

Day 1: October 16, 2023, Monday

11⁰⁰-11³⁰ Opening Ceremony

Welcome messages and greetings to participants of CAMPE-2023:

General Conference Chair - Andrii Kostikov, Anatolii Pidhorneyi Institute of Mechanical Engineering Problems of the NAS of Ukraine

Alexander Cheng, School of Engineering, University of Mississippi, Oxford, USA

Xiao-Wei Gao, Dalian University of Technology, Dalian, China,

Stavros Syngellakis, Wessex Institute (WIT), Ashurst, Southampton, UK

11³⁰-13¹⁵ Session 1 *Fluid mechanics and heat transfer in power engineering*

Chair: Roman Rusanov, Anatolii Pidhorneyi Institute of Mechanical Engineering Problems of the NAS of Ukraine

11³⁰-11⁴⁵ Uchenna Azubuike, Howard Njoku and Onyemaechi Ekechukwu. Parametric Effects on Advanced Exergy and Exergoeconomics of a Gas-Fired Steam Power Plant Boiler
University of Nigeria, Nsukka 410001, Nigeria

11⁴⁵-12⁰⁰ Yuri Bykov, Romuald Rzadkowski and Lyubov Kolodyazhna. Aeroelastic state of turbine rotor during harmonic blade oscillations
Anatolii Pidhorneyi Institute of Mechanical Engineering Problems of the NAS of Ukraine, Ukraine
Robert Szewalski Institute of Fluid-Flow Machinery of the Polish Academy of Sciences, Gdansk, Poland

12⁰⁰-12¹⁵ Andrii Rusanov, Yevgen Ahibalov, Pavlo Korotaiev, Yuri Bykov and Oleg Khoryev. Experimental studies of diffuser fins effect in pump-turbine draft tube on pressure pulsations in turbine mode
Anatolii Pidhorneyi Institute of Mechanical Engineering Problems of the NAS of Ukraine, Ukraine

12¹⁵-12³⁰ Volodymyr Tymoshchuk and Olexandr Riabenko. Protecting the Adjacent Areas and Providing the Reliable Operation of Upper Water Reservoirs of Pumped Storage Power Plants under Translation Waves Formation
National University of Water and Environmental Engineering, Rivne, Ukraine

12³⁰-12⁴⁵ *Neelam Choudhary, Kyryl Degtyariov, Denis Kriutchenko, Olena Strelnikova and Vasyl Gnitko*. Liquid Vibrations Analysis of Baffled Reservoirs with Fuzzy Concepts Implementation

Bennet University, Uttar Pradesh, India

Anatolii Pidhornyi Institute of Mechanical Engineering Problems of the NAS of Ukraine, Ukraine

12⁴⁵-13⁰⁰ *Basile Perly, Izabela Wardach-Święcicka and Dariusz Kardaś*. Influence of cylinder diameter and position on thermal and hydrodynamic interaction of shedding vortices with the heat exchanger wall

Polytech Orléans, France

Robert Szewalski Institute of Fluid-Flow Machinery of the Polish Academy of Science, Poland

13⁰⁰-13¹⁵ *Kyrylo Krasnikov*. Performance Comparison of Computing Platforms for Fluid Flow Problem in a Stirred Tank

Dniprovskiyi state technical university, Kamianske, Ukraine

13¹⁵-14⁰⁰ Lunch

14⁰⁰-17⁰⁰ Session 2 Energy saving technologies in power engineering and ecology

Chair: Elena Strelnikova, Anatolii Pidhornyi Institute of Mechanical Engineering Problems of the NAS of Ukraine

14⁰⁰-14¹⁵ *Anatoly Tarelin, Andriy Tarelin, Iryna Annopolska and Yevhen Lukianov*. Assessment of the Second-Order Phase Transition Effect on the Thermal Efficiency of a Rankine Cycle

Anatolii Pidhornyi Institute of Mechanical Engineering Problems of the NAS of Ukraine, Ukraine

14¹⁵-14³⁰ *Dmytro Leontiev and Oleksandr Riabushenko*. Research of Average Speed of the Vehicle Depending of the Established Restrictions on the Maximum Speed of Movement in a Large City

Kharkiv National Automobile and Highway University, Department of Automobiles, Kharkiv, Ukraine

14³⁰-14⁴⁵ *Borys Kuznetsov, Ihor Bovdui, Olena Voloshko, Tetiana Nikitina and Valerii Kolomiets*. Experimental Adjustment of a Double-Circuit Closed Loop System of Active Silencing of the Magnetic Field Generated by a Double-Circuit Power Line

Anatolii Pidhornyi Institute of Mechanical Engineering Problems of the NAS of Ukraine, Ukraine

Educational scientific professional pedagogical Institute Ukrainian Engineering Pedagogical Academy, Bakhmut, Ukraine

14⁴⁵-15⁰⁰ *Ihor Bovdii, Borys Kuznetsov, Olena Voloshko, Tetiana Nikitina and Borys Kobylanskyi*. Magnetic Field Active Silencing in One-Storey Old Buildings Closed to Power Line

Anatolii Pidhornyi Institute of Mechanical Engineering Problems of the NAS of Ukraine, Ukraine

Educational scientific professional pedagogical Institute Ukrainian Engineering Pedagogical Academy, Bakhmut, Ukraine

15⁰⁰-15¹⁵ *Oleksandr Shubenko, Oleksandr Usatyi, Mykola Babak, Oleksandr Senetskyi and Volodymyr Sarapin*. Optimal thermal power of an absorption heat pump which integrated into the steam turbine PT-60/70-130/13 thermal scheme

Anatolii Pidhornyi Institute of Mechanical Engineering Problems of the NAS of Ukraine, Ukraine

National Technical University "Kharkiv Polytechnic Institute", Kharkiv, Ukraine

O. M. Beketov National University of Urban Economy, Kharkiv, Ukraine

MIRAI INTEX s.r.o., Czechia

15¹⁵-15³⁰ *Elena Kobilskaya, Viktor Lyashenko, Michail Todorov and Olga Demyanchenko*. Modeling of thermal processes in axisymmetric elements of complex metallurgical systems on the basis of nonlocal problems

Mykhailo Ostrohradskyi National University, Kremenchuk, Ukraine

Technical University of Sofia, Bulgaria

Azov maritime institute of National university "Odessa maritime academy", Mariupol, Ukraine

15³⁰-15⁴⁵ *Oleh Derkach*. Modelling of Effective Electroelastic and Dissipative Properties of Layered Piezocomposites

G.S. Pisarenko Institute for Problems of Strength of the National Academy of Sciences of Ukraine, Ukraine

15⁴⁵-16⁰⁰ *Volodymyr Kukhar, Elena Balalayeva, Khrystyna Malii and Anastasiia Serhiienko*. Re-Drawing Recycling of Low-Carbon Steel Wire for Electricity Infrastructure

Technical University "Metinvest Polytechnic", LLC, Zaporizhzhia, Ukraine

Pryazovskyi State Technical University Dnipro, Ukraine

"Zorya–Mashproekt" Scientific and Production Complex of Gas-Turbine Building, Ukraine

16⁰⁰-16¹⁵ *Volodymyr Mykhaylenko, Olexiy Antonov, Olga Lukyanova, Evgeny Lukyanov and Igor Kholodenko*. Purification of Highly Mineralized Mine and Quarry Water Using Electrochemical Deironing

Anatolii Pidhornyi Institute of Mechanical Engineering Problems of the NAS of Ukraine, Ukraine

Loftytek, LLC, USA

16¹⁵-16³⁰ *Oleksandr Smyrnov, Valentina Iurchenko, Oksana Melnikova, Yuliia Levashova and Natalia Teliura*. Energy Saving in Wastewater Treatment Processes Using the Technology of Deep Removal of Nitrogen Compounds
LCCE "Lvivvodokanal", Lviv, Ukraine
O. M. Beketov National University of Urban Economy, Kharkiv, Ukraine

Plenary speech:

16³⁰ *Imran Ali*. Recent advances in hydrogen energy storage
Jamia Millia Islamia (Central University), New Delhi, India

Day 2: October 17, 2023, Tuesday

10⁰⁰-13⁰⁰ Session 3 Energy saving technologies in power engineering and ecology

Chair: Olena Strelnikova, Anatolii Pidhornyi Institute of Mechanical Engineering Problems of the NAS of Ukraine

10⁰⁰-10¹⁵ *Oleksandr Shorinov and Kostyantyn Balushok*. Experimental Study of the Porosity of Ni+Zn+Al₂O₃ Coatings Deposited by Low-Pressure Cold Spraying
National Aerospace University "Kharkiv Aviation Institute", Kharkiv, Ukraine
JSC "Motor Sich", Zaporizhzhia, Ukraine

10¹⁵-10³⁰ *Sergiy Panchenko, Valentyn Moiseienko, Olha Ananieva, Mykhailo Babaiev and Vasyl Sotnyk*. System of Automatic Notification of Personnel about Damage to Power Supply Facilities
Ukrainian State University of Railway Transport, Kharkiv, Ukraine

10³⁰-10⁴⁵ *Oleksii Goryk, Stanislav Koval'chuk and Oleksandr Brykun*. Destruction Aspects of the Surface Layer of Metal Products of Mechanical Engineering During Shot Blasting
Poltava State Agrarian University, Poltava, Ukraine

10⁴⁵-11⁰⁰ *Nataliia Tsapko, Oleg Proskurnin, T. Ivashchenko, S. Vasilenko, N. Zakharchenko*. Standardizing the wastewater composition in order to minimize the eutrophication risk for the reservoir
Ukrainian Scientific and Research Institute of Ecological Problems, Kharkiv, Ukraine
State Ecological Academy of Postgraduate Education and Management, Kyiv, Ukraine
Municipal Enterprise "Vodokanal", Kyiv, Ukraine
National Aerospace University "Kharkiv Aviation Institute", Kharkiv, Ukraine

11⁰⁰-11¹⁵ *Pavlo Kuznietsov, Olesya Yaroschuk, Olha Biedunkova, Alla Pryshchepa and Oleksandr Antonyuk*. Effective management of water resources cooling system discharges at nuclear power plants

National University of Water and Environmental Engineering, SS Rivne NPP,
Ukraine

11¹⁵-11³⁰ *Ruslan Puzyr, Anatolii Soltus, Eduard Klimov, Andrii Chernysh and Yuliia Sira*. The Production of Steel Rims for Automobile Wheels: the Mathematical Aspects of the First Shaping Transition

Cherkasy State Technological University, Cherkasy, Ukraine

Mykhailo Ostrohradskyi National University, Kremenchuk, Ukraine

11³⁰-11⁴⁵ *Oleksandr Shapoval, Iurii Savchenko, Yurii Parshyn, Oksana Khrebtova and Viktoriia Kulynych*. Modelling Safety System of Waveguides Made of Regenerated Hard Alloy

University of Customs and Finance, Dnipro, Ukraine

Dnipro State University of Internal Affairs, Dnipro, Ukraine

Mykhailo Ostrohradskyi National University, Kremenchuk, Ukraine

11⁴⁵-12⁰⁰ *Iurii Savchenko, Oleksandr Shapoval, Sergei Panteikov, Inna Zhulkovska and Oleg Zhulkovskyi*. Increasing the Life of Lance Tips with Extended Laval Nozzles

University of Customs and Finance, Dnipro, Ukraine

Dniprovsky State Technical University, Kamianske, Ukraine

12⁰⁰-12¹⁵ *Oleg Zhulkovskyi, Elena Panteikova, Sergei Panteikov, Inna Zhulkovska and Iryna Pieieva*. Development of the Slag-Splashing Lance for Slag Skull Coating the Converter Lining

University of Customs and Finance, Dnipro, Ukraine

Private Joint-Stock Company "KAMET-STAL", Kamianske, Ukraine

Dniprovsky State Technical University, Kamianske, Ukraine

Mykhailo Ostrohradskyi National University, Kremenchuk, Ukraine

12¹⁵-12³⁰ *Mikhail Kuznetsov, Victoria Tarasova and Andrii Kostikov*. Techno-Economic Method for the Rational Choice of Air Source Heat Pumps for Bivalent Heating Systems

Anatolii Pidhornyi Institute of Mechanical Engineering Problems of the NAS of Ukraine, Ukraine

12³⁰-12⁴⁵ *Anatolii Smikhula, Isaak Sigal, Oleksii Marasin*. Reduction of nitrogen oxides emissions at combustion natural gas in outdated powerful steam boilers
The Gas Institute of the National Academy of Sciences of Ukraine, Ukraine

12⁴⁵-13³⁰ Lunch

13³⁰-16⁰⁰ Session 4 Dynamics and Strength of Power Equipment

Chair: Konstantin Avramov, Anatolii Pidhornyi Institute of Mechanical Engineering Problems of the NAS of Ukraine

13³⁰-13⁴⁵ *Alexey Milenin, Elena Velikoivanenko, Galina Rozyinka, Nina Pivtorak and Serhii Volkov*. Multi-scale finite-element methodology for predicting the thermodeformed state of welded large-size structures

E.O. Paton Electric Welding Institute of the NAS of Ukraine, Ukraine
Kyiv Academic University, Kyiv, Ukraine

13⁴⁵-14⁰⁰ *Vladimir Shpachuk, Aleksandr Chuprynin and Tatiana Suprun*. Mechanics of deflections in the discrete-continual structure on the example of the complex "tram - the upper structure of the track"

O. M. Beketov National University of Urban Economy, Kharkiv, Ukraine

14⁰⁰-14¹⁵ *Maksym Shtoda*. Stand Stiffness and Rolling Accuracy in a Tube Billet Mill (TBM) 900/750–3

LLC Technical University "METINVEST Polytechnic", Kamianske, Ukraine

14¹⁵-14³⁰ *Yury Torba, Dmytro Pavlenko and Yevgen Sbrodov*. Spectral and Wavelet Vibration Analysis Applied for Detecting Afterburner Ignition

SE "Ivchenko-Progres", Zaporizhzhia, Ukraine

14³⁰-14⁴⁵ *John Katsikadelis, George Dassios and George Tsiatas*. Response of mechanical systems described by variable-order fractional differential equations

National Technical University of Athens, Greece

University of Patras, Greece

14⁴⁵-15⁰⁰ *Holm Altenbach, Dmytro Breslavsky, Alyona Senko and Oksana Tatarinova*. Creep and damage processes in cyclically loaded model of turbine rotor

Otto-von-Guericke-University Magdeburg, Germany

National Technical University "Kharkiv Polytechnic Institute", Kharkiv, Ukraine

15⁰⁰-15¹⁵ *Pavlo Tryshyn, Natalia Honchar, Eduard Kondratiuk, Michael Grebennikov and Natalia Myronova*. Improving Aircraft Engine Compressor Blade Finishing

SE "Ivchenko-Progres", Zaporizhzhia, Ukraine

Bonn-Rhein-Sieg University of Applied Sciences, Sankt Augustin, Germany

15¹⁵-15³⁰ *Oksana Klochko, Volodymyr Volchuk, Mariia Bilinska, Evgeniya Deryabkina and Oleksandr Voronov*. Structure Formation Features of White Chrome Cast Irons inside Working Layer of Massive Mill Rolls

State Biotechnological University, Kharkiv, Ukraine

Prydniprovsk State Academy of Civil Engineering and Architecture, Dnipro, Ukraine

Jagiellonian University, Kraków, Poland

15³⁰-15⁴⁵ *Chitaranjan Pany*. Flutter Analysis of Shallow Shell Panels with Simply Supported Edges

Vikram Sarabhai Space Centre, India

15⁴⁵-16⁰⁰ *Vitaly Miroshnikov, Oleksandr Savin, Michael Grebennikov and Vladislav Demenko*. Analysis of the Stress State of a Layer With a Cylindrical Cavity, Located on Cylindrical Embedded Supports

National Aerospace University "Kharkiv Aviation Institute", Ukraine
SE "Ivchenko-Progres", Zaporizhzhia, Ukraine

Day 3: October 18, 2021, Wednesday

10⁰⁰-12⁰⁰ Session 5 Dynamics and Strength of Power Equipment

Chair: Natalya Smetankina, Anatolii Pidhornyi Institute of Mechanical Engineering Problems of the NAS of Ukraine

10⁰⁰-10¹⁵ *Dmytro Savielov, Volodymyr Dragobetskyi, Anastasiya Symonova, Viktor Kryvoi and Oleg Vysotskyi*. The evaluation of the effectiveness of the application of the heterogeneous layered armor elements

Mykhailo Ostrohradskyi National University, Kremenichuk, Ukraine

Private joint stock company "Scientific and production association "Praktika", Kyiv, Ukraine

10¹⁵-10³⁰ *Konstantin Avramov, Christophe Pierre and Maryna Chernobryvko*. Buckling of cylindrical sandwich panels with imperfections in honeycomb cores manufactured by fused deposition modeling

Anatolii Pidhornyi Institute of Mechanical Engineering Problems of the NAS of Ukraine, Ukraine

Stevens Institute of Technology, Hoboken, USA

10³⁰-10⁴⁵ *Kostiantyn Barakhov, Olexandr Poliakov, Daria Dvoretzkaya and Serhii Kurenkov*. An Improved Stress State Mathematical Model for the Adhesive Joint of Coaxial Tubes

National Aerospace University "Kharkiv Aviation Institute", Kharkiv, Ukraine

10⁴⁵-11⁰⁰ *Oleksandr Salenko, Mykolai Kryshchuk, Vadym Orel, Sergii Shlyk, Viktoriia Kulynych*. Prediction of Damage Development in a Cellular Axisymmetric Tank Obtained by FDM

National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute", Ukraine

Kremenichuk flight college Kharkiv National University of Internal Affairs, Ukraine

Mykhailo Ostrohradskyi National University, Kremenichuk, Ukraine

11⁰⁰-11¹⁵ *Oleksandr Gaidachuk, Igor Taranenko, Tetyana Nabokina and Andrii Kondratiev*. Analysis of Shape Distortion of the Composite Reflector Antennas During Assembly

National University “Zaporizhzhia Polytechnic”, Ukraine

National Aerospace University “Kharkiv Aviation Institute”, Ukraine

O.M. Beketov National University of Urban Economy, Kharkiv, Ukraine

11¹⁵-11³⁰ *Francisco Monticeli, Felipe Fuga, Mariano Arbelo and Mauricio Donadon*. Investigation of Fatigue Intra/Interlaminar Damage Propagation in CFRP: Tensile After Impact

São Paulo State University, Brazil

Technological Institute of Aeronautics, São José dos Campos, Brazil

11³⁰-11⁴⁵ *Andrii Chuhai, Yuriy Stoyan, Tetyana Romanova, Georgiy Yaskov and Olha Starkova*. Special Constraints of Packing Problems in Materials Structure Research
Anatolii Pidhornyi Institute of Mechanical Engineering Problems of the NAS of Ukraine, Ukraine

University of Leeds, United Kingdom

Simon Kuznets Kharkiv National University of Economics, Ukraine

11⁴⁵-12⁰⁰ *Georgiy Yaskov, Yuriy Stoyan, Andrii Chuhai, Tetyana Romanova and Luis Gutierrez*. Optimized designing of parts for additive manufacturing
Anatolii Pidhornyi Institute of Mechanical Engineering Problems of the NAS of Ukraine, Ukraine

University of Leeds, United Kingdom

Nuevo Leon State University, Mexico

12⁰⁰-12³⁰ Coffee-break

12³⁰-14⁴⁵ Session 6 Dynamics and Strength of Power Equipment

Chair: Natalya Smetankina, Anatolii Pidhornyi Institute of Mechanical Engineering Problems of the NAS of Ukraine

12³⁰-12⁴⁵ *Natalia Smetankina, Ievgeniia Misiura, Kateryna Kren, Anatolii Vasiliev and Sergii Misiura*. Thermal Stress Analysis of Multilayer Glazing Elements Subjected to Interlayer Heat Sources

Anatolii Pidhornyi Institute of Mechanical Engineering Problems of the NAS of Ukraine, Ukraine

Simon Kuznets Kharkiv National University of Economics, Ukraine

Eötvös Loránd University, Budapest, Hungary

12⁴⁵-13⁰⁰ *Vitalii Peshko, Oleksandr Usatyi and Olga Chernousenko*. The Efficiency and Durability of a Nuclear Power Plant Turbine Without the Stage of Damaged Blades

Igor Sikorsky Kyiv Polytechnic Institute, Kyiv, Ukraine

National Technical University "Kharkiv Polytechnic Institute", Kharkiv, Ukraine

13⁰⁰-13¹⁵ *Sergiy Sklepus, Alexander Galishin and Markus Kober*. Bending of Complex Shape Shallow Shells from Materials with Different Behavior in Tension and Compression

S.P. Timoshenko Institute of Mechanics of the NAS of Ukraine, Ukraine

German Aerospace Center (DLR), Germany

13¹⁵-13³⁰ *Mohamed Farid Benlamnour, Nabil Bensaid, Tahar Saadi and Yazid Laib Dit Laksir*. Analysis and selection of SMAW welding process parameters of Cr-Mo P11 steel for power plant applications

Research Center In Industrial Technologies, Cheraga, Algeria

Larbi ben M'hidi University, Oum el Bouaghi, Algeria

13³⁰-13⁴⁵ *Kyryl Degtyariov, Alexander Steinwolf, Ivan Vierushkin and Vasyl Gnitko*. Boundary and Finite Element Methods in Crack Propagation Analysis

Anatolii Pidhornyi Institute of Mechanical Engineering Problems of the NAS of Ukraine, Ukraine

AST Consulting Ltd., Auckland, New Zealand

13⁴⁵-14⁰⁰ *Olena Sierikova, Denis Kriutchenko, Ivan Vierushkin and Konstantin Vandyshev*. Structure Elements with Crack-Type Defects Durability Estimation

National University of Civil Protection of Ukraine, Kharkiv, Ukraine

Anatolii Pidhornyi Institute of Mechanical Engineering Problems of the NAS of Ukraine, Ukraine

Delft University of Technology, Netherlands

14⁰⁰-14¹⁵ *Volodymyr Kvasnikov, Dmytro Kvashuk and Yulin He*. Intelligent Motor Testing System Utilizing Neural Networks for the Recognition of Anomalous Operating Modes

National Aviation University, Kyiv, Ukraine

Harbin Institute of Technology, Harbin, Heilongjiang, China

14¹⁵-14³⁰ *Nabil Bensaid, Mohamed Farid Benlamnour, Yazid Laib Dit Laksir, Tahar Saadi and Riad Badji*. Influence of Alloying Elements in the Base Material on the Mechanical Behavior of X70 HSLA Steel Welds

Research Center In Industrial Technologies, Cheraga, Algeria

Larbi ben M'hidi University, Oum el Bouaghi, Algeria

14³⁰-14⁴⁵ Closing Ceremony