



Memory of Ming Chang ,RIP



# ISUDEF'24

HYBRID

National Aviation Academy  
May 22nd-24th, 2024, Baku, AZERBAIJAN



## ISUDEF'24 Program - DAY 1

BAKU/Azerbaijan Time (UTC+4)		Baku Hall - 22 May 2024 <a href="#">Microsoft Teams Link</a>		
<b>09:00 - 09:30 - NAA, Student Training Centre - Arrivals, Registration</b>				
09:30 - 10:30	Opening Session	Symposium Moderator: <b>Günel Valiyeva</b>		
		Musical part		
		<b>Arif Pashayev</b> , Honorary Chair of ISUDEF'24, Rector of the National Aviation Academy, Azerbaijan		
		<b>Adnan Özcan</b> , Honorary Chair of ISUDEF'24, Rector of the Eskişehir Technical University, Türkiye		
<b>Abdulhamit Avşar</b> , Honorary Chair of ISUDEF'24, Rector of the İstanbul Ticaret University, Türkiye				
10:30 - 11:00	Plenary Reports Session	<b>Adalat Samadov</b> , The first vice-rector of the National Aviation Academy, Azerbaijan		
		<b>Beken Seidakhmetov</b> , Rector of the Civil Aviation Academy, Kazakhstan		
11:00 - 12:00	Opening Keynote Session	<b>Max. F. Platzer</b> , Lifetime Honorary President of SARES, USA		
		<b>T. Hikmet Karakoç</b> , President of SARES, Eskişehir Technical University, Türkiye		
<b>12:00-13:30 Lunch Break</b>				
13:30 - 15:00	I Keynote Session	Session Chair: <b>Birol Kılıç</b>		
		<i>Design concepts for a Flight Simulator of an Unmanned Aerial System (UAS) from Hydra Technologies</i>		
		<b>Ruxandra Mihaela Botez</b> , Canada Research Chair in Aircraft Modeling and Simulation, École de Technologie Supérieure (ÉTS)		
		<i>Electronically Tunable Acousto-Optic Delay Line of discrete action</i>		
		<b>Afig Hasanov</b> , Vice-rector for scientific affairs of the National Aviation Academy, Azerbaijan		
		<i>3D-VR simulators for engineering training on aircraft maintenance equipment using intellectual support</i>		
<b>Kairat Koshekov</b> , Vice-rector for scientific affairs of the Civil Aviation Academy, Kazakhstan				
<i>The cyber resilience problems of IoT-based cyber-physical systems and some approaches to their solutions</i>				
<b>Rasim Aliguliyev</b> , Director of Institute of Information Technologies, Azerbaijan				
15:00 - 16:00	I Industrial Special Session	Session Chair: <b>Ruxandra Mihaela Botez</b>		
		<i>Intelligent UAV flight control system</i>		
		<b>Ali Abbasov</b> , Director of Institute of Control Systems, Azerbaijan; <b>Elchin Aliyev</b> , President of the SİNAM, Azerbaijan		
		<i>Hydrogen in Aviation Sector</i>		
<b>Hüseyin Devrim</b> , TEKSİS İleri Teknolojiler, Türkiye				
<i>GeoAI - Power of Location Intelligence Combined with AI</i>				
<b>Barış Uz</b> , CEO of Esri Türkiye, Türkiye				
<b>16:00-16:15 Coffee Break</b>				
16:15 - 17:00	Paralel Session	<b>Baku Hall (Chair: Alper Dalkıran)</b>	<b>Karabakh Hall (Chair: Fuad Mirzayev)</b>	<b>Shusha Hall (Chair: Elgun Aghayev)</b>
		<a href="#">Microsoft Teams Link</a>	<a href="#">Microsoft Teams Link</a>	<a href="#">Microsoft Teams Link</a>
		<i>Detection of foreign object debris on runway by using unmanned aerial vehicles, object detection algorithms and lidar technology</i> <b>İslam Isgandarov</b> , National Aviation Academy, Azerbaijan <b>Hasan Huseynov</b> , National Aviation Academy, Azerbaijan	<i>Sustainable control of UAVs with implementation of AES encryption method</i> <b>Ibrahim Babayev</b> , National Aviation Academy, Azerbaijan <b>Rafail Ibrahimov</b> , National Aviation Academy, Azerbaijan <b>Avgun Zeynalova</b> , National Aviation Academy, Azerbaijan <b>Mehriban Mirzayeva</b> , National Aviation Academy, Azerbaijan	<i>Methodology for assessment of the technical condition of electric motors and descriptive forms of signals</i> <b>Huseyngulu Guliyev</b> , Azerbaijan Technical University, Azerbaijan <b>Elshan Manafov</b> , National Aviation Academy, Azerbaijan <b>Farid Huseynov</b> , National Aviation Academy; Azerbaijan State Oil and Industrial University, Azerbaijan
		<i>Weather Research Forecasting Model (WRF) - Digital Twin Automated System</i> <b>Yiğitalp Kara</b> , Samsun University, Türkiye <b>Serdar Yumlu</b> , Istanbul Technical University, Türkiye <b>Atom Damali</b> , Sampaş Holding, Türkiye <b>Hüseyin Toros</b> , Polar Meteorological Consulting & Engineering, Samsun Technopark, Türkiye <b>Durdana Rustamova</b> , Western Caspian University, Azerbaijan <b>Aydın Ulubey</b> , Trakya University, Turkey	<i>The process of launching a missile on a target in the air by a drone with ballistic calculations and research.</i> <b>Hasanov Huseyn</b> , National Aviation Academy, Azerbaijan <b>Huseynov Namig</b> , National Aviation Academy, Azerbaijan <b>Nabiyev Khayyam</b> , National Aviation Academy, Azerbaijan <b>Heybatov Devanet</b> , National Aviation Academy, Azerbaijan <b>Mahmudov Kamil</b> , National Aviation Academy, Azerbaijan	<i>Automatic door closing system based on the number of individuals</i> <b>Kamala Oghuz</b> , Baku Higher Oil School, Azerbaijan Technical University, Azerbaijan <b>Afruz Huseynova</b> , Baku Higher Oil School, Azerbaijan
		<i>Digital twin application for simulation of quadcopter performance using various propellers</i> <b>Gokce Cihan</b> , Erciyes University, Institute of Science, Türkiye <b>Nacak Aybuke</b> , Erciyes University, Institute of Science, Türkiye <b>Yıldız Melih</b> , Erciyes University, Türkiye	<i>An evaluation crop yield prediction using deep learning techniques</i> <b>Bakhtiyar Babashli</b> , National Aviation Academy, Azerbaijan <b>Aytac Badalova</b> , National Aviation Academy, Azerbaijan	<i>Deep learning with Keras</i> <b>Shahla Zeynalova</b> , National Aviation Academy, Azerbaijan <b>Farid Novruzlu</b> , National Aviation Academy, Azerbaijan

DAY ONE

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## ISUDEF'24 Program - DAY 2

BAKU/Azerbaijan Time (UTC+4)		Baku Hall - 23 May 2024 <a href="#">Microsoft Teams Link</a>				
10:00 - 11:30	II Keynote Session	Session Chair: <b>Afig Hasanov</b>				
		<p><i>Robust Kalman Filtering for Estimation of UAV Dynamics under Uncertain Measurement Noise Conditions</i> <b>Chingiz Hajiyev</b>, İstanbul Technical University, Faculty of Aeronautics and Astronautics, Türkiye</p> <p><i>Hydrogen Fueled UAV for Forest Firefighting and Reconnaissance</i> <b>Birol Kılıç</b>, OSTIM Technical University, Türkiye</p> <p><i>Artificial Intelligence in Project Management</i> <b>Çetin Elmas</b>, Gazi University, Türkiye</p>				
11:30 - 12:30	II Industrial Special Session	Session Chair: <b>Hüseyin Devrim</b>				
		<p><i>Design Considerations for Tethered Aerostat Systems</i> <b>Ahmet Nezir Ertürk</b>, Otonom Teknoloji, Türkiye</p> <p><b>Farhan Guliyev</b>, Director, Azeraeronaavigation (AZANS), Azerbaijan</p> <p><i>The specialization of Safety in different Aviation fields and its role in the increasing of effectiveness of Safety Implementation at Airports</i> <b>Elmir Gulu-zadeh</b>, Deputy director of Heydar Aliyev International Airport</p>				
<b>12:30-14:00 Lunch Break</b>						
14:00 - 15:30	Paralel Session I	<b>Baku Hall (Chair: Chingiz Hajiyev)</b>	<b>Karabakh Hall (Chair: Fuad Mirzayev)</b>	<b>Shusha Hall (Chair: Elgun Aghayev)</b>		
		<a href="#">Microsoft Teams Link</a>	<a href="#">Microsoft Teams Link</a>	<a href="#">Microsoft Teams Link</a>		
		<p><i>Structural synthesis of new Mars Rover</i> <b>Rasim Alizade</b>, National Aviation Academy, Azerbaijan <b>Konul Huseynzade</b>, National Aviation Academy, Azerbaijan</p> <p><i>A survey on flight controllers used for UAV platforms</i> <b>Alpaslan Durmus</b>, OSTIM Technical University Turkey <b>Erol Duymaz</b>, OSTIM Technical University, Turkey <b>Ahmet Murat Kadioğlu</b>, OSTIM Technical University, Turkey</p> <p><i>A literature overview of the sustainable solutions in air transport industry: future prospects</i> <b>Imanov Tapdiq</b>, Cyprus Science University, Northern Cyprus <b>Aliyev Saig</b>, National Aviation Academy, Azerbaijan</p> <p><i>Prospects of the using terahertz waves in ensuring aviation safety</i> <b>Khagani Abdullayev</b>, National Aviation Academy, Azerbaijan <b>Turana Vazirova</b>, National Aviation Academy, Azerbaijan</p> <p><i>Graphical user interface system in unmanned aerial vehicles for differentiating enemy, civilian, and friendly targets</i> <b>Aftandil Mammadov</b>, National Aviation Academy, Azerbaijan <b>Davanat Heybatov</b>, National Aviation Academy, Azerbaijan <b>Yahya Ahadov</b>, National Aviation Academy, Azerbaijan</p> <p><i>Evaluation of sustainability dimensions of air cargo carriers</i> <b>Büsrə Yıldırım</b>, Suleyman Demirel University, Türkiye <b>Eda Çınaroğlu</b>, Erciyes University, Türkiye</p> <p><i>Satellite data and artificial intelligence applications in agriculture</i> <b>Avyaul Musayeva</b>, Baku Higher Oil School, Azerbaijan</p>	<p><i>Application of stochastic forecasting models to passenger flows in non-scheduled air transportation</i> <b>Nadir Aghayev</b>, National Aviation Academy, Azerbaijan <b>Dashgin Nazarli</b>, National Aviation Academy, Azerbaijan</p> <p><i>Air traffic control system controller performance under loss of spatial orientation</i> <b>Peyman Mukhtarov</b>, National Aviation Academy, Azerbaijan <b>Nurana Mammadova</b>, National Aviation Academy, Azerbaijan</p> <p><i>The accelerated evolution of unmanned aerial vehicle technologies presents new challenges for aviation training centres</i> <b>Fuad Mirzayev</b>, National Aviation Academy, Azerbaijan <b>Gulnara Ahmadova</b>, National Aviation Academy, Azerbaijan <b>Kovsar Dadashova</b>, National Aviation Academy, Azerbaijan</p> <p><i>Disposal and recycling problems lithium-ion batteries</i> <b>Arif Mammadov</b>, Azerbaijan Technical University, Azerbaijan <b>Agil Babayev</b>, Azerbaijan Technical University, Azerbaijan <b>Mukhtar Huseynov</b>, Azerbaijan Technical University, Azerbaijan <b>Batura Musurzayeva</b>, Azerbaijan Technical University, Azerbaijan <b>Farid Jafarov</b>, 21U Internationale Hochschule, Germany</p> <p><i>Introduction of unmanned aerial vehicles - the key to the safety of international transport corridors</i> <b>Dana Sosunova</b>, National Aviation Academy, Azerbaijan <b>Balaga Karimov</b>, National Aviation Academy, Azerbaijan <b>Gaibatullah Akhmedov</b>, Azerbaijan Technical University, Azerbaijan</p> <p><i>Enhancing Autonomous UAV Capabilities with deep reinforcement learning</i> <b>Sarkhan Aghadadashov</b>, National Aviation Academy, Azerbaijan</p> <p><i>Issues of taking into account the influence of temperature when measuring soil conductivity and salinity</i> <b>Elchin İsgenderzade</b>, National Aerospace Agency, Azerbaijan <b>Hikmat Asadov</b>, National Aerospace Agency, Azerbaijan <b>Valida Mahmudova</b>, National Aerospace Agency, Azerbaijan <b>İlaha Mammedova</b>, National Aerospace Agency, Azerbaijan <b>Rashad Nematzade</b>, National Aerospace Agency, Azerbaijan</p>	<p><i>Performance analysis of Pseudo-Random SF-LFM pulse train radar system in the presence of noise</i> <b>Mirana Manafova</b>, National Aviation Academy, Azerbaijan</p> <p><i>Development of a radio telemetry system for aerial vehicle</i> <b>Rafael Ibrahimov</b>, National Aviation Academy, Azerbaijan <b>Gurban Hasanli</b>, National Aviation Academy, Azerbaijan <b>Aygun Zeynalova</b>, National Aviation Academy, Azerbaijan</p> <p><i>Optimizing control over the movement of ground vehicle at airports</i> <b>Afig Hasanov</b>, National Aviation Academy, Azerbaijan <b>Ruslan Hasanov</b>, Aviation Service Group, Azerbaijan <b>Elgun Aghayev</b>, National Aviation Academy, Azerbaijan <b>Rovshan Ahmadov</b>, National Aviation Academy, Azerbaijan</p> <p><i>Development of prospective methods for increasing the reliability of radar information in the ATC system</i> <b>Islam Isgandarov</b>, National Aviation Academy, Azerbaijan <b>Tevmur Aliev</b>, National Aviation Academy, Azerbaijan</p> <p><i>Smart sensors as an integral part of intelligent management and control systems</i> <b>Bikas Aghayev</b>, Institute of Information Technologies of the Ministry of Science and Education, Azerbaijan <b>Malevka Pashayeva</b>, Institute of Information Technologies of the Ministry of Science and Education, Azerbaijan</p> <p><i>Application of a hybrid random number generator for radar deceptive jamming prevention</i> <b>Ruslan Hasanov</b>, Aviation Service Group, Azerbaijan <b>Inci Aliyeva</b>, National Aviation Academy, Azerbaijan</p> <p><i>Research on some issues of the processed surface formation in the hydroabrasive cutting of chrome-nickel steels</i> <b>Sylvio Simon</b>, Brandenburg University of Technology Cottbus-Senftenberg, Germany <b>Nizami Yusubov</b>, Azerbaijan Technical University, Azerbaijan <b>Samir Amirli</b>, Azerbaijan Technical University, Azerbaijan <b>Fariz Amirov</b>, Azerbaijan Technical University, Azerbaijan</p>		
		<b>15:30-16:00 Coffee Break</b>				

DAY TWO

DAY TWO

		Baku Hall (Chair: Bahadır Cinoğlu)	Karabakh Hall (Chair: Islam Isgandarov)	Shusha Hall (Chair: Ramil Mukhtarov)
		<a href="#">Microsoft Teams Link</a>	<a href="#">Microsoft Teams Link</a>	<a href="#">Microsoft Teams Link</a>
16:00 - 17:00	Paralel Session II	A study on battery management systems in the application of aviation engines <b>Gokce Sarana</b> , Eskisehir Technical University, Turkey <b>Ozge Yetik</b> , Eskisehir Osmangazi University, Turkey <b>T. Hikmet Karakoc</b> , Eskisehir Technical University, Turkey	Preparation of polyether urethane composite materials with various nanocarbons <b>Arif Pashayev</b> , National Aviation Academy, Azerbaijan <b>Adalat Samadov</b> , National Aviation Academy, Azerbaijan <b>Khagani Abdullayev</b> , National Aviation Academy, Azerbaijan <b>Nariman Javadov</b> , National Aviation Academy, Azerbaijan <b>Vagif Ahmadov</b> , Institute of Catalysis and Inorganic Chemistry, Azerbaijan	Structural and constructive synthesis of octagonal Euclidean parallel robot manipulator of spacecraft docking system <b>Rasim Alizade</b> , National Aviation Academy, Azerbaijan Technical University, Azerbaijan <b>Kanan Azimov</b> , National Aviation Academy, Azerbaijan <b>Javad Samadzade</b> , National Aviation Academy, Azerbaijan
		UAS Data Management Systems: a case study (navigation notebook-seyir defteri) <b>Erol Duymaz</b> , OSTIM Technical University, Turkey <b>Serhat Gümüş</b> , Mavi Kanatlar LLC, Turkey <b>Ahmet Murat Kadioğlu</b> , OSTIM Technical University, Turkey <b>Alpaslan Durmus</b> , OSTIM Technical University, Turkey	How to choose the ideal airfoil for UAV <b>Shahla Zeynalova</b> , National Aviation Academy, Azerbaijan <b>Muhammadali Hajizadeh</b> , National Aviation Academy, Azerbaijan	The influence of the orientation of electric and magnetic fields on current fluctuations <b>Eldar Hasanov</b> , Baku State University, Institute of Physics, Azerbaijan <b>Shahla Khalilova</b> , Institute of Physics, Azerbaijan <b>Ruhiyya Mustafayeva</b> , Baku State University, Azerbaijan
		Boosting Performance of Recurrent Neural Networks via Task-Oriented Modifications <b>Sahin Isik</b> , Eskisehir Osmangazi University, Turkey <b>Isil Yazar</b> , Eskisehir Osmangazi University, Turkey <b>Yildiray Anagun</b> , Eskisehir Osmangazi University, Turkey	Applying of integrated diagnostic models in aircraft structures <b>Khagani Abdullayev</b> , National Aviation Academy, Azerbaijan <b>Solmaz Allahverdiyeva</b> , National Aviation Academy, Azerbaijan <b>Rovshen Aliyev</b> , National Aviation Academy, Azerbaijan	Algorithm development for software optimization using ANT <b>Shafaqat Mahmudova</b> , Ministry of Science and Education Institute of Information Technology, Azerbaijan
		Universal standby pendulum indicator for measuring and alerting attitude of aircraft <b>Toghrul Karimli</b> , National Aviation Academy, Azerbaijan <b>Vasif Karimli</b> , Azerbaijan Airlines, Azerbaijan <b>Vagif Garashov</b> , George Washington University, USA; ADA University, Azerbaijan	Research on ways to improve the reliability of spacecraft systems <b>Islam Isgandarov</b> , National Aviation Academy, Azerbaijan <b>Sakinakhanum Abdullayeva</b> , National Aviation Academy, Azerbaijan	Application of drones to perimeter security systems <b>Ramil Mukhtarov</b> , National Aviation Academy, Azerbaijan <b>Famin Salmanov</b> , Institute of Radiation Problems of the Ministry of Science and Education Republic of Azerbaijan <b>Namiq Heydarov</b> , Institute of Radiation Problems of the Ministry of Science and Education Republic of Azerbaijan <b>Nezire Mazanova</b> , National Aviation Academy, Azerbaijan

## International Symposium on Unmanned Systems: AI, Design & Efficiency



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### ISUDEF'24 Program - DAY 3

BAKU/Azerbaijan Time (UTC+4)		Baku Hall - 24 May 2024 <a href="#">Microsoft Teams Link</a>		
DAY THREE	10:00 - 11:30	III Keynote Session	Session Chair: <b>Chingiz Hajiyev</b>	
			<i>The business model of an automated warehouse with the integration of the cargo world application</i> <b>Indira Assilbekova</b> , Civil Aviation Academy, Almaty, Kazakhstan	
			<i>Evolving needs of airport information systems after AI potential</i> <b>Alper Dalkiran</b> , Suleyman Demirel University, Turkey	
			<i>Relevance of studying the Earth's ionosphere using nanosatellites: roadmap and current results of Samara University</i> <b>Igor Belokonov</b> , Head of department, Samara National Research University named after Academician S.P. Korolev, Russia	
DAY THREE	11:30 - 13:00	IV Keynote Session	Session Chair: <b>T. Hikmet Karakoc</b>	
			<i>To the application of non-contact measurement and control methods and devices in aerospace instrumentation</i> <b>Islam Isgandarov</b> , Head of Department Aerospace Instruments, National Aviation Academy, Azerbaijan	
			<i>Aircraft electrification as a pathway to net zero air transportation</i> <b>Oleksandr Zaporozhets</b> , Łukasiewicz Research Network – Institute of Aviation, Poland	
			<i>Automatic Emotion Recognition from Speech Signal Using Deep Learning Technology</i> <b>Raziyam Anayatova</b> , Civil Aviation Academy, Almaty, Kazakhstan	
<b>13:00-14:00 Lunch Break</b>				
		<b>Baku Hall (Chair: Bahadır Cinoğlu)</b> <a href="#">Microsoft Teams Link</a>	<b>Karabakh Hall (Chair: Islam Isgandarov)</b> <a href="#">Microsoft Teams Link</a>	<b>Shusha Hall (Chair: Elgun Aghayev)</b> <a href="#">Microsoft Teams Link</a>

DAY THREE

14:00 - 15:30

Paralel Session I

Examining heart rate variability in unmanned aerial vehicle operator automation  
**Omar Alharasees**, Budapest University of Technology and Economics, Hungary  
**Utku Kale**, Budapest University of Technology and Economics, Hungary

Features of integrating artificial intelligence into maintenance and reliability design for remote monitoring  
**Islam Isgandarov**, National Aviation Academy, Azerbaijan  
**Yunus Karimov**, National Aviation Academy, Azerbaijan

Advantages of IMA technology and their application  
**Aftandil Mammadov**, National Aviation Academy, Azerbaijan  
**Orkhan Shikhverdiyev**, National Aviation Academy, Azerbaijan

AI Assisted Soaring UAVs  
**Alpaslan Durmus**, OSTIM Technical University, Turkey  
**Erol Duymaz**, OSTIM Technical University, Turkey  
**Ahmet Murat Kadioğlu**, OSTIM Technical University, Turkey

Study of the designed convertiplane-type micro UAV in stationary and multicopter flight modes with the on-board control-measurement system  
**Rasim Nabiye**, National Aviation Academy, Baku, Azerbaijan  
**Anar Abdullayev**, National Aviation Academy, Baku, Azerbaijan  
**Gadir Garayev**, National Aviation Academy, Baku, Azerbaijan

Aircraft accidents associated with improper use of ground proximity warning systems and ways to eliminate them  
**Islam Isgandarov**, National Aviation Academy, Azerbaijan  
**Ramil Ramazanov**, National Aviation Academy, Azerbaijan

Study of the possibility of ground water pollution due to soil contamination with oil  
**Ayshan Azizova**, National Aerospace Agency, Azerbaijan  
**Elshen Memmedov**, National Aerospace Agency, Azerbaijan  
**Elchin Isgenderzade**, National Aerospace Agency, Azerbaijan  
**Khumar Aliyeva**, National Aerospace Agency, Azerbaijan

Detection device for security-alarm and its working algorithm  
**Rasim Nabiye**, National Aviation Academy, Azerbaijan  
**Gadir Garayev**, National Aviation Academy, Azerbaijan

Enhancement of Small Aircraft heading and attitude estimation using PID through artificial intelligent control  
**Islam Isgandarov**, National Aviation Academy, Azerbaijan  
**Huseyn Bakhshiyev**, National Aviation Academy, Azerbaijan

Artificial Intelligence implementation on unmanned aerial vehicle for real-time detection  
**Firdovsi Mahmudlu**, National Aviation Academy, Azerbaijan  
**Devanat Heybatov**, National Aviation Academy, Azerbaijan  
**Samad Samadov**, National Aviation Academy, Azerbaijan

Highly sensitive active elements based on MW-CNT/ polymer composites for preparation of harmful carbon monoxide gas sensors  
**Samira Mammadova**, National Aviation Academy, Baku, Azerbaijan, Institute of Physics, Ministry of Science and Education  
**Asgar Huseynov**, Institute of Catalysis and Inorganic Chemistry Named After Academician M.Naghiyev, Ministry of Science and Education, Azerbaijan  
**Eldar Zeynalov**, Institute of Catalysis and Inorganic Chemistry Named After Academician M.Naghiyev, Ministry of Science and Education, Azerbaijan

Implementing a comprehensive approach to protect UAVs from cyber threats  
**Aftandil Mammadov**, National Aviation Academy, Azerbaijan  
**Gurban Sadigov**, National Aviation Academy, Azerbaijan

Anisotropic thermoelectrics based on extruded samples of Bi<sub>0.85</sub>Sb<sub>0.15</sub> solid solution doped with tellurium  
**Mail Tagiyev**, Azerbaijani State University of Economics, Azerbaijan  
**Khadija Alieva**, Institute of Physics, Ministry of Science and Education of the Republic of Azerbaijan, Azerbaijan  
**Tarana Piriyeva**, Institute of Physics, Ministry of Science and Education of the Republic of Azerbaijan, Azerbaijan  
**Samira Jafarova**, Ganja State University, Azerbaijan

Deformations occurring in the AL-CU System powder bodies during the liquid-phase sintering  
**Emin Yagubov**, Ganja State University, Azerbaijan

A study on the contributions of phase change material in battery cooling processes in thermal management  
**Cagla Akpinar**, Eskisehir Technical University, Turkey  
**Ozge Yetik**, Eskisehir Osmangazi University, Turkey  
**T. Hikmet Karakoc**, Eskisehir Technical University, Turkey

Optimizing Airport Cybersecurity: Expert-Based Comparative Analysis  
**Mahmoud Eleimat**, Obuda University, Hungary  
**Arnold Oszi**, Obuda University, Hungary

Simulation of an ultrasonic generator with excitation of the natural frequency of a mechanical vibration system during the vibration cutting process  
**Imran Yolchuyev**, Azerbaijan Technical University, Azerbaijan  
**Toghrul Karimli**, National Aviation Academy, Azerbaijan  
**Sevmur Aliev**, National Aviation Academy, Azerbaijan

Diagnostic system for traction motor bearings based on Artificial Intelligence  
**Eishan Manafov**, National Aviation Academy, Azerbaijan  
**Huseyngulu Guliyev**, Azerbaijan Technical University, Azerbaijan  
**Farid Huseynov**, National Aviation Academy; Azerbaijan State Oil and Industrial University, Azerbaijan

Using space images and ArcGIS software of pollution sources of the Caspian Sea in Neftchala district  
**Aytaj Badalova**, National Aviation Academy, Azerbaijan  
**Narmin Gafanova**, National Aviation Academy, Azerbaijan

Study of FSON Based on a Simple Artificial Neuron Model  
**Mehman Hasanov**, Azerbaijan Technical University, Azerbaijan  
**Khagani Abdullayev**, National Aviation Academy, Azerbaijan  
**Sahib Piriev**, Azerbaijan Technical University, Azerbaijan  
**Nadir Atayev**, Azerbaijan Technical University, Azerbaijan  
**Turana Rasullu**, Azerbaijan Technical University, Azerbaijan

Methods of applying geodetic technologies for hydrological measurements  
**Aysel Calilova**, Ministry of Defence Industry of the Azerbaijan Republic, National Aerospace Agency (NASA) of Azerbaijan, Department of Special design bureau of Instrument engineering, Azerbaijan  
**Vugar Arazov**, Coordinate Group LLC, Azerbaijan

15:30 - 16:00 Coffee break

16:00 - 17:00

Paralel Session II

**Baku Hall (Chair: Rovshan Ahmadov)**

[Microsoft Teams Link](#)

Top drive wash pipe surface wearing  
**Fariz Amirov**, Azerbaijan Technical University, Azerbaijan  
**Ilgar Shiraliyev**, Azerbaijan Technical University, Azerbaijan

Application of multispectral satellite images for monitoring geotechnical objects based on various normalized indices  
**Elchin Isgenderzade**, National Aerospace Agency, Azerbaijan  
**Rauf Raqimov**, National Aerospace Agency, Azerbaijan  
**Rashad Nematzade**, National Aerospace Agency, Azerbaijan  
**Elman Aleskerov**, National Aerospace Agency, Azerbaijan  
**Farid Samedov**, National Aerospace Agency, Azerbaijan

Increasing the energy efficiency of UAVs  
**Ramiz Kalbiyev**, Azerbaijan Technical University, Azerbaijan  
**Rana Hamidova**, Azerbaijan Technical University, Azerbaijan  
**Murad Rzayev**, Azerbaijan Technical University, Azerbaijan

On the possibility of mutual inter-satellite radiometric calibration of equipment on board Landsat satellites  
**Amida Aliyeva**, National Aerospace Agency, Azerbaijan  
**Hikmat Asadov**, National Aerospace Agency, Azerbaijan  
**Tofiq Suleymanov**, National Aerospace Agency, Azerbaijan

Impact of physical factors on stability of solutions at simulation of transients in high-voltage systems  
**Tahir Lazimov**, Azerbaijan State Marine Academy, Azerbaijan  
**Esam Saafan**, University of El-Mansoura, Egypt  
**Asif Sadigov**, Azerbaijan Technical University, Azerbaijan

Kinematic and dynamic calculation of profiled cam mechanism based on new equation  
**Isa Khalilov**, Azerbaijan Technical University, Azerbaijan  
**Ahmad Imanov**, National Aviation Academy, Azerbaijan

**Karabakh Hall (Chair: Kovsar Dadashova)**

[Microsoft Teams Link](#)

Multi-Agent model of academic performance of high school students  
**Nadir Agayev**, National Aviation Academy, Azerbaijan  
**Amir Khanli Durdane**, National Aviation Academy, Azerbaijan

The possibility of using correlation and regression analysis in environmental and economic research in oil refineries  
**Azizov Bakhtiyar**, National Aviation Academy, Azerbaijan  
**Maharramov Tural**, National Aviation Academy, Azerbaijan  
**Hikmat Mammadov**, National Aviation Academy, Azerbaijan  
**Valehov Nasimi**, National Aviation Academy, Azerbaijan

Features of the new design of the camshaft of internal combustion engines  
**Vagif Abbasov**, Azerbaijan Technical University, Azerbaijan  
**Fariz Amirov**, Azerbaijan Technical University, Azerbaijan  
**Azad Karimov**, Azerbaijan Technical University, Azerbaijan

Investigation of the water regime of foothill regions in the river basin zones  
**Hikmet Asadov**, National Aerospace Agency, Azerbaijan  
**Yegane Suleymanova**, National Aerospace Agency, Azerbaijan  
**Hemide Muradli**, National Aerospace Agency, Azerbaijan

Towards a green world: economic development prospects for the alternative energy industry  
**Gazanfar Suleymanov**, Azerbaijan State Oil and Industry University, Azerbaijan  
**Turkan Sheyda**, Azerbaijan State Oil and Industry University, Azerbaijan  
**Nurana Abbasova**, Azerbaijan State Oil and Industry University, Azerbaijan  
**Ziyada Safarli**, Azerbaijan State Oil and Industry University, Azerbaijan

