



December 4-5
2023

PROGRAM



MINISTRY OF SCIENCE AND EDUCATION
REPUBLIC OF AZERBAIJAN

HEYDAR ALIYEV

100



2ND INTERNATIONAL SCIENTIFIC-PRACTICAL CONFERENCE "MACHINE BUILDING AND ENERGY: NEW CONCEPTS AND TECHNOLOGIES"

December 4-5, 2023, AzTU,
Baku, Azerbaijan



**MACHINE-BUILDING
AND ENERGY
NEW CONCEPTS
AND TECHNOLOGIES**

The address of the conference:
AZ1073, H. Javid ave. 25, Baku,
Azerbaijan Technical University
www.aztu.edu.az

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PLENARY SESSION PROGRAM

December 4, 2023, AzTU, Baku, Azerbaijan

12:00-14:00 (Baku time, Hybrid), Main building, Conference Hall

Introduction:

Prof. Vilayat Valiyev - Rector of the Azerbaijan Technical University

Congratulatory speeches:

Prof. Gesine Grande - President of Brandenburg Technical University Cottbus-Zenftenberg, Germany

Prof. Musa Yildiz - Rector of Gazi University, Türkiye

Reports:

Prof. Yashar Musayev

Prof. Nizami Yusubov, Kamran Rzayev

(Siemens Energy AG, Azerbaijan Technical University)

Green Hydrogen - Fuel of the Future

Discussion of the report

Prof. Mustafa Güden

(Izmir Institute of Technology)

Testing and modeling cellular structures against dynamic loading

Discussion of the report

Hakan Yavash

(Turkish Aerospace Industries)

**Advances in aerospace and space platforms:
a distributed Research and Development approach**

Discussion of the report

 **Gala Dinner 19:00-21:00 (Baku time)**



SECTION 1

first meeting

December 4

2nd International Scientific-Practical Conference

"Machine Building and Energy: New Concepts and Technologies"

December 4-5, 2023, AzTU, Baku, Azerbaijan

SECTION 1. INNOVATIVE TECHNOLOGIES IN MACHINE BUILDING

Chairman: Prof. Nizami Yusubov

Co-chairman: Prof. Sylvio Simon

Deputy Chairman: Dos. Arastun Mammadov

Scientific Secretary: Senior Lecturer Ramil Dadashov

 14:30-17:30 (Baku time, Hybrid)  Main building, room 429

 Tea break 15:50-16:10 (Baku time, Hybrid)

 14:30-14:40

1. Yashar Musayev

Nizami Yusubov, Kamran Rzayev (Siemens Energy AG, Azerbaijan Technical University)

Green Hydrogen - Fuel of the Future

 15:20-15:30

6. Igor Savin, Vagif Movlazade, Ugurlu Nadirov,

Isaq Khankishiyev, Irada Abbasova (Kazan National Research Technical University named after A. N. Tupolev, Azerbaijan State Marine Academy, Azerbaijan Technical University)

Laser Ablation Worn Die Surfaces in the Conditions of a Large Engineering Company

 14:40-14:50

2. Sylvio Simon, Nizami Yusubov,

Samir Amirli (Brandenburg University of Technology Cottbus-Senftenberg, Azerbaijan Technical University)

Formation of Geometric Parameters of the Surfaces of Cylindrical Parts during Waterjet Cutting

 15:30-15:40

7. Igor Savin, Alexander Shaparev, Sergey

Ptichkin, Isaq Khankishiyev, Asim Mirzayev (Kazan National Research Technical University named after A. N. Tupolev, Public Joint Stock Company KAMAZ, Azerbaijan State Marine Academy, Azerbaijan Technical University)

Punches and Matrices Recovery for Hot Punching by Electric Arc Hardfacing

 14:50-15:00

3. Abid Shah, Rezo Aliyev,

Henning Zeidler, Stefan Krinke (Technische Universität Bergakademie Freiberg)

Investigation for Multi-Layer CuAl and Multi-Material (CuAl-Mild Steel) Deposition Via WAAM Process

 15:40-15:50

8. Igor Balabanov, Yuliya Balabanova,

Agasi Agayev (Kazan National Research Technical University named after A. N. Tupolev, Kazan Federal University, Kazan State University of Architecture and Engineering – KSUAE, Azerbaijan Technical University)

Development of a Parametric Model for Calculating Cutting Forces in External Cylindrical Turning of 16MnCr5 Steel

 15:00-15:10

4. Pascal Fritzsche, Ilgar Abbasov (Brandenburg University of Technology Cottbus-Senftenberg)

Chip Formation and Shaping in Milling Machining of Light Metal Casting Materials

 16:10-16:20

9. Sarvan Aziz (Azerbaijan Technical University)

Characteristics of Quality Formation in Processing of 32CrMoV12-10 Steel by Honing

 15:10-15:20

5. Dmitriy Pankratov, Alexander Shaparev,

Danil Pankratov, Malik Garayev, Zarifa Azizli (Kazan National Research Technical University named after A. N. Tupolev, Kazan Federal University, Azerbaijan Technical University)

The Use Hot Stamping to Restore the Efficiency Tie Rod Ball Pins Trucks

 16:20-16:30

10. Orkhan Mustafaoğlu (Azerbaijan Technical University)

Correct Installation of Measuring Instruments and Determination of Errors by Checking the Equipment

 16:30-16:40

11. Rezo Aliyev (TU Bergakademie Freiberg)

Specifics of the Planning of Additive Manufacturing Processes



SECTION 1

second meeting

December 5

2nd International Scientific-Practical Conference

"Machine Building and Energy: New Concepts and Technologies"

December 4-5, 2023, AzTU, Baku, Azerbaijan

Chairman: Prof. Nizami Yusubov

Co-chairman: Prof. Sylvio Simon

Deputy Chairman: Dos. Arastun Mammadov

Scientific Secretary: Senior Lecturer Ramil Dadashov

 **11:00-13:00 (Baku time, Hybrid)  Main building, room 429**

 **11:00-11:10**

1. Nariman Rasulov, Ugurlu Nadirov, Irada Abbasova (Azerbaijan Technical University)

Increasing the Efficiency of Processing Multi-Directional Conical Surfaces and Threads with the Control of Static Technological Connections

 **11:10-11:20**

2. Nariman Rasulov, Elgun Shabiyev, Gulbeniz Demirova, Mursal Alakbarov, Yusif Huseynov (Azerbaijan Technical University)

Increasing the Efficiency of Forming Complex Rotating Surfaces with the Control of Technological Connections

 **11:20-11:30**

3. Hasan Huseynov (Azerbaijan Technical University)

New Trends in Mechanical Engineering Technology

 **11:30-11:40**

4. Vagif Abbasov, Fariz Amirov, Samir Amirli, Shalala Hasanli, Karel Frana (Azerbaijan Technical University, Brandenburg University of Technology Cottbus-Senftenberg, Hochschule Zittau)

Formation of Shaft Accuracy During Mechanical Processing on CNC Machines

 **11:40-11:50**

5. Rasim Bashirov, Oyrad Abdullayev (Azerbaijan Technical University, Caspian Sea Transport Project and Scientific Research Institute)

Classification of Subsea Construction Vessels and Evaluation of Study Effectiveness

 **11:50-12:00**

6. Yusif Hasanov, Jaroslav Zuda, Tamilla Shabiyeva, Mahmud Suleymanli (Azerbaijan Technical University, Azerbaijan University of Architecture and Construction, World Maritime University)

Determination of the Uncertainty of the Dimensions of Weight Stones in Mass Measurements in Maritime Shipping

 **12:00-12:10**

7. Ilgar Abbasov, Mahabbat Suleymanov, Arastun Mammadov

(Brandenburg University of Technology Cottbus-Senftenberg, Azerbaijan Technical University)

Modelling of Turning Process for Prediction of Energy Consumption

 **12:10-12:20**

8. Mukhaddin Samadov, Omar Nazirov (Azerbaijan Technical University)

Intelligent Adaptive Grinding Control Systems in Industry

 **12:20-12:30**

9. Sergey Bogatengov, Ольга Gabbasova, Mukhaddin Samadov, Elgun Shabiyev, Rufat Abbasov (South Ural State University, Azerbaijan Technical University)

Safety of Energy Metering Systems: Optimization of Diagnostics of Measurement Channels

 **12:30-12:40**

10. Sergey Bogatengov, Natalia Sazanova, Vagif Movlazade, Heyran Abbasova, Ramil Dadashov, Ruslan Bazhenov (South Ural State University, Azerbaijan Technical University)

Digital Twins for Computer Aided Design on Lathe Operations

 **12:40-12:50**

11. Hasan Huseynov, Cherkez Yusubov (Azerbaijan Technical University)

Modeling of Main Gas Pipelines at Change of Pressure at the Beginning and Speed of Movement at the end of Pipe



SECTION 2

first meeting

December 4

2nd International Scientific-Practical Conference

"Machine Building and Energy: New Concepts and Technologies"

December 4-5, 2023, AzTU, Baku, Azerbaijan

SECTION 2. MACHINE SCIENCE, MECHATRONICS AND AUTOMATION

Chairman: Prof. Isa Khalilov

Co-chairman: Prof. Dr.-Ing. Karel Frana

Deputy Chairman: Dos. Vahid Farhadov

Scientific Secretary: Senior Lecturer Anar Hajiyev

 14:30-17:30 (Baku time, Hybrid)  Main building, room 207

 Tea break 15:50-16:10 (Baku time, Hybrid)

 14:30-14:40

1. Andreas Bürger, Sylvio Simon, Stephan Herschier (BTU Cottbus - Senftenberg, Universitätsplatz)

Intelligent Sensor Technology for Rotating Parts in Machines and Plants

 14:40-14:50

2. Mikhail Lustenkov, Isa Khalilov, Andrey Moiseenko (Belarusian-Russian University, Azerbaijan Technical University)

Comparative Analysis of Dynamic Characteristics of Spherical and Eccentric Transmissions with a Double-Ring Satellite

 14:50-15:00

3. Abdullah Sofiyev, Tarkan Vergül, Isa Khalilov (Istanbul Ticaret University, Azerbaijan Technical University)

Vibration Behaviour of Shear Deformable Laminated Plates Composed of Non-Homogenous Layers

 15:00-15:10

4. Viktor Artemyev, Vitaly Kargin, Anar Hajiyev (BIOTECH University, Azerbaijan Technical University)

Application of Difference Equations in Automated Production Control Systems Using Abstract Discrete Automata

 15:10-15:20

5. Valeh Bakhshali (Azerbaijan Technical University)

Anti-Vibration Foundation for the Machines Used in the Oil and Gas Industry

 15:20-15:30

6. Farrukh Mamedov, Viktor Artemyev, Vitaly Kargin (Azerbaijan Technical University, BIOTECH University)

Using Statistical Methods to Assess the Accuracy of Production Process Control Systems

 15:30-15:40

7. Alesker Aliyev, Sevda Aliyeva, Veli Fataliyev (Azerbaijan State Oil and Industry University, Azerbaijan Technical University)

Influence of Technological Factors on the Performance and Aging Process of Oil Pumpjack

 15:40-15:50

8. Beyali Ahmedov, Anar Hajiyev (Azerbaijan Technical University)

The Influence of Asymmetry of the Converter Mechanism on the Performance of the Sucker Rod Pumping Unit

 15:50-16:00

9. Iftikhar Chalabi (Azerbaijan Technical University)

Worm Gear Failure Analysis According to Various Calculation Criteria

 16:00-16:10

10. Ahmad Imanov (Azerbaijan Technical University)

Kinematic and Dynamic Calculations of Cam Mechanism Profiled with Modified Curve Based on New Equation



SECTION 2

second meeting

December 5

2nd International Scientific-Practical Conference

"Machine Building and Energy: New Concepts and Technologies"

December 4-5, 2023, AzTU, Baku, Azerbaijan

Chairman: Prof. Isa Khalilov

Co-chairman: Prof. Dr.-Ing. Karel Frana

Deputy Chairman: Dos. Vahid Farhadov

Scientific Secretary: Senior Lecturer Anar Hajiyev

 **11:00-13:00 (Baku time, Hybrid)**  **Main building, room 207**

 **11:00-11:10**

1. Ramiz Ahmadov, Khadija Aliyeva

(Azerbaijan Technical University)

Control Subsystem for Adaptive Control of Technological Processes on Metal-Cutting Machines

 **12:00-12:10**

7. Huseyn Mirzayev, Beyali Ahmedov

(Baku Engineering University, Azerbaijan Technical University)

Estimation of the Sliding Bearings Efficiency of a New Designed Multistage Gearbox

 **11:10-11:20**

2. Vagif Gasimov, Shahla Aliyeva, Maryam Asadova,

Zhanna Assanova (Azerbaijan Technical University, Mingachevir State University, Kyzylorda University named after Korkut Ata)

Application of Blockchain Technology for the Security of Smart Infrastructures

 **12:10-12:20**

8. Shahid Yusubov

(Azerbaijan Technical University)

Analysis of a Longitudinal Crack in a Pipeline Loaded with a Certain Internal Pressure, with Recommendations for Further Operation

 **11:20-11:30**

3. Yahya Amanov, Savalan Kerimov, Samaya Baghirova

(Azerbaijan Technical University)

Study of the Dependence of the Friction Force and Coefficient of the Abrasive in the Metal Contact Zone on Various Factors

 **11:30-11:40**

4. Eldar Aliyev, Shabnam Ismayilova

(Azerbaijan Technical University)

Determination of the Thickness of the Colorful Layer, Taking into Account the Roughness of the Printed Surface

 **11:40-11:50**

5. Firuz Mammadov, Samaya Baghirova

(Azerbaijan Technical University)

Research on Ratio Regulation Gear Differential Closed by a Continuously Variable Transmission

 **11:50-12:00**

6. Shahin Charkasov (Azerbaijan Technical University)

Calculation of Equal Resistance Riveted Joint



SECTION 3

first meeting

December 4

2nd International Scientific-Practical Conference

"Machine Building and Energy: New Concepts and Technologies"

December 4-5, 2023, AzTU, Baku, Azerbaijan

SECTION 3. Materials science and nanomaterials in mechanical engineering

Chairman: Prof. Subhan Namazov

Co-chairman: Prof. Mustafa Guden

Deputy Chairman: Prof. Amdulla Mekhrabov

Scientific Secretary: Senior Lecturer Lala Azimova

 14:30-17:30 (Baku time, Hybrid)  Main building, room 424

 Tea break 15:50-16:10 (Baku time, Hybrid)

 14:30-14:40

1. Amdulla Mekhrabov, Bengi Yagmurlu, Vedat Akdeniz Azerbaijan Technical University, Novel Alloy Design and Development Laboratory (NOVALAB), Middle East Technical University)

Design and Synthesis of Bulk Amorphous Steel from Cast Iron Scrap

 14:40-14:50

2. Subhan Namazov, Taleh Taghiyev, Shahin Mashayev (Azerbaijan Technical University)

Production Technology of the Valve of the Steel Drilling Pump Brand PK08X4H5

 14:50-15:00

3. Güden Mustafa, Gürler Yigit, Yıldırım Servet, Dağlıöz Özkan (Izmir Institute of Technology, Bosch Home Comfort Group R&D Center)

Strain Rate and Temperature Dependent Tensile Failure of a Short Glass Fiber Reinforced Polyamide Thermoplastic Composite

 15:00-15:10

4. Sasan Yazdani, Suleyman Tekeli, Elina Akbarzadeh - CH (Gazi University)

Fabrication of Multi-layer 316L-TiC Composite by Selective Laser Melting Additive Manufacturing

 15:10-15:20

5. Sevda Kasimova (Azerbaijan Technical University)

Development of Non-Reflective Coatings for Radars

 15:20-15:30

6. Lala Azimova, Naila Mirbabayeva (Azerbaijan Technical University)

Method for Reducing Fuel Consumption when Roasting Pellets from Magnetite Iron Ore Concentrate

 15:30-15:40

7. Arif Mammadov, Aqil Babayev, Nizami Ismayilov, Muxtar Huseynov, Faig Guliyev (Azerbaijan Technical University, Azerbaijan State Marime Academy, "Baku Steel Company" LLC)

Improvement of Production Processes of Seamless Steel Pipes for Oil and Gas Extraction

 15:40-15:50

8. Ramiz Hasanli (Azerbaijan Technical University)

Study of Microstructural Evolutions in Thermally Processed High-Strength Pig-Iron



SECTION 4

first meeting

December 4

2nd International Scientific-Practical Conference

"Machine Building and Energy: New Concepts and Technologies"

December 4-5, 2023, AzTU, Baku, Azerbaijan

SECTION 4. ELECTRICAL ENGINEERING, ELECTRONICS AND ELECTRO-MATERIAL SCIENCE

Chairman: Dos. Hikmat Aliyev

Co-chairman: Prof. Dauren Akhmetbaev

Deputy Chairman: Dos. Qara Hasanov

Scientific Secretary: Dos. Bahruz Sadigli

 **14:30-17:30 (Baku time, Hybrid)**  **Building 7, first floor**
 **Tea break 15:50-16:10 (Baku time, Hybrid)**

 **14:30-14:40**

1. Amdulla Mekhrabov, Matanat Mehrabova
(Azerbaijan Technical University)

Effect of Gamma Irradiation on Structural and Optical Properties of CdMnTe Epitaxial Thin Films

 **15:20-15:30**

6. Mehti Camalov, Elmir Bagirli, Hikmet Aliyev
(Azerbaijan Technical University)

Investigation of Dielectric Properties and Structural Changes in XLPE Composite Insulation of Covered Conductor Due to Thermal Aging

 **14:40-14:50**

2. Ahmad Mammadov, Zaur Zakaryayev
(Azerbaijan Technical University, Military Institute named after Haydar Aliyev)

Holography and Its Usage Nowadays

 **15:30-15:40**

7. Togrul Ismayilov
(Azerbaijan Technological University)

Research Multiservice Telecommunications Future Generation Networks Based on SDN Technology

 **14:50-15:00**

3. Sergey Gandzha, Andrey Sogrin, Nikolay Neustroev, Denis Korobotov, Dmitry Ardashev, Ramil Dadashov (South Ural State University, Azerbaijan Technical University)

The Development and Study of an Electromechanical Converter for an Electro-Hydraulic Power Amplifier of a Servo-Hydraulic Drive

 **15:40-15:50**

8. Elvin Abaszada
(Azerbaijan Technical University)

Studies Some Aspects Information Security of Wireless Communication Networks

 **15:00-15:10**

4. Denis Korobotov, Alexey Baturn, Dmitry Ardashev, Heyran Abbasova (South Ural State University, Azerbaijan Technical University)

Requirements Definition, Modeling, and Simulation of Control Units of an Electrohydraulic Power Amplifier

 **15:10-15:20**

5. Vaqif Maherramov
(Azerbaijan Technical University)

Issues Practical Implementation of the Receiving System Infrared Space Telescopes and Testing it at Low Temperatures



SECTION 4

second meeting

December 5

2nd International Scientific-Practical Conference

"Machine Building and Energy: New Concepts and Technologies"

December 4-5, 2023, AzTU, Baku, Azerbaijan

Chairman: Dos. Hikmat Aliyev

Co-chairman: Prof. Dauren Akhmetbaev

Deputy Chairman: Dos. Qara Hasanov

Scientific Secretary: Dos. Bahruz Sadigli

 **11:00-13:00 (Baku time, Hybrid)**  **Building 7, first floor**

 **11:00-11:10**

1. Laman Hasanova, Hikmet Aliyev, Gulnar Sydykova
(Azerbaijan Technical University, Korkyt Ata Kyzylorda University)

Analysis of Operating Benefits of Modern Wind Turbines

 **11:10-11:20**

2. Bayram Ibragimov, Asmar Nabieva, Aygun Hamidova
(Azerbaijan Technical University)

Research Efficiency Functioning Wireless Cellular Networks Taking into Account Modern Energy Saving Technologies

 **11:20-11:30**

3. Asad Rustamov
(Military Scientific Research Institute)

Acoustooptic Receiver of Passive Radar System

 **11:30-11:40**

4. Bayram Ibragimov, Ali Tagiyev
(Azerbaijan Technical University)
Research on the Effectiveness Energy Saving Mechanisms in Mobile Networks When Using the Wi-Fi Radio Interface

 **11:40-11:50**

5. Bahruz Sadiqli, Shamkhal Aliyev, Gunel Guseynova, Araz Mammadzade
(Azerbaijan Technical University, "Azerishiq" Training Center)
Increasing Control Automation and Management Flexibility in Distribution Electric Networks

 **11:50-12:00**

6. Gara Hasanov, Shamkhal Aliyev
(Azerbaijan Technical University)
Application of Volterra Integral Equations and Discrete Borel Transformations to Transient Switching Modes of Networks and Systems

 **12:00-12:10**

7. Fagan Amanullazada
(Baku Engineering University)

Research Capacity Indicators Multiservice Convergent Communication Networks Based on Modern Technologies

 **12:10-12:20**

8. Ahmad Mammadov, Afiz Manafov
(Azerbaijan Technical University)

Relay Protection of Electrical Networks in Megacities and Automation Devices and Problems in Establishing Electrical Energy Supply Systems and Development Perspectives



SECTION 5

first meeting

December 4

2nd International Scientific-Practical Conference

"Machine Building and Energy: New Concepts and Technologies"

December 4-5, 2023, AzTU, Baku, Azerbaijan

SECTION 5. ENERGY SYSTEMS AND COMPLEXES

Chairman: Prof. Nurali Yusifbayli

Co-chairman: T.e.d. Pavel Ilyushin

Deputy Chairman: Dos. Huseyngulu Guliyev

Scientific Secretary: Dos. Ramiz Kalbiyev

 14:30-17:30 (Baku time, Hybrid)  Main building, room 317
 Tea break 15:50-16:10 (Baku time, Hybrid)

 14:30-14:40

**1. Nurali Yusifbayli, Ramiz Kalbiyev,
Rana Hamidova, Asif Sadigov**
(Azerbaijan Technical University)

Prospects of Green Energy Use in the Republic of Azerbaijan

 15:20-15:30

**6. Rufat Kalbaliyev, Lala Akhmedova-Azizova,
Ulviyye Nasibova** (Azerbaijan Research and Design-Prospecting Institute
of Energetics, Azerbaijan Technical University)

Increasing the Energy Efficiency of Heat Exchanger Devices

 14:40-14:50

2. Huseyngulu Guliyev, Ramil Yusifov
(Azerbaijan Technical University, "Azerishiq" LTD)

Research of the Electromechanical Part of Three-Phase
Electromagnetic Vibrator of Low Frequency Vibrations

 15:30-15:40

7. Huseyngulu Guliyev, Farid Huseynov
(Azerbaijan Technical University, Baku, Azerbaijan National Aviation Academy)

Methodology for Complex Assessment of the Technical Condition of Electric
Motors and Descriptive Forms of Signals

 14:50-15:00

3. Javad Najafli, Yadigar Imamverdiyev
(Azerbaijan Technical University)

Choosing the Optimal Location of Solar Panels
Using Z-Numbers

 15:00-15:10

**4. Ramiz Kalbiyev, Rana Hamidova,
Gulyaz Huseynova** (Azerbaijan Technical University)

Analysis of The Speed of Sound in Solutions of Ionic
Liquids with Methanol.

 15:10-15:20

5. Nijat Nasirov
(Azerbaijan Technical University)

A Detailed Analysis of External Ballistics and
a Study of Factors Affecting the Projectile Range



SECTION 5

second meeting

December 5

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Chairman: Prof. Nurali Yusifbayli

Co-chairman: T.e.d. Pavel Ilyushin

Deputy Chairman: Dos. Huseyngulu Guliyev

Scientific Secretary: Dos. Ramiz Kalbiyev

 **11:00-13:00 (Baku time, Hybrid)**  **Main building, room 317**

 **11:00-11:10**

1. Iltimas Mammadov, Ulfat Sadigov

(Azerbaijan Technical University)

Research Information Security and Reliability Critical Infrastructure Control Systems

 **12:00-12:10**

7. Famil Ibrahimov

(Azerbaijan Technical University)

Models of Power System Elements in Phase Coordinates for the Study of Non-Symmetrical Steady-State and Transition Modes

 **11:10-11:20**

2. Jamil Gasimov (Demiryolservis LLC Azerbaijan Railways)

Increase in Resource Reserves Due to the Reliability of the Track on the Railways

 **11:20-11:30**

3. Aydin Muradaliyev (Azerbaijan Technical University)

Methodology for Assessing the Degree of Aging Overhead Power Transmission Lines of Ees

 **11:30-11:40**

4. Akif İsmayilov, Alivahid Aliyev

(Azerbaijan State Marine Academy)

Verification of the Adequacy of the Created Work Cycle Calculation Model of Marine Diesel Engine

 **11:40-11:50**

5. Sevda Kasimova

(Azerbaijan Technical University)

Nonreflective Coatings to Enhance the Accumulation of Solar Energy

 **11:50-12:00**

6. Misir Khan Talybov, Ilmutdin Abdulagatov

(Azerbaijan Technical University, Dagestan State University)

Experimental Study of the Effect of Temperature and Ions Concentration on the Density of Natural Mineral Waters from The Region of South Russia



SECTION 6

first meeting

December 4

2nd International Scientific-Practical Conference

"Machine Building and Energy: New Concepts and Technologies"

December 4-5, 2023, AzTU, Baku, Azerbaijan

SECTION 6. ECOLOGICAL, AND SOCIOECONOMIC ASPECTS OF ENVIRONMENTAL PROTECTION, MACHINE BUILDING AND ENERGY

Chairman: Prof. Fakhraddin Yusubov

Co-chairman: Prof. Andrey Ershov

Deputy Chairman: Dos. Arzu Suleymanov

Scientific Secretary: Prof. Gulahmad Talybov

 **14:30-17:30 (Baku time, Hybrid)**  **Main building, room 329**
 **Tea break 15:50-16:10 (Baku time, Hybrid)**

 **14:30-14:40**

1. Irada Khalafova, Kenan Mammadli
(Azerbaijan State Oil and Industry University)
Catalytic Pyrolysis Systems of Light Hydrocarbons

 **15:00-15:10**

4. Fakhraddin Yusubov, Miryusif Mirbabayev, Gulahmad Talybov, Ilham Aliyev, Govhar Valiyeva
(Azerbaijan Technical University)
The Adsorption of Heavy Metal Ions

 **14:40-14:50**

2. Sevinj Guliyeva, Fakhraddin Yusubov, Narmina Alieva
(Azerbaijan State Oil and Industry University, Azerbaijan Technical University)
Application of Artificial Intelligence in the Process of Adsorption Purification of Isobutane, Isobutylene and Benzene from Impurities

 **15:10-15:20**

5. Naile Veysova, Vaqife Huseynova, Aynure Yariyeva, Shukufa Eyvazova
(Azerbaijan Technical University)
Biological Properties of Cyclohex-3-Encarbonyl Acid Pyridin-2-Yl Amide Compound

 **14:50-15:00**

3. Elvin Alizada, Niyazi Mammadov
(Azerbaijan Technical University)
Measuring the tendency of the age groups of the population to the digitalization of the transport infrastructure in Azerbaijan





SECTION 6

second meeting

December 5

2nd International Scientific-Practical Conference

"Machine Building and Energy: New Concepts and Technologies"

December 4-5, 2023, AzTU, Baku, Azerbaijan

Chairman: Prof. Fakhraddin Yusubov

Co-chairman: Prof. Andrey Ershov

Deputy Chairman: Dos. Arzu Suleymanov

Scientific Secretary: Prof. Gulahmad Talybov

 **11:00-13:00 (Baku time, Hybrid)**  **Main building, room 329**

 **14:30-14:40**

1. Naciba Shirinova, Gulnara Kerimova

(Azerbaijan Technical University)

Research of the Chemical Composition of Mining Industry Waste

 **15:30-15:40**

7. Aydin Heydarov (Azerbaijan Technical University)

Sustainable Development Goals: The Case of Industrial Ecology

 **14:40-14:50**

2. Nasimi Valehov, Fidan Valehova

(National Aviation Academy, National Aerospace Agency,
Institute of Ecology)

Application of Ndvi Index and Supervised Classification Methods on
Sentinel-2a and Landsat 5 Tm Satellite Images in Arcgis Software

 **14:50-15:00**

3. Miryusif Mirbabayev, Gulnar Bahramova

(Azerbaijan Technical University)

Modern Methods of Purification of Heavy Metal Ions from Wastewater

 **15:00-15:10**

4. Matanat Pashayeva, Fariz Mammadov, Nargiz Baghirli

(Azerbaijan Technical University, Ministry of Energy, Azerbaijan)

Establishment of Energy Efficiency Fund in Azerbaijan: Energy
Sustainability & Resource Efficiency Nexus

 **15:10-15:20**

5. Gulnar Sydykova, Matanat Pashayeva, Fariz Mammadov

(Korkyt Ata Kyzylorda University, Azerbaijan Technical University)

Energy Efficiency as a Driver of Sustainable Development:
Case of Azerbaijan and Kazakhstan

 **15:20-15:30**

6. Leyla Vazirova, Govhar Abbasova

(Azerbaijan State Oil and Industry University,
Azerbaijan Technical University)

Sorbents Based on Iron Oxide Nanoparticles for Release of
Tetracyclines for Water Treatment



**FINAL
MEETING**

December 4

2nd International Scientific-Practical Conference

**"Machine Building and Energy:
New Concepts and Technologies"**

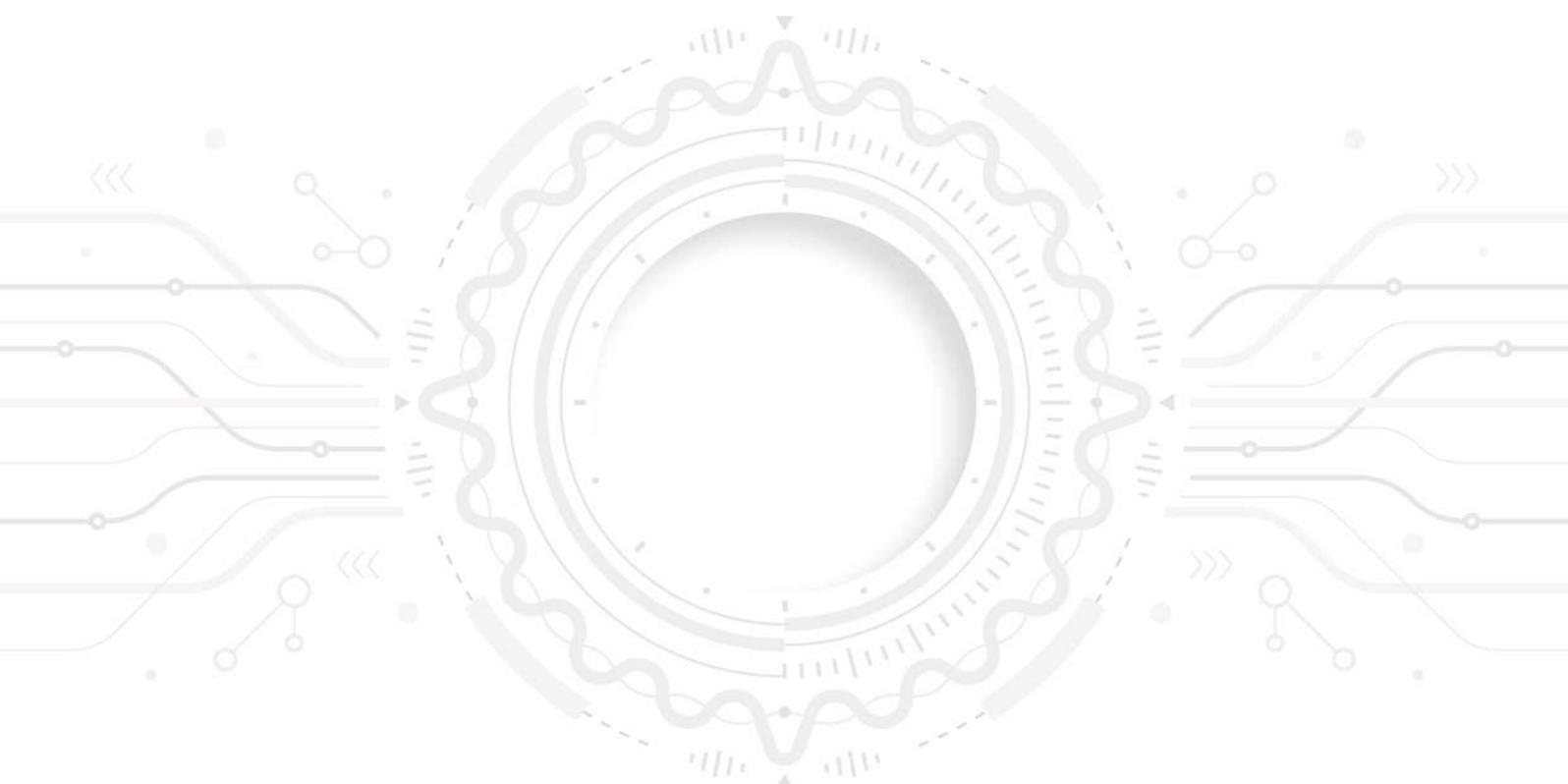
December 4-5, 2023, AzTU, Baku, Azerbaijan

FINAL MEETING OF THE CONFERENCE

December 5, 2023, 17.00-18.00 (Baku time, Hybrid)

📍 Main building, room 207

- 1) Reports of department chairmen.**
- 2) General discussions and relevant decisions.**
- 3) Closing of the conference.**





December 4-5
2023

2nd International Scientific-Practical Conference
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Notes:





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