information processing in implementation of landscape data dynamic loading.  
*O.M. Glazok, F.S. Khodchenko, National Aviation University, Ukraine.*
7. Methods modeling control processes complex economic systems.  
*G.M. Kvita, Kyiv National University of Technologies and Design, Ukraine.*  
*O.M. Dyshliuk, National Aviation University, Ukraine.*
8. Analytical technologies for recognition of aerial photos.  
*O.S. Vasyliiev economic Co.Ltd "Vesta", Ukraine, O.O.Belyakov, National Aviation University, Ukraine.*
9. Basic principles of the e-government.  
*V. Klobukov, S. Volhonskiy, D. Samofalov, V. Ryabokon, National Aviation University, Ukraine.*
10. Electronic documents management systems of higher education institutions as a component of e-government.

*S. Volhonskiy, D. Samofalov, L. Klobukova, O.Zykov  
National Aviation University, Ukraine.*

11. Requirements for infrastructure electronic document management systems in higher education institutions.

*V. Klobukov, S. Volhonskiy, D. Samofalov, V. Ryabokon,  
National Aviation University, Ukraine.*

12. The basic principles of automated systems deployment inside containers virtualization software in a project.

*V. Klobukov, V. Ryabokon, O.Zykov, L.Klobukova  
National Aviation University, Ukraine.*

### **1.13. Advanced information technologies in aviation**

Chairman – **M. Sidorov**, National Aviation University, Ukraine.

Secretary – **M. Olenin**, National Aviation University, Ukraine.

26 September, 15<sup>00</sup>,  
Room 6.313.

1. Green software life cycle model.

*N.A. Sidorov, National Aviation University, Ukraine.*

2. Methodologies for ontology creation.

*I.S. Chystiakova, Institute of Software Systems National Academy  
of Sciences, Ukraine.*

3. Method of flight simulator development.

*R.A. Kolisnichenko, National Aviation University, Ukraine.*

4. Effective programming style.

*M.M. Kostiv, National Aviation University, Ukraine.*

5. Loss identification method in lean software development.

*E.M. Sidorov, National Aviation University, Ukraine.*



6. Ontology of programming style.

*N.M. Sidorova, Y.M. Kramar, National Aviation University, Ukraine.*

7. Mathematical model of software ecosystem.

*O.O. Grinenko, National Aviation University, Ukraine.*

8. Methods of code optimization on the criterion of minimum energy consumption.

*T.V. Nagornyyak, National Aviation University, Ukraine.*

9. The domain-oriented tool for constructing software.

*Y. Ryabokin, National Aviation University, Ukraine.*

#### **1.14. Mathematical modeling and numerical methods**

Chairman – **V. Denysiuk**, National Aviation University, Ukraine.

Secretary – **Ye. Shkvar**, National Aviation University, Ukraine.

26 September, 13<sup>30</sup>,  
room 6.200.

1. Necessary condition for excitation the oscillations in goodwin's model of business cycle.

*A.O. Antonova, National Aviation University, Ukraine.*

2. Method of improvement of the convergence of trigonometric interpolating polynomials.

*V.P. Denysiuk, L.V. Rybachuk, National Aviation University, Ukraine.*

3. Mathematical processing of the results of non-destructive testing.

*V.G. Demydko, V.I. Mamchuk, National Aviation University, Ukraine.*

4. Some systematic mistakes in near-wall turbulence modeling and possible way to overcome them.

*B.P. Golovnya, National University, Ukraine.*

5. On integral moduli of smoothness of conformal mappings.  
*O.V. Karupu, National Aviation University, Ukraine.*
6. On the relation between oscillatory solutions of second-order differential equation and corresponding difference equation.  
*O. Karpenko, National Aviation University, Ukraine.*  
*M. Bohner, Missouri University of Science and Technology, Rolla, MO, USA.*  
*O. Stanzhytskyi, Taras Shevchenko National University of Kyiv, Ukraine.*
7. Research of the complete energy of mechanical system under random perturbation.  
*Oksana. I. Kovtun, National Aviation University, Ukraine.*  
*Oleg. V. Pereguda, Taras Shevchenko National University of Kyiv, Ukraine.*
8. Mathematical models of flow of bodily profiles limited stationary viscous incompressible fluid flow.  
*Yu. Krashanitsa, National Aerospace University "KHAI", Ukraine.*  
*Ye. Shkvar, National Aviation University, Ukraine.*  
*Peng Yue, National Aerospace University "KHAI", Ukraine.*
9. Mathematical models of turbulent viscosity coefficient for wall shear flows.  
*V. Movchan, Ye. Shkvar, National Aviation University, Ukraine.*
10. Discrete models generation for layered shells of a spacecraft.  
*S.V. Choporov, A.O. Lisnyak, Zaporizhzhya National University, Ukraine, Zaporizhzhya.*  
*D.V. Akimov, Yuzhnoye State Design Office, Ukraine.*
11. An investigation of a spacecraft's propellant tank's shell's bearing strength.  
*V.Z. Gristchak, S.I. Gomeniuk, S.N. Grebeniuk, Zaporizhzhya National University, Ukraine.*  
*I.F. Larionov, P.G. Degtiarenko, V.N. Sirenko, D.V. Akimov, Yuzhnoye State Design Office, Ukraine.*

SYMPOSIUM 2  
**UNMANNED AIRCRAFT SYSTEMS (UAS)**

Chairman – **V. Kharchenko**, National Aviation University, Ukraine.  
Secretary – **D. Prusov**, National Aviation University, Ukraine.

24 September, 10<sup>00</sup>  
room 11.314

1. The Remote-Piloted Aircraft System Development and its Experimental Testing in Accordance with the Certification Basis.  
***V.P. Kharchenko, D.E. Prusov, National Aviation University, Ukraine.***
2. Balloon platform as a safety system for testing Unmanned Aircraft Equipment.  
***Krzysztof Szafran, Institute of Aviation, Warsaw, Poland.***
3. Conceptually New Approach to the Formation of Aerodynamic Wing Layout. Vortex Active UAV Wing.  
***E.P. Udarcev, National Aviation University, Ukraine.***
4. Vortex Slat of Unmanned Aerial Vehicle.  
***S.I. Alekseenko, O.O. Zhdanov, National Aviation University, Ukraine.***
5. Digital Video Stabilization for Unmanned Aerial Vehicle.  
***P.O. Prystavka, E.P. Nichikov, National Aviation University, Ukraine.***
6. Procedure of Recognition Target Object on Video Frames in a Video Streaming Data from UAV Processing System.  
***A.A. Rohatiuk, National Aviation University, Ukraine.***
7. Fundamentals of Safety and Efficiency of the Next Generation Unmanned Aircraft Systems.  
***V.P. Kharchenko, National Aviation University, Ukraine, Traffic College of Ningbo University of Technology, China.***

***Wang Bo, Economics and Management College of Ningbo University of Technology, China.***

***D.O. Bugayko, National Aviation University, Ukraine.***

8. Training of Personnel of Unmanned Aircraft Systems.

***V.V. Kabanyachyi, D.M. Matijchyk. National Aviation University, Ukraine.***

9. Develop the Curriculum for Unmanned Aerial Vehicles Operators.

***V.P. Kharchenko, T.F. Shmelova, D.E. Prusov. National Aviation University, Ukraine.***

### **SYMPOSIUM 3 AIR NAVIGATION AND ATM SYSTEMS**

#### **3.1. Air traffic management**

Chairman – ***T. Shmelova***, National Aviation University, Ukraine.

Secretary – ***D. Vasyliiev***, National Aviation University, Ukraine.

24 September, 13<sup>30</sup>,  
room 11.323.

1. Determining the influence of factors of internal and external environment of management on the safety of aviation enterprise.

***A.Yu. Assaul, National Aviation University, Ukraine.***

***Yu.V. Sikirda, Kirovohrad Flight Academy of the National Aviation University, Ukraine.***

***O.S. Stasyuk, T.F. Shmelova, National Aviation University, Ukraine.***

2. Neural network for automated estimation of pre-simulating training.

***A.P. Bilko, V.A. Lazorenko, O.V. Poluhovich, T.F. Shmelova, National Aviation University, Ukraine.***

3. Unmanned aerial vehicle's group flights.

***D.I. Bondarev, National Aviation University, Ukraine.***

***T.R. Jafarzade, National Aviation Academy, Azerbaijan.***

***A.N. Kozub, National Defence Academy of Ukraine.***

4. Systematization of aircraft wake vortices modeling types based on the use of various mathematical methods.

***V.I. Chepizhenko, R.E. Lukiianchuk, National Aviation University, Ukraine.***

5. Experimental research of terminal control area operations under uncertainty conditions.

***Yu.V. Chynchenko, I.M. Kim, O.S. Samartseva, V.O. Vakhrina, National Aviation University, Ukraine.***

6. Professional reliability of operator of air navigation system.

***O. Kozhokhina, V. Gribov, S. Rudas, National Aviation University, Ukraine.***

7. Analysis of European concepts implementation in ATM.

***A. Zadorozhnia, S. Pavlova, National Aviation University, Ukraine.***

8. Indicators of integrity satellite channel depending on antenna gain.

***D.I. Tereshchenko, National Aviation University, Ukraine.***

### **3.2. Communication, navigation, surveillance**

Chairman – **V. Konin**, National Aviation University, Ukraine.

Secretary – **O. Pogurelskiy**, National Aviation University, Ukraine.

24 September, 10<sup>00</sup>,  
room 11.321.

1. Nav aids facility for aircraft positioning.

***I.V. Ostroumov, National Aviation University, Ukraine.***

2. Spline as a universal mean for continuous UAV parameters processing.  
***N.S. Kuzmenko, National Aviation University, Ukraine.***
3. Aircraft landing flare.  
***E.O. Kovalevskiy, V.V. Konin, T.I. Olevinska, National Aviation University, Ukraine.***
4. Control of process degradation of transport technological system.  
***V.G. Melkumyan, T.L. Malyutenko, National Aviation University, Ukraine.***
5. Initial analysis of space debris hazard.  
***V.V. Konin, O.S. Pogurelskiy, F.O. Shyshkov, National Aviation University, Ukraine.***
6. Model for navigation satellite availability on various orbits analysis.  
***V.V. Konin, O.S. Pogurelskiy, F.O. Shyshkov, National Aviation University, Ukraine.***
7. Simulation of navigation satellites availability on the near-Earth space.  
***V.V. Konin, O.S. Pogurelskiy, F.O. Shyshkov, National Aviation University, Ukraine.***
8. Some practical results of integrated navigation system flight testing.  
***V. Kharchenko, V. Kondratyuk, S. Ilnytska, O. Kutsenko, E. Vyshnyakova, A. Ismael, National Aviation University, Ukraine.***

### **3.3. Aviation English and safety of flight**

Chairman – **O. Petrashchuk**, National Aviation University, Ukraine.

Secretary – **L. Korol**, National Aviation University, Ukraine.

24 September, 11<sup>40</sup>,  
room 11.313.

1. Linguistic profile of ground-to-air radiotelephony communication.

***O. Petrashchuk, O. Vasiukovich, National Aviation University, Ukraine.***

2. Time perspective as a personality resource of aero navigation specialists.

***K. Povoroznik, National Aviation University, Ukraine.***

3. The aircraft maintenance engineer competence within the context of aviation safety regulations.

***T. Kharlamova, National Aviation University, Ukraine.***

4. The effect of student-relationship on the quality of training.

***L. Nemliy, National Aviation University, Ukraine.***

5. Directed activities related to texts as means of teaching reading technical texts.

***L. Korol, National Aviation University, Ukraine.***

6. Why using video is challenging.

***O. Skipalska, National Aviation University, Ukraine.***

7. Aviation safety in the context of emergency situations.

***O. Vasyukovich, National Aviation University, Ukraine.***

8. Educational function of a resource CAREER PATH: CIVIL AVIATION for the teaching aviation English.

***N. Zelinska, National Aviation University, Ukraine.***

### 3.4. Avionics

Chairman – **Y. Hryshchenko**, National Aviation University, Ukraine.

Secretary – **G. Polozhevets**, National Aviation University, Ukraine.

24 September, 13<sup>30</sup>,  
room 5.403.

1. Informational services for crew about minimal critical flight velocities.

**A. Chuzha, G. Polozhevets, I. Donchenko, National Aviation University, Ukraine.**

2. Reliability assessment of aircraft with regard of information factors and feedback loops.

**A. Skrypets, V. Tronko, U. Grishenko, O. Kozhokhina, National Aviation University, Ukraine.**

3. Problems of technical condition estimation of complex aviation systems components.

**V. Chepizhenko, O. Orlov, O. Tryzna, National Aviation University, Ukraine.**

4. Prevention of crew and personnel errors related with the failure obligatory actions caused by inappropriate psychological state.

**S. Egorov, T. Kravsova, National Aviation University, Ukraine.**

5. Results of investigation the information criterias to empower crew enviroment persepction possibilities by psychologig influence.

**O. Sytnyk, L. Sytnyanskyh, M. Onyshchuk, National Aviation University, Ukraine.**

6. Independence of doppler effect from wave-length at the multiwave concerted sounding and reception.

**V. Zemljanskij, M. Gusiev, National Aviation University, Ukraine.**

7. Enchantment of automatic flight control system quality at approach phase.

**D. Prosvirin, National Aviation University, Ukraine.**



8. The two-wave LDV with cophased reception of the doppler signals.

***V. Zemljanskij, A. Chudecov, M. Gusev, National Aviation University, Ukraine.***

9. Organization of integrated logistics support of maintenance and repair of aircraft.

***Maksym Romaniuk, National Aviation University, Ukraine.***

### **3.5. Complex systems control**

Chairman – **V.N. Azarskov**, National Aviation University, Ukraine.

Secretary – **O.A. Sushchenko**, National Aviation University, Ukraine.

24 September, 14<sup>00</sup>,  
room 5.503

1. Robust adaptive automatic MIMO process control in the presence of great parametric uncertainty.

***V.N. Azarskov, L.S. Zhiteckii, K. Yu. Solovchuk, National Aviation University, Ukraine.***

2. Numerical analysis of stochastic gradient algorithms for on-line learning in neural network models: a new simulation result.

***V.N. Azarskov, L.S. Zhiteckii, S.A. Nikolaienko, National Aviation University, Ukraine.***

3. Approach to design of robust systems for stabilization of unmanned aerial vehicles equipment.

***O.A. Sushchenko, National Aviation University, Ukraine.***

4. Problems of implementation of safety management system on civil aviation aerodromes.

***V.N. Azarskov, S.S. Devyatkina, National Aviation University, Ukraine.***

5. 2D fractal model of an airplane with 2 set radiative antennas.

***A.V. Vishnevsky, National Aviation University, Ukraine.***

6. Oscillation damping of air-space structures with joint-up dynamic absorber.

***V.N. Azarskov, D.V. Gristchak, D.D. Gristchak, National Aviation University, Ukraine.***

7. The neural realization of an electronic composer.

***A. V. Vishnevsky, National Aviation University, Ukraine.***

8. Precise vibratory gyroscope based on resonator made of elinvar alloy.

***V.V. Chikovani, H.V. Tsiрук, National Aviation University, Ukraine.***

***O.V. Petrenko, Plant Automatics, Ukraine.***

#### **4. IEEE MICROWAVES, RADAR and REMOTE SENSING (MRRS-2014)**

Chairman – **Felix Yanovsky**, National Aviation University, Ukraine.

Coordinator – **Yuliya Averyanova**, National Aviation University,  
Ukraine.

#### **SESSION A1 - SIGNAL AND IMAGE PROCESSING**

23 September, 14.00–15.40,  
Assemble Hall, Building 1

1. Lower bound on image filtering mean squared error in the presence of spatially correlated noise.

***Mikhail Uss, Aleksey Rubel, Vladimir Lukin, National Aerospace University, Kharkov, Ukraine***

***Benoit Vozel, Kacem Chehdi, University of Rennes 1 – Enssat France, Rennes.***

2. A neural network based predictor of filtering efficiency for image enhancement.

***Aleksey Rubel, Aleksey Naumenko, Vladimir Lukin, National Aerospace University, Kharkov, Ukraine.***

3. Direction finding using bank of modified weighted unitary root – music estimators.

***Volodymyr I. Vasylyshyn, Kharkiv Air Force University, Kharkiv, Ukraine.***

4. Statistical analysis of meteorological echoes mean power estimate.

***Dmytro S. Rachkov, David I. Lekhovyt'skiy, Andrii V. Semeniaka, Kharkiv National University of Radio Electronics, Kharkiv, Ukraine.***

5. Harmonic signal frequency estimation under an impulse interference action.

***I. G. Prokopenko, I. P. Omelchuk, Y. D. Chyrka, National Aviation University, Kyiv, Ukraine.***

## **SESSION A2 - REMOTE SENSING**

23 September, 16.00 – 17.40,  
Assemble Hall, Building 1

1. Some features of a radar measuring polarization spectrum.

***Yuliya Averyanova, Felix J. Yanovsky, National Aviation University, Kyiv, Ukraine.***

2. Combined use of radiometer and double frequency radar for measurement of rain intensity.

***Anna Linkova, Grygoriy Khlopov, A. Ya. Usikov Institute for Radiophysics and Electronics of National Academy of Sciences of Ukraine, Kharkiv, Ukraine.***

3. Backscattering of electromagnetic waves from ice crystals in cloud.

***Alex Pitertsev, Felix J. Yanovsky, National Aviation University, Kyiv, Ukraine.***

4. The creation of pressure maps using sif/iff information.

***Ladislav Gregor, Libor Drazan, Jiri Vesely, University of Defence, Brno, Czech Republic.***

5. The mapping of the total water content over the Kharkiv region by GNSS measurements.

**Alexey L. Kovorotniy, Feliks V. Kivva, Vladimir N. Gorobets, A. Ya. Usikov** *Institute for Radiophysics and Electronics of National Academy of Sciences of Ukraine, Kharkiv, Ukraine*  
**Yuriy V. Goncharenko**, *University of Birmingham, Brmingham, UK.*

### SESSION A3 - MICROWAVE DEVICES AND ANTENNAS

24, September, 09.00 – 10.40

Building 3, room 406

1. A new high-performance OPA based VCO for microwave applications.

**V.V. Ulansky, A.A. Kolesnik**, *National Aviation University, Kyiv, Ukraine.*

**H.M. Elsherif**, *Tripoli University, Tripoli, Libya.*

2. Small-aperture dielectric disk antenna with the axial radiation.

**Sergey Radionov, Ivan Ivanchenko, Nina Popenko, O.Ya. Usikov** *Institute for Radiophysics and Electronics of the NAS of Ukraine, Kharkiv, Ukraine.*

3. Occupied bandwidth of digital television measurement at monitoring stations.

**Leonid Sibruk, D.P. Bondarenko, O.A. Basanskyy**, *National Aviation University, Kiyv, Ukraine.*

4. Parameters measurement and operating mode determination for microwave circuit.

**Lyudvig Y. Ilnitsky, Leonid V. Sibruk, Olga A. Shcherbina**, *National aviation university, Kyiv, Ukraine.*

5. Time-domain characterization of novel band notched microstrip antennas for UWB application.

**Hemlata Soni, Pradeep Chhawcharia**, *Techno India NJR Institute of Technology Udaipur (Rajasthan), India.*

***Pushtivardhan Soni, Dhirubhai Ambani, Institute of Information and Communication Technology, Gandhinagar (Gujarat), India.***

**SESSION A4 - SIGNAL AND DATA**

24, September, 10.50 -12.30  
building 3, room 406

1. CFAR detection algorithm of noise-like radar signals.

***Igor Prokopenko, Igor Martynchuk, National Aviation University, Kyiv, Ukraine.***

2. Comparison of approximation and rigorous solution of electromagnetic scattering from nonspherical drops.

***Grigoriy Khlopov, Ganna Veselovska, O.Ya. Usikov Institute for Radiophysics and Electronics of the NAS of Ukraine, Kharkiv, Ukraine.***

3. Passive acoustic radar for aircraft trajectory tracking.

***Rustem Sinitsin, Felix Yanovsky, Eugene Chervoniak, Oleksandr Zaporozhets, National Aviation University, Kyiv, Ukraine.***

4. Nonparametrical rank detection and estimation of radar doppler signals.

***Kostyantyn Prokopenko, National Aviation University, Kyiv, Ukraine.***

5. Modeling of discrete condition monitoring for radar equipment.

***A. Raza, Department of the President`s Affairs Abu Dhabi, UAE Vladimir Ulansky, National Aviation University, Kyiv, Ukraine.***

6. Optimization of use of resources in multiposition radar systems.

***Igor Prokopenko, Vitalii Vovk, Sergey Stavitskiy, Valeriy Medvedev, National Aviation University, Kyiv, Ukraine.***

SESSION A5 - MICROWAVE AND NANO ELECTRONIC  
DEVICES

24, September, 14.00 -16.40  
Building 3, room 406

X-ray 3D stereo remote sensing for biomedical application.

***S.I. Miroshnychenko, “Teleoptic” PRA” Ltd, Kiev, Ukraine.***

***E.V.Volkov, National Aviation University, Kyiv, Ukraine.***

Residual phase errors and autofocusing in airborne SAR systems.

***Ievgen M. Gorovyi, Oleksandr O. Bezvesilnyi, Dmytro M. Vavriv,  
Institute of Radio Astronomy of NAS of Ukraine, Kharkiv,  
Ukraine.***

Classification, identification and detection of biological agents with  
graphene nanosensor.

***Emir G. Aznakayev, Diana E. Aznakayeva, National Aviation  
University, Kyiv, Ukraine.***

Development of low power multi channel interpolator for system on  
chip in 4G application.

***Vivek Jain, Navneet Agarwal, MPUAT, Udaipur, India.***

***Pradeep Chhawcharia, Techno India NJR Institute of Technology  
Udaipur (Rajasthan), India.***

An overview of spectrum sensing in cognitive radar systems.

***M. Tahir Mushtaq, Faran Awais Butt, Ahmed Malik, School of  
Engineering University of Management and Technology, Lahore,  
Pakistan.***

SYMPOSIUM 5  
ENVIRONMENT PROTECTION

**5.1. Chemical technology and engineering**

Chairman – **V.M. Ledovskykh**, National Aviation University, Ukraine.

Secretary – **T.A. Haievskva**, National Aviation University, Ukraine.

23 September, 15<sup>30</sup>,  
room 12.211.

1. Urban tree biomass as a sorbent for spilled petroleum products.

***S.A. Chripko, E.F. Novoselov, National Aviation University, Ukraine.***

2. Electroreduction of aliphatic carbonyl compounds at the aluminum cathode.

***O. Davydenko, V. Ledovskykh, National Aviation University, Ukraine.***

3. Efficiency of modified forms of natural zeolites in the processes of methanol transformation into components of motor fuel.

***A. Kustovska, O. Kosenko, National Aviation University, Ukraine.***

4. Electro-spark treatment of steel surface for varnish-paintwork quality improving.

***S. Levchenko, V. Ledovskykh, National Aviation University, Ukraine.***

5. The influence of light oil products on the surface activity of lowmolecular alcohols.

***M.R. Maksymiuk, V.L. Chumak, T.V. Neshta, U.S. Bosak, V.V. Didenko, National Aviation University, Ukraine.***

6. Betulinic acid derivatives synthesis.

***E.F. Novoselov, O.I. Tkachenko, V.A. Kachur, National Aviation University, Ukraine.***

7. Catalyst surface acidic properties at rapeseed oil heterogeneous catalytic transesterification with ethyl alcohol.

***I.V. Olshevsky, T.A. Haievska, Yu.V. Bilokopytov, National Aviation University, Ukraine.***

8. Minimizing of petroleum products natural evaporation by ultralight insulating system.

***O.A. Spaska, National Aviation University, Ukraine.***

9. Gelation reaction rate of silicate compositions.

***O. Titova, National Aviation University, Ukraine.***

10. Optimizing the properties of mixed fuel based on compositions hydrocarbon-alcohol.

***V.V. Yefymenko, O.V. Yefimenko, National Aviation University, Ukraine.***

11. Usage of hydrotreating process in the production of jet fuels.

***V.V. Yefymenko, N.S. Atamanenko, National Aviation University, Ukraine.***

## **5.2. Environmental protection**

Chairman – **O. Zaporozhets**, National Aviation University, Ukraine.

Secretary – **K. Synylo**, National Aviation University, Ukraine.

24 September, 10<sup>00</sup>,  
room 5.601.

1. Aviation under the context of international law in the sphere of biodiversity: gaps and necessary steps.

***V. Havrylenko, Ia. Movchan, O. Zaporozhets, D. Hulevets, Iu. Kartash, National Aviation University, Ukraine.***

2 Implementation of energy-saving technologies at airports to increase the level of environmental safety.

***M.M. Radomska, O.M. Tykhenko, O.V. Ryabchevsky, O.M. Dekhtiarenko, National Aviation University, Ukraine.***



3. Ukrainian aviation under the context of international law in the sphere of climate change: gaps and recommendations for improvement.

***O. Zaporozhets, V. Tokarev, Ia. Movchan, National Aviation University, Ukraine.***

***O. Grasko, Civil Aviation Administration, Ukraine.***

4. Electromagnetic load on the airport staff and basic methods of its reducing.

***V. Glyva, V. Kovalenko, N. Kychata National Aviation University, Ukraine.***

***L. Levchenko National Technical University of Ukraine “Kyiv Polytechnic Institute”, Ukraine.***

5. Information support of complex improving of security level at the enterprise.

***B. Khalmuradov, National Aviation University, Ukraine.***

***O. Evtushenko, N. Volodchenkova, National University Food Technology, Ukraine.***

6. Modelling and measurement of aircraft engine emissions inside the airport area.

***P. Wiesen, R. Kurtenbach, Bergische University of Wuppertal, Germany.***

***O. Zaporozhets, K. Synylo, National Aviation University, Ukraine.***

7. Monitoring of aircraft noise.

***K. Kazhan, National Aviation University, Ukraine.***

8. Passive method of inboard noise reduction for aircrafts.

***V. Makarenko, V. Tokarev, National Aviation University, Ukraine.***

9. On the issue of light air ions normalization in the air of controllers room.

***Kh. Pankiv, National University “Lviv Polytechnic”, Ukraine.***

***I. Paryliak, Kyiv National University of Construction and Architecture, Ukraine.***

***O. Sydorov, National Aviation University, Ukraine.***

***L. Levchenko National Technical University of Ukraine “Kyiv Polytechnic Institute”, Ukraine.***

10. Mitigation of aircraft noise and acoustic pollution near airports.

***I. Borisov, N. Kizilova, Yu.I. Rudnev, Kharkov National University, Ukraine.***

***E. Konovalova, National Aviation University, Ukraine.***

11. Renewable energy - wind, overview.

***I.V. Yakymets, National Aviation University, Ukraine.***

12. Risk assessment vs conscience.

***A.V. Lukyanchikov, T.M. Lukyanchykova, S.I. Karasev National Aviation University, Ukraine.***

13. Materials of aerial photographs as part of monitoring systems of animal -vehicle collision.

***O. Kokhan, National Aviation University, Ukraine.***

### **5.3. Land management, cadastre and land monitoring**

Chairmen – **M. Kovalchuk**, National Aviation University, Ukraine.

Secretary – **I. Kapelistaja**, National Aviation University, Ukraine.

23 September, 14<sup>00</sup>,  
room 3.504.

1. Features establishment and functioning of the cadastre system of estate of Sweden.

***M.G. Bagauri, National Aviation University, Ukraine.***

2. Analysis of modern methods of geodetic support design airport.

***A.F. Dankevich, National Aviation University, Ukraine.***

3. Geoecological aspects of environmental management geological monument of nature stows the Haidamatskyu yar.

***I.M. Kapelistaja, National Aviation University, Ukraine.***

4. Modern EU practice of creating the cadastre- registration systems.  
*T.V. Kozlova, National Aviation University, Ukraine.*
5. Land relations in the field of urban development.  
*I.O. Novakovska, Institute of Land Relations Ukraine, Kyiv, National Aviation University, Ukraine.*
6. Factor of transport accessibility for spatial planning.  
*Nataliia Pashynska, Institute of Geography of the National Academy of Science of Ukraine, Kyiv, Ukraine, National Aviation University, Kiev, Ukraine.*
7. Using the openstreet map in the cadastral and planning works.  
*V.V. Putrenko, National Aviation University, WDC-Ukraine NTUU “KPI”, Ukraine.*
8. Satellites of planets – self-gravitating formation in the solar system.  
*S.O. Yasenev, National Aviation University, Ukraine.*

#### **5.4. Biotechnology in aviation**

Chairmen – **K. Garkava**, National Aviation University, Ukraine.

Secretary – **N. Nikolaieva**, National Aviation University, Ukraine.

24 September, 10<sup>00</sup>,  
room 5.713.

1. Biological technologies for space: range of problems and new prospects.  
*V.I. Karpenko, V.G. Lazariev, A.V. Drazhnikova, National Aviation University, Ukraine.*
2. Use of higher aquatic vegetation in the system of «Bioplato» to reduce concentration of pollutants in sewage.  
*I.O. Kolomiets, I.V. Samofal, V.V. Gorupa.*
3. Stressful factors of space flight.

***O. M. Kovalev, V.V. Gorupa, National Aviation University, Ukraine.***

***O.O. Linnik, Institute of Physiology named after A.A. Bohomoltsia NAS Ukraine.***

4. Stress activation of free radical oxidation.

***O. M. Kovalev, N.V. Nikolaieva, National Aviation University, Ukraine.***

***O.O. Linnik, Institute of Physiology named after A.A. Bohomoltsia NAS Ukraine.***

5. Antimicrobial properties of biologically active substances of ginger root extract.

***V. Kudas, O. Vasylchenko, National Aviation University, Ukraine.***

6. The issue of air pollution by toxic substances and their effect on pollen of woody plants.

***N.V. Nikolaieva, K.G. Garkava, V.V. Khrobust, National Aviation University, Ukraine.***

7. Improving extraction of biological active substances of *Sambucus* spp.

***M. Skuratovska, M. Baranovsky, National Aviation University, Ukraine.***

8. Comparative analysis of anticancer drugs on basis of gemcitabine.

***K.I. Fedulova, L.O. Kosogolova, National Aviation University, Ukraine.***

## SYMPOSIUM 6

### AVIATION CHEMMOTOLOGY

**Chairman** – L. Yanovsky, FGUP “Central Institute of Aircraft Engines named by P.I. Baranov”, Russian Federation

**Co-Chairman** – S. Boichenko, National Aviation University, Ukraine

**Secretary** – L. Cherniak, National Aviation University, Ukraine.

24 September, 15<sup>00</sup>,  
room 5.601.

1. A new paradigm of use of traditional and alternative fuels and lubricants. Foresight of chemmotology.

*S. Boichenko, National Aviation University, Kyiv, Ukraine.*

2. Modern ways of solving the problem of gasoline vapors emissions from storage tanks.

*L. Cherniak, M. Radomska, National Aviation University, Kyiv, Ukraine.*

*W. Reschetilowski, Institute of Industrial Chemistry, Dresden University of Technology, Dresden, Germany.*

3. Tribological properties of friction pair in magnetic field.

*M. Svirid, I. Trofimov, A. Kolomiets, A. Plotnykov, National Aviation University, Ukraine.*

4. The assessment of environmental parameters of conventional and alternative fuels.

*M. Radomska, L. Cherniak, National Aviation University, Ukraine*

5. Tribo-cavitation for aviation kerosene.

*A. Stelmakh, R.E. Kostyunik, A.V. Stelmakh, National Aviation University, Ukraine.*

6. Experimental comparison of differential-phase method and method of dynamic focusing in defining roughness parameters of surfaces.

*O. Stelmakh, A. Ibraimov, V. Radzievski, National Aviation University, Ukraine.*

7. Impact of rape oil ethyl ethers additives on some characteristics of jet fuel.

***A. Iakovlieva, National Aviation University, Ukraine.***

***K. Lejda, Rzeszowska Politechnika, Poland.***

***S. Boichenko, National Aviation University, Ukraine.***

***H. Kuszewski, Rzeszowska Politechnika, Poland.***

***O. Vovk, O. Martynova, National Aviation University, Ukraine.***

8. Assessment of allelopathic activity in process of airports territory decontamination by application of phytoremediation in SITU.

***O. Shtyka, T. Bilyk, National Aviation University, Kyiv, Ukraine.***

9. The effectiveness of kerosene-water emulsions removal using polypropylene sorbents with imbibition promoters.

***O. Shtyka, National Aviation University, Kyiv, Ukraine.***

***J. Sęk, Lodz University of Technology, Lodz, Poland.***

10. Quality boosting of diesel fuels by the isomerization of n-paraffins on mesoporous support based catalysts – design of experiments in combination with kinetic modeling.

***A. Rüfer, A. Werner, W. Reschetilowski, Dresden University of Technology, Dresden, Germany.***

11. Influence of fuels with alternative components on lubricating materials.

***O. Shevchenko, P. Lemish, V. Kamenieva Ukrainian State University of Chemical Technology, Dniepropetrovs'k, Ukraine.***

12. Investigation of performance and environmental characteristics of motor and aviation gasolines with different content of ethanol.

***A. Azarenkova, S. Boichenko, O. Aksenov, National Aviation University, Ukraine.***

13. Aircraft lubricant materials with additives of molybdenum disulfide and diselenide graphene-like nanoparticles.

***J. Lyubinin, M. Kurbatova, State enterprise «Scientific and Research Institute for Refining and Petrochemical Industry “MASMA”, Ukraine.***

***L. Kulikov, K. Grinkevych, N. Konig-Ettel, I. Tkachenko,  
L. Mordel, Frantsevich Institute for Problems of Materials Science  
of NASU, Ukraine.***

14. Model of hydrocarbons transport through the porous ground media.

***Andrzej Gawdzik, University of Opole, Department of Process Engineering, Opole, Poland.***

***Jaroslav Gawdzik, University of Technology, Faculty of Civil and Environmental Engineering, Division of Waste Management, Kielce, Poland.***

***Barbara Gawdzik, Jan Kochanowski University of Humanities and Sciences, Faculty of Mathematics and Science, Institute of Chemistry, Kielce, Poland.***

***Alicja Gawdzik, University of Opole, Department of Process Engineering, Opole, Poland.***

15. Determination of factors influencing the amount of light gasoline hydrocarbons losses from evaporation in HST.

***Nina Chernobaeva, Nikolay Shutko, National Aviation University, Ukraine.***

16. Prospects for modernization of aircraft's tribosystems in accordance with the Directive ICAO Doc 9977.

***A. Nikitin, PhD, G. Nikitin, National Aviation University, Ukraine.***

17. Stabilization of service properties of turbine oils with electrostatic field and impulses of electromagnetic nature.

***T. Marynych, National Aviation University, Ukraine.***

18. Estimation of tribological and operating characteristics of hydraulic fluids.

***N. Krasilnikova, I. Lyubinin, State owned Enterprise S&R Institute of Crude Oil Refining and Petrochemical Industry "MASMA", Kiev, Ukraine.***

***K. Pashynska, Ye. Rudnytska, O. Yevdokymenko, National Aviation University, Ukraine.***

19. A New Model For Charging EVs With Current Fuel Infrastructure – Self Charging Electric Vehicle Configuration Fed By Stationary Outboard Fuel.

***Emrah Kinav, S.Z. Baykara, Yildiz Technical University, Turkey.***

20. Fuel filling complex low cost.

***K. Suyarkov, hansaconsult Ingenieurgesellschaft mbH, Reinbek, Germany.***

21. Inclusion of Biofuels and Sustainability Criteria on the EU regulation: EU Fuel Quality and Renewable Energy Directives. Application on aviation.

***María del Mar de la Rica, César Velarde, Observatory of Sustainability in Aviation (OBSA), SENASA, Spain.***

22. Methods of calculating the geometric dimensions of the gravitational inertial cleaner type (GICT).

***S. Puzik, V. Manzii, A. Hvozdetzkyi, National Aviation University, Ukraine.***

## SYMPOSIUM 7 COMMUNICATION FACTOR IN MODERN INTERNATIONAL RELATIONS

### **7.1. Information and legal principles of international relations**

Chairman – **O. V. Sosnin**, National Aviation University, Ukraine.

Secretary – **O. Yu. Kondratenko**, National Aviation University, Ukraine.

24 September, 10<sup>00</sup>,  
room 7.206.

1. International law mechanisms for world forest ecosystem protection.

***I. S. Iatsukhnenko, National Aviation University, Ukraine.***



2. International information transparency.  
*O. O. Kozhushko, National Aviation University, Ukraine.*
3. Informational component of Russian aggression against Ukraine.  
*O. Yu. Kondratenko, National Aviation University, Ukraine.*
4. Some aspects of biometric passports introduction in Ukraine in compliance to ICAO and EU specifications.  
*V. I. Mazur, O. Yu. Mazur, National Aviation University, Ukraine, Ukrainian National Airlines, Ukraine.*
5. Strategic prognostication of the USA foreign policy.  
*N. F. Rzhevska, National Aviation University, Ukraine.*
6. Establishing public administration of education – the way to build in Ukraine into the knowledge society.  
*O. V. Sosnin, National Aviation University, Ukraine.*
7. Ukraine's role in the world in countering human trafficking.  
*I. Yu. Shcherbyna, V. N. Kubalskiy, National Aviation University, Ukraine.*
8. International law and geo-economic causes of terrorism escalation and occurrence.  
*R. V. Fedynets, National Aviation University, Ukraine.*

**7.2. The transformation of journalism in the context of technologizing the world and the processes of globalization**  
Chairman – **Y.V. Kozachok**, National Aviation University, Ukraine.  
Secretary – **V.M. Vasylenko**, National Aviation University, Ukraine.

24 September, 10<sup>00</sup>,  
room 7.217.

1. Ukrainian media in the context of axiology.  
*O. M. Ryzhko, National Aviation University, Ukraine.*

2. Information component of terrorism in the globalization.

***V.A. Emets, National Aviation University, Ukraine.***

3. Effect of media on the formation of Ukrainian national political consciousness in the context of globalization.

***T. E. Martynova, National Aviation University, Ukraine.***

4. Transformation of the journalism and phenomenon cognitive linguistics in the modern scientific knowledge.

***I.V. Kevlyuk, National Aviation University, Ukraine.***

5. Ukrainian tautological phraseology in the texts of media.

***T.M. Andreeva, Taras Shevchenko National University of Kyiv, Ukraine.***

6. The phraseologisms motivated by the rite of oath in the media.

***V.M. Vasylychenko, National Aviation University.***

7. Internet trolling: the latest efficient manipulative technique for the formation of public opinion in Ukrainian media landscape.

***G.I. Nazarenko, National Aviation University.***

### **7.3. The international scientific and technical cooperation of Ukraine in aerospace industry**

Chairman – **S.V. Sidenko**, National Aviation University, Ukraine.

Secretary – **M.P. Vysotskfa**, National Aviation University, Ukraine.

23 September, 13<sup>30</sup>,  
room 7.401(a).

1. Prospects of international grain market in the season 2014-2015 years

***K.V. Antonenko, O.I. Kotlyarova, National Aviation University, Ukraine.***

2. Impact of globalization on labor migration.

***M.P. Vysotska, V.O. Ilenko, National Aviation University, Ukraine.***

3. International cooperation of Ukraine in aerospace industry.  
***S. Gryniuk, National Aviation University, Ukraine.***
4. Economic diplomacy as important component foreign policy.  
***I. Derevyanko, National Aviation University, Ukraine.***
5. Features of the creation and operation of international strategic alliances in the aviation.  
***I. Nabok, National Aviation University, Ukraine.***
6. Institutional base of nigerian aviation industry.  
***Z.S. Sokolova, National Aviation University, Ukraine.***

## SYMPOSIUM 8

### ECONOMY AND MANAGEMENT IN AVIATION

Chairman – **V. Matveev**, National Aviation University, Ukraine.

co-Chairman – **I. Suvorova**, National Aviation University, Ukraine.

Secretary – **O. Vovk**, National Aviation University, Ukraine.

24 September, 14<sup>00</sup>,  
room 2.401.

1. Investment activity in Ukraine: aims and obstacles.  
***T. Bilenko, National Aviation University, Ukraine.***
2. The global market aircraft construction.  
***I. Heiets, National Aviation University, Ukraine.***
3. Intelligent logistics systems.  
***M. Grygorak, Y. Varenko, National Aviation University, Ukraine.***
4. Angstrommanagement technology and 3d-modelling in of airlines.  
***T. Kuznetsova, National Aviation University, Ukraine.***
5. The airline deregulation effects of tourism industry in turkey.  
***Angstr Ali Emre SARILGAN, Anadolu University, Turkey.***

6. Air transportation management education comparison in Anadolu University and National Aviation University.

***Iryna Kuryanova, Anadolu University Vocational School of Transportation, Turkey.***

***Ali Emre Sarilgan, Anadolu University, Turkey.***

7. Inter-firm interaction of the aviation enterprise as a method to enhance the functioning of Ukrainian aviation complex.

***G. Malakhivska, National Aviation University, Ukraine.***

8. Resource allocation improvement in the tasks of airport ground handling operations.

***K. Marintseva, G. Yun, National Aviation University, Ukraine.***

9. Low-cost airlines in Ukraine: history and perspectives.

***V. Myroniuk, V. Matveev, National Aviation University, Ukraine.***

10. Legal, organizational and economic aspects of classification of enterprises integration.

***O. Ovsak, O. Kyrylenko, National Aviation University, Ukraine.***

11. Mechanisms of global markets aerospace.

***T. Ostapenko, National Aviation University, Ukraine.***

12. Influence of the marketing environment demographic factor on the development of the Ukrainian higher education market.

***S. Ramens'ka, National Aviation University, Ukraine.***

13. Influence of globalization processes on the airline industry of Ukraine.

***V. Sibruk, National Aviation University, Ukraine.***

14. European integration of Ukraine and participation of international organizations in reforming the national agricultural sector.

***V. Klymenko, National Aviation University, Ukraine.***

***A. Lozova, Taras Shevchenko National University of Kyiv, Ukraine.***

SYMPOSIUM 9  
**HUMAN FACTOR IN AVIATION**

Chairman – **A. Gudmanian**, National Aviation University, Ukraine.

**Session A. Language modelling of aviation information systems**

Chairman – **O. Kovtun**, National Aviation University, Ukraine.

Secretary – **L. Konoplianyk**, National Aviation University, Ukraine.

24 September, 15<sup>20</sup>,  
room 8.1412

1. Requirements to pilots and air traffic controllers' proficiency in aeronautical communication.

***O. Kovtun, A. Gudmanian, National Aviation University, Ukraine.  
A. Mikhaylov, Siberian State Aerospace University,  
named after academician M.F. Reshetnev, Russian Federation.***

2. Professional competence as a required component of professional ethics of a future interpreter in the area of aviation.

***N. Belous, S. Iagodzinskyi, National Aviation University, Ukraine.***

3. The role and function of sign language in aviation.

***N. Zakharchuk, S. Kharytska, National Aviation University,  
Ukraine.  
P.-P. Mittertreiner, Quality Engineer at the Dutch Railroad.  
Network Administrator, the Netherlands.***

4. Lexical ways of aviation terminology rendering.

***T. Smirnova, National Aviation University, Ukraine.***

5. English-language training of future aviation specialists and its influence on flight safety.

***O. Bondaruk, S. Volgina, O. Yashchuk, National Aviation  
University, Ukraine.***

6. Basic principles of teaching aviation English to pilots and air traffic controllers.

***O. Kovtun, National Aviation University, Ukraine.***

***G. Simoncini, John Cabot University, Italy.***

7. Human factor in aviation documentation translation: grammatical transformations in use.

***S. Shurma, National Aviation University, Ukraine.***

8. Professional ethics of an aviation industry translator.

***G. Encheva, T. Semyhinivska, National Aviation University, Ukraine.***

9. Aviation terminology formation as a factor of safety.

***I. Burlakova, T. Diachuk, National Aviation University, Ukraine.***

10. Evolution of human factors in aviation: history and definitions.

***O. Shved, L. Sydorenko, National Aviation University, Ukraine.***

11. The human factor and linguistic aspects to ensure communication efficiency in the aviation industry.

***I. Burlakova, N. Romanchenko, National Aviation University, Ukraine.***

12. Communication in aviation.

***L. Konoplianyk, National Aviation University, Ukraine.***

13. Motivation for training of future specialists in aviation industry.

***L. Bondar, N. Iskhakova, National Aviation University, Ukraine.***

14. The problems of the aeronautical text machine translation adaptation.

***G. Gayovych, V. Teleutsia, National Aviation University, Ukraine.***

15. Providing professional reliability of the flight crew members.

***Ya. Absaliyeva, L. Kucheriava, G. Mikhnenko, National Aviation University, Ukraine.***

16. Language communication difficulties in aviation.

***O. Shostak, Yu. Pryshupa, National Aviation University, Ukraine.***

**Session B. Social, political, moral and psychological components  
of aviation safety**

Chairman – **S. Iagodzinskiy**, National Aviation University, Ukraine.

Secretary – **N. Iskhakova**, National Aviation University, Ukraine.

24 September, 15<sup>20</sup>,  
room 8.803

1. The role of scientific humanitarian knowledge  
in spiritual aviation expert personality build-up.

***O. Sidorkina, O. Skyba, T. Poda, I. Skyba, National Aviation  
University, Ukraine.***

2. Requirements for scientific and pedagogical staff  
in the process of formation of future psychologists' readiness  
for professional activity in the aviation industry.

***L. Baranovska, T. Kovalkova, National Aviation University,  
Ukraine.***

3. Compensation for damages in aviation: historical and legal aspect.

***T. Klynina, National Aviation University, Ukraine.***

4. Women-pilots in the Great Patriotic War of the Soviet Union.

***Yu. Smolnikov, O. Yurchenko, National Aviation University,  
Ukraine.***

5. Cross-cultural factors in aviation safety.

***T. Davydenko, S. Yurchenko, National Aviation University,  
Ukraine.***

6. The requirements for personal and professional skills of aviation  
industry software engineers in the context of professional  
communication readiness development.

***H. Babii, L. Tsymbalist, National Aviation University, Ukraine.***

7. The role of human factor in aviation safety.

***Y. Zharoid, National Aviation University, Ukraine.***

8. The results of the development of theoretical and methodological foundation of social and psychological support of aviation.  
***V. Kornilov, K. Fedosova, National Aviation University, Ukraine.***
9. Training of the future aviation experts for professional activities.  
***L. Prudka, National Aviation University, Ukraine.***
10. Methodological approaches to the research of the problem of training of future social workers in the aviation field.  
***O. Kotykova, L. Dovgopolova, National Aviation University, Ukraine.***
11. Psychological causes of human factor occurrence.  
***V. Furman, National Aviation University, Ukraine.***
12. Philosophical sciences in shaping ideological culture of Aviation Universities students.  
***L. Drotianko, N. Sukhova, L. Kadnikova, L. Moklyak, National Aviation University, Ukraine.***
13. Technological age: ethics of responsibility.  
***M. Abysova, T. Shorina, National Aviation University, Ukraine.***
14. Kyiv Aeronautical Society as the leading centre of aviation specialists' in Ukraine training.  
***V. Grebennikov, V. Doroshenko, National Aviation University, Ukraine.***
15. Formation of the NAU students' value system during the physical education classes.  
***T. Kasatska, S. Heichenko, National Aviation University, Ukraine.***
16. Social projection of justice in the global airspace of the 21st century.  
***S. Ordenov, H. Kleshnia, National Aviation University, Ukraine.***



17. Synergetic model of integrative-and-activity educational system as a basis for forming planetary thinking in the process of future aviation specialists training.

***E. Luzik, National Aviation University, Ukraine.***

18. The humanitarian aspects of security policy of Ukraine in the context of European integration.

***L. Chupriy, National Aviation University, Ukraine.***

19. Psychological work with pilots in combat conditions.

***O. Blinov, National Aviation University, Ukraine.***

20. Using an interdisciplinary approach in the context motivation students for physical education.

***I. Wrzesnewskyj, N. Orlenko, N. Turchina, National Aviation University, Ukraine.***

***Agita Abele, Latvian Academy of Pedagogy, Latvia.***

21. Vectors of modernization of the national system of higher education.

***O. Khomeriki, M. Klyov, National Aviation University, Ukraine.***

22. Subculture as the agent of action of cultural tradition – the initiator of innovation and institutionalisation processes.

***K. Nastoiashcha, National Aviation University, Ukraine.***

23. The human factor in the corporate culture of the aviation industry of Ukraine.

***S. Stoyan, National Aviation University, Ukraine.***

### **Session C. Psychology of aircraft safe operation and modern ergatic systems**

Chairman – **O. Petrenko**, National Aviation University, Ukraine.

Secretary – **V. Biletska**, National Aviation University, Ukraine.

24 September, 15<sup>20</sup>,  
room 8.1203

1. Emotional burnout as one of the psychological consequences that occur during the continuous monitoring of personal professional levels of quality assurance engineers.

***H. Borodina, Y. Ardashova, M. Ivanyuk, National Aviation University, Ukraine.***

2. Transforming gender identity of students studying at the Faculty «Air Traffic Control».

***Y. Ardashova, S. Barabash, National Aviation University, Ukraine.***

3. Stretching practice in the process of the students' physical education.

***I. Bondarenko, J. Danilchenko, National Aviation University, Ukraine.***

4. Practising standard statistical and graphic data presentation lexicon as a factor of safe air traffic communication.

***A. Akmalidina, O. Pysmenna, National Aviation University, Ukraine.***

5. Training humans for an automated air traffic.

***A. Davidenko, National Aviation University, Ukraine.***

6. Decision-making in stressful cognitive conditions as a psychological problem.

***L. Pomytkina, National Aviation University, Ukraine.***

7. Development of professional responsibility of civil aviation pilots.

***V. Zlagoduh, National Aviation University, Ukraine.***

8. Optimizing non-technical skills within the workplace.  
***Andrew Duma, Royal Flying Doctor Service, Australia.***
9. Human factor and psychological aspects in flight safety provision.  
***O. Akmal'dinova, L. Budko, O. Kravchuk, T. Shulga, National Aviation University, Ukraine.***
10. Cellphone use on airliners: an attempt at newspaper discourse analysis.  
***M.-M. Rybalko, National Aviation University, Ukraine.***
11. The ratio of body weight and length of the NAU first-year students.  
***L. Yasko, National Aviation University, Ukraine.***  
***I. Pereverseva, Ulyanovsk State technical University, Russia.***
12. Recreating walking classes in the process of the students' physical education.  
***V. Zinchenko, Y. Usachov, T. Tarnavska, National Aviation University, Ukraine.***
13. Independent work of students for physical education.  
***V. Biletska, National Aviation University, Ukraine.***  
***O. Pryimakov, Uniwersytet Szczecinski, Poland.***
14. Physical preparation of air traffic controllers.  
***N. Nosenko, I. Skydan, T. Svirskaya, National Aviation University, Ukraine.***
15. The structure of psychophysical potential professional development of students of aviation industry.  
***V. Fotynyuk, National Aviation University, Ukraine.***
16. ATC risk level estimation of distances between aircraft during flight level rules violations.  
***O. Reva, S. Borsuk, National Aviation University, Ukraine.***

17. Emotional intelligence as a determinant of situational psychological readiness of air traffic controllers.  
***T. Zaporozhets, National Aviation University, Ukraine.***
18. Psychological conception of man-machine verbal interaction in the intelligent cockpit.  
***O. Petrenko, National Aviation University, Ukraine.***
19. Factors affecting NAU students motivation to regular exercise.  
***I. Vrzhesnevskyy, T. Rakytina, E. Cherniayev, National Aviation University, Ukraine.***  
***O. Novoselova, Uralskyy State University, Russia.***
20. Recursive models of psychodynamics in the framework of subjective entropy of preferences paradigm.  
***V. Kasianov, A. Goncharenko, National Aviation University, Ukraine.***
21. Human factors in aircraft maintenance.  
***N. Glushanytsia, National Aviation University, Ukraine.***
22. Features of ICAO "risk triangle" solutions of human factors under complicated standards of the airspace separation.  
***Aleksey Reva, National Aviation University, Kiev, Ukraine***  
***Bala Mirzayev, Peyman Mukhtarov, Shahin Nasirov, The Main Center of the Unified System Air Traffic Control of the Azerbaijan Republic, Baku.***

SYMPOSIUM 10  
**SPATIAL ORGANIZATION OF AIR COMPLEXES**  
Chairman – **A. Bieliatynskyi**, National Aviation University, Ukraine.  
Secretary – **A. Vyshnevskya**, National Aviation University, Ukraine.

24 September, 10<sup>00</sup>  
room 5.303

1. Improvement of concrete airfield pavement design.  
*O.V. Rodchenko, National Aviation University, Ukraine.*
2. Introduction of the acoustic emission method in technical diagnostics of bridges.  
*A. Byelyatynskyi, National Aviation University, Ukraine.*  
*E. Krayshkina, A.V. Skrypchenko, P.M. Koval, The National Academy of Fine Arts and Architecture, Ukraine.*
3. Moving in interior design.  
*I. Kuznetsova, V. Sirak, National Aviation University, Ukraine,*
4. Special features of modern yacht interiors.  
*I. Kuznetsova, H. Shepel, National Aviation University, Ukraine,*
5. Theoretical modeling as a research method of a relaxation center at the airport.  
*O.V. Chemakina, I.A. Lysiuk, National Aviation University, Ukraine.*
6. Features of the formation of first-aid medical centers with using air ambulance.  
*O.V. Chemakina, I.V. Minyailo, National Aviation University, Ukraine.*
7. Tawning covers as means of formation of architectural expressiveness of airports.  
*G.N. Agieieva, National Aviation University, Ukraine.*
8. Methodological approach to scientific research in architectural space at the example of octagonal constructions.  
*Mrynska N.O., Ukraine.*

9. Effectiveness of the buffer zone.

***Bolotov G.I., National Aviation University, Ukraine.***

10. Basic characteristics of open public spaces on the territory of civil airports organization.

***O.V.Chemakina, O.Vasylchenko, National Aviation University, Ukraine.***

11. Specifics of the space-planning organization of aviation universities.

***Y.V. Socolova, National Aviation University, Ukraine.***

12. Effect of environmental competence architects is rated the world's airports.

***O. Osipenko, National Aviation University, Ukraine.***

13. Method of progressive collapse modeling based on real high-rise building examples.

***M.S. Barabash, M.A. Romashkyna, National Aviation University, Ukraine.***

14. The method of calculating the metal frame considering its spatial work.

***N.O. Kostyra, E.A. Bakylin, National Aviation University, Ukraine.***

15. Analysis of the main results of experimental research rigidity of plane tension reinforced concrete composite constructions.

***V. Kolchunov, T. Tugay, I. Yakovenko, National Aviation University, Ukraine.***

16. Building a computer model of an optoelectronic fire smoke alarm detector.

***G. Sokolov, National Aviation University, Ukraine.***

SYMPOSIUM 11  
**AIR AND SPACE LAW: INTERNATIONAL AND NATIONAL  
ISSUES OF SECURITY**

23 September, 13<sup>30</sup>,  
room 1.411

1. Globalization and commercialization of space activities as a determining factor of development of international space law.  
*N.N. Antonenko, National Aviation University, Ukraine.*
2. Terms of the Air Code of Ukraine and provisions of criminal law.  
*S.R. Bagirov, National Aviation University, Ukraine.*
3. Realization of international legal norms of adjusting the safety of aviation in Ukraine.  
*S.G. Golovko, V.V. Sobkova, National Aviation University, Ukraine.*
4. Structural and functional aspects personnel of Civil Aviation.  
*O. A. Husar, National Aviation University, Ukraine.*
5. Legal regime of regional patents.  
*K. Kmetyk, National Aviation University, Ukraine.*
6. Problems of administrative and legal regulation of safety in current conditions.  
*I.Ya. Kozachok, National Aviation University, Ukraine.*
7. Measures to prevent the bankruptcy of the debtor - Aviation Enterprise and extrajudicial procedures.  
*V.P. Kozyreva, National Aviation University, Ukraine.*
8. Criminal and legal characteristic of socially dangerous consequences of violation of traffic rules safety and operation of air transport (art. 276 of CC of Ukraine).  
*S.Ya. Lykhova, I.O. Roschyna, National Aviation University, Ukraine.*

9. Modern trends of air and international air law development.  
*N.V. Maliarchuk, N.M. Tereshchenko, National Aviation University, Ukraine.*
10. Functions of administrative law in aviation sphere.  
*O.M. Myronets, National Aviation University, Ukraine.*
11. Financial sanction in Ukrainian law: theoretical aspects.  
*I.P. Ustinova, National Aviation University, Ukraine.*
12. Civil liability: conceptional approach.  
*R.B. Shyshka, National Aviation University, Ukraine.*
13. Innovation is such a complex purposeful change.  
*N.B. Shust, National Aviation University, Ukraine*  
*A.O. Yaroshenko, Dragomanov National Pedagogical University, Kyiv, Ukraine.*

## SYMPOSIUM 12

### INNOVATIVE TECHNOLOGY OF PROFESSIONAL TRAINING ON THE BASIS OF HIGHER EDUCATION

Chairman – **V. Shpylyovyi**, National Aviation University, Ukraine.

Secretary – **Yu. Kazarinov**, National Aviation University, Ukraine.

24 September, 13<sup>30</sup>,  
room 8.905.

1. Challenges of aircraft maintenance personnel training standards harmonization.  
*Iryna Zarubinska, Anatoliy Polukhin, National Aviation University, Ukraine.*
2. Creating the scientific school management of innovative development.  
*V. Shpylyovyi, National Aviation University, Ukraine.*



3. The problem of functioning of magistracy on project management.  
***M. Grinyova, Poltava National Pedagogical University named after V.G. Korolenko, Ukraine.***  
***O. Mykhalchenko, National Aviation University, Ukraine.***
4. Implementation of the statistical methods into the project activity of the aviation production-and-maintenance complexes.  
***A. Ovsyankin, Yu. Kazarinov, National Aviation University, Ukraine.***
5. Traditional methods of diagnostics learning outcomes with the help of innovative technologies.  
***L. Vdovenko, V.Yudka, G. Serdyuk, National Aviation University, Ukraine.***
6. Training future heads of educational establishments in terms magistracy specialty "Management of educational institutions".  
***N. Sas, Poltava National Pedagogical University named after V.G. Korolenko, Ukraine.***  
***O. Mykhalchenko, National Aviation University, Ukraine.***
7. Mastering the bases of project activity as a resource of general pedagogical training in high school.  
***O. Zhdanova-Nedilko, Poltava National Pedagogical University named after V.G. Korolenko, Ukraine.***  
***Yu. Kazarinov, National Aviation University, Ukraine.***
8. Design contents of competency oriented education in higher educational institutions.  
***H. Sorokina, Poltava National Pedagogical University named after V. G. Korolenko, Ukraine.***  
***L. Vdovenko, National Aviation University, Ukraine.***
9. Child labour corps as an innovative project A.S. Makarenko.  
***A. Tkachenko, Poltava National Pedagogical University named after V. G. Korolenko, Ukraine.***  
***N. Chaika, National Aviation University, Ukraine.***

10. On the state of availability secondary educational institutions Ukraine with computers and internet access.

***N. Shumar, G. Kyrychevskyy, National Aviation University, Ukraine.***

11. Research activity of future managers in project management.

***S. Grinyov, Poltava National Pedagogical University named after V. G. Korolenko, Ukraine.***

***A. Ovsyankin, V. Ignatyev, National Aviation University, Ukraine.***

### **13 ROUND TABLE DISCUSSION**

#### **ICAO: Aviation Safety Challenges**

Chairperson – **G. Suslova**, National Aviation University, Ukraine

Secretary – **O. Bilous**, National Aviation University, Ukraine

23 September, 14<sup>30</sup>,  
room 8.200.

1. Security Aspects of Air Cargo and Mail Transportation.

***Andrii Kryzhanovskiy, National Aviation University, Ukraine.***

2. Risk Management in Civil Aviation.

***Igor Dobrovolskyi, National Aviation University, Ukraine.***

3. Crisis Management Concept.

***Yuliya Zagnii, National Aviation University, Ukraine.***

4. Training and Upgrading of Aviation Security Personnel.

***Tetiana Zagnii, National Aviation University, Ukraine.***

5. Facilitation of the Travel Document Security Chain.

***Oleksandr Bilous, National Aviation University, Ukraine.***

6. Analysis of Laser Attack Impact on Professional Pilot Activities.

***Olena Dolgova, National Aviation University, Ukraine.***

7. Implementation of Security Procedures in Air Traffic Control.  
***Oksana Sobodieieva, National Aviation University, Ukraine.***

8. Civil-Military Coordination in Air Traffic Control.  
***Ganna Turlo, National Aviation University, Ukraine.***

## Notes

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