

**Vladimir State University named after Alexander and Nikolay Stoletovs
Peter the Great St. Petersburg Polytechnic University
Research Institute of Building Physics of Russian Academy of Architecture
and Construction Sciences**

**SCHEDULE
of the International Conference on Materials Physics, Building
Structures and Technologies in Construction, Industrial and
Production Engineering
(MPCPE-2021)**

26-28 April 2021



Vladimir, Russian Federation

SCHEDULE OF THE CONFERENCE

26 April 2021

9.15-9.30	Connecting of the participants
9.30-9.45	Opening ceremony
9.45-13.00	Morning sessions
13.00-14.00	Break
14.00-20.00	Evening sessions

27 April 2021

9.00-13.00	Morning sessions
13.00-14.00	Break
14.00-20.00	Evening sessions

28 April 2021

9.00-13.00	Morning sessions
13.00-14.00	Break
14.00-20.00	Evening sessions

DETAILED SCHEDULE
of the International Conference on Materials Physics, Building
Structures and Technologies in Construction, Industrial and
Production Engineering
(MPCPE-2021)

SECTION 1
BUILDINGS AND STRUCTURES IN CIVIL
AND STRUCTURAL ENGINEERING

April 26, Morning sessions

1. Dynamics of the hydrological and alluvial regime of the river under the influence of hydraulic structures

Dilshod Bazarov, Oybek Vokhidov and Iqboloy Rayimova

2. Mathematical model of deformation of the river channel in the area of the damless water intake

Dilshod Bazarov, Nikolai Vatin, Oybek Vokhidov and Iqboloy Rayimova

3. Hydraulic parameters in the area of the damless water intake structure of the river

Dilshod Bazarov, Farokhiddin Uljayev, Oybek Vokhidov and Iroda Rayimova

4. Deformation and failure of pre-stressed reinforced concrete frames in ultimate states

Tatyana Aleksandrovna Ilushchenko, Vitaliy Ivanovich Kolchunov and Sergej Yur'Evich Savin

5. Engineering calculations of acidifier retaining walls during water treatment facilities designing

Vladimir Rimshin, Ekaterina Ketsko, Irina Kuzina, Pavel Truntov and Svetlana Roschina

6. Деформативные и прочностные свойства кладки с изучением напряженно-деформированного состояния полимеркомпозитных блоков с декоративно-фасадной отделкой

Любовь Нагрузова, Наталия Эклер and Екатерина Глазырина

7. Effectiveness of the use of suspended structures in seismic areas

Tatiana Belash and Iliia Svitlik

8. Formula for the fundamental frequency of natural vibrations of an externally statically indeterminate truss

9. Research of the stability of the ground slope

Igor Gandelsman and Artem Gandelsman

10. Joint use of water resources in the Aral Sea basin as a factor of sustainable development of the states of central

Baxodir Soliyev, Anvar Sherov, Matluba Muhammadeva and Aziza Gafarova

11. Innovative solutions for the construction of drainage in urban environments to protect against flooding by groundwater

Baxodir Soliyev, Anvar Sherov, Matluba Muhammadeva, Sanobar Dustnazarova and Aziza Gafarova

12. Return waters of the Amu Darya river basin

Matluba Muhammadeva, Yormat Shermatov and Bakhodirjon Amanov

13. Оценка воздействия вибрации на здание от железнодорожного транспорта

Имран Алирзаев and Николай Сова

14. Improvement of Water Resources Management in Syrdarya Basin

Norkobil Rakhmatov and Khojiakbar Khasanov

April 26, Evening sessions

1. Bending of multilayer slabs lying on elastic half-space, considering shear stresses

Mirziyod Mirsaidov, Kazokboy Mamasoliev and Kubaymurat Ismayilov

2. The new hypothesis about linear deformations of reinforced concrete structures and the construction of filling diagram under combined torsion and bending. Analysis, approximation, functions, graphics and functionals

Vladimir I. Kolchunov, Alexey I. Demyanov, Vyacheslav N. Shankov and Sergey V. Grechishnikov

3. Analysis of the foundations of the modern "International Harmonized Format" of the theory of concrete creep

Rudolf Sanzharovsky, Frieder Sieber and Tatyana Ter-Emmanuilyan

4. Numerical analysis for stress-strain state of earthfill dam under seismic impact

Klara Salyamova, Asror Yangiev, Jamshid Choriev, Khusanboy Turdiqulov and Shaydobek Kurbonov

5. Thermal and economic performance of a solar hot water system in Tashkent

Nodirbek Abdullaev, Alisher Shaislamov, Petros Axaopoulos and Abzalkhoja Ahkrorhkojaev

6. Calculation of viscoelastic cylindrical panels with concentrated masses for dynamic stability

Rustamkhan Abdikarimov, Dadakhan Khodzhaev and Nikolay Vatin

7. Nonlinear vibrations of an orthotropic viscoelastic rectangular plate under periodic loads

Mirziyod Mirsaidov, Rustamkhan Abdikarimov, Bakhodir Normuminov and Dadakhan Khodzhaev

8. Current issues of financial support of the regulatory state of highways in the region (technical and economic aspects)

Pavel N. Zakharov, Alexandr V. Vikhrev, Galina V. Provatorova and Artur A. Posazhennikov

9. Features of calculating pile foundations in karst areas

Ruslan Sharapov and Nina Lodigina

10. Spatial vibrations of high-rise buildings using a plate model

Makhamatali Usarov, Gayratjon Ayubov, Davronbek Usarov and Giyosiddin Mamatisaev

11. Improvement of water intake in large machine water lifting systems (on the example of the karshi main canal)

Oleg Glovatskii, Rustam Ergashev and Jaloliddin Rashidov

12. Whirlpools problem in front forechamber of a pumping station

Rustam Ergashev and Jaloliddin Rashidov

13. Calculation of noise regime in urban development taking into account sound re-flection from building facades

Alexander Grechishkin, Alexander Antonov and Anastasia Putintseva

14. Analysis and assessment of the technical condition of earth dams and dammed lakes of the Republic of Uzbekistan

Mashrab Akhmedov, Elyor Toshmatov and Ziyoda Urazmukhamedova

15. Self-tapping tubular nails with screw thread for glued wooden structures

Alexander Shmidt

April 27, Morning sessions

1. Calculating the strengthening of construction structures before the reconstruction of the building

Alexey Neverov, Pavel Truntov, Ekaterina Ketsko and Vladimir Rimshin

2. Mathematical modeling of the deformation process of composite shell structures

Shoolim Salimov, Tulkin Mavlanov and Giyaz Yusupov

3. Features of preliminary stresses in wooden structures

Михаил Москалев

4. Regulation of stresses in structures of buildings located in extreme wind conditions

Михаил Москалев and Dmitriy Charnik

5. Design of Special mobile structures for the restoration of overhead power lines

Nikolai Senkin

6. Filtration in the earth-fill dam in reservoir hydrosystem

Masharif Bakiev, Kahramon Babajanov, Nodira Babajanova and Khojiakbar Khasanov

7. Analysis of the construction industry using the Vladimir region as an example

Sergey Prohorov

8. Estimation of strip foundation settlement based on stochastic analysis

Constantin Kurguzov, Denis Gorobtsov, Igor Fomenko and Margarita Novgorodova

9. Lower estimate of the first natural vibration frequency of a double lattice girder

Mikhail Kirsanov and Elizaveta Petrichenko

10. Theoretical method for calculating of sound insulation of sandwich panels

Dmitriy Monich and Vladimir Erofeev

11. Pre-project search for the artistic image of the Museum and Exhibition Pavilion of VISU

Irina V. Trufanova

12. Justification of service life of the designed reinforced concrete bridges

Dmitriy Shestovitskiy

13. Damage and destruction of irrigation canals during earthquakes and recommendations for their strengthening

Mashrab Akhmedov, Javlon Yarashov and Doniyor Jurayev

14. Geophysical methods in survey and geotechnical monitoring of foundations and underlying soils

Elena Gryaznova

15. Calculations of the rigidity and the strength of concrete filled steel deck diaphragms

Linur Gimranov, Oleg Efimov and Alsou Fattakhova

16. Numerical simulation of transfer processes in multilayer enclosing structures of buildings and engineering networks

Renat Sadykov, Fail Ahmadiev, Renat Gizzyatov, Halim Ahmadiev and Aida Mukhametzianova

17. Assessment of the operational state of the rock fill dam of the Tupalang reservoir based on field observations

Ashikmamut Ibraymov, Odiljon Kadirov, Uktam Kahharov and Otanazar Matkarimov

18. Bending test of stress-laminated timber decks using laser scanning

Aleksandr Chernykh, Pavel Koval, Shirali Mamedov, Egor Danilov, Denis Nizhegorodtsev and Tatyana Kazakevich

April 27, Evening sessions

1. Control of the air environment of residential premises

Svetlana Ugorova and Oleg Veselov

2. Влияние тепловлажностного режима на работу нагельных соединений

Сергей Викторович Федосов, Виталий Геннадьевич Котлов, Анатолий Николаевич Актуганов, Анатолий Геннадиевич Поздеев and Татьяна Николаевна Пугачева

3. Methodology for modeling the survivability of multi-storey building frames with complex stress reinforced concrete elements

Nataliya V. Fedorova, Violetta S. Moskovtseva, Mikhail D. Medyankin and Marina K. Eniutina

4. Fire resistance of loaded thin-walled compressed steel constructions

Ivan Dmitriev and Marina Gravit

5. A comprehensive approach to the design and construction of building coverings

Лев Еропов

6. Tamped foundation with central pile

Alexey Glushkov, Vyacheslav Glushkov and Ilya Glushkov

7. Calculation of a spatial model of a box-type structure in the LIRA Design System using the Finite Difference Method

Makhamatali Usarov, Giyosiddin Mamatisaev and Davronbek Usarov

8. Influence of constructive solutions of civil buildings on the organizational and technological parameters of dismantling works

Dmitry Mazurin and Marina Dement'Eva

9. Forecast of mud silting of vortex zone behind the transverse dam

Bakiev Masharif, Yakubov Kuvonchbek, Zarip Mukimov and Dilrabo Murodova

10. Zoning and an account for soil salination in the design of automobile roads

Abdubaki Kayumov, Rashidbek Hudaykulov and Azizjon Kayumov

11. Numerical slope stability analysis of reinforced structure (embankment)

Rauan Lukpanov, Talal Awwad, Denis Tsygulyov and Aigerim Yenkebayeva

12. Planning of a rational sequence of a complex of construction works, considering resource restrictions

Yuliya Kustikova and Svetlana Bakrunova

13. Spatial stability problems of elastic beams with potential loading: Euler's problem and Nikolai paradox

Vladimir Lalin, Valentin Nenashev, Iana Utimisheva, Stanislav Diakov, Mikhail Sukhoterin and Roman Orlovich

14. Quality control of repair and construction works in ensuring the operational safety of buildings and structures

Evgeniy Degaev

15. Survivability exposition of a long-term deformable reinforced concrete building frame under accidental actions

Vitaly Kolchunov and Nataliya Androsova

16. Statistical information analysis of metro induced noise and vibration levels inside residential buildings

Alexey Pospelov, Vladimir Smirnov and Elena Rudneva

17. Rigid joint of bent glued laminated timber structures using inclined glued-in rods

Anatoliy Yakovlevich Naichuk, Svetlana Roshchina, Aleksandr Alekseevich Pogoreltsev, Igor Evgenyevich Demchuk and Andrii Ivaniuk

April 28, Morning sessions

1. Impact of a plane compression wave on a cylindrical shell filled with fluid

Sagdulla Abdukadirov, Mark Aisenberg-Stepanenko, Bakhtiyor Yuldoshev and Khilola Zhabborova

2. Dependence of the location of industrial facilities on the imlosion of the urban planning system

Alla Cherepushkina

3. Labor costs for major and current repairs during the operation of buildings

Oleg Korol, Maksim Mazhirin and Zaur Tutarishev

4. Structural analysis of labor costs for the building construction and their structural elements

Elena Korol and Galina Akopyan

5. Determination of the reduced costs carried out in the process of operation of buildings and constructions

Rima Petrosyan, Roman Korol, Antoniadi Diana and Tigran Ovsepyanatotv

6. Features of the Justification of Design Solutions

Larisa Filimonova, Elena Matys and Ianina Abusheva

7. Grigorii Trunin, Irina Pogodina, Alexey Scheka and Roman Streltsov

Assessment of construction of facilities of rural emergency medicine in Russia: economic and technology overview

8. The choice of a rational heat-insulating layer thickness in the process of the overhaul of facades to improve the heat-shielding characteristics of buildings

Oleg Korol, Aleksandr Petrov and Zaur Tutarishev

9. The planned size of the constrained flow of cross dams on rivers with floodplains steel

Masharif Bakiev, Uktam Kakhhorov and Azizjon Jakhonov

10. Wood and steel rope: a rational combination in floor beams

Artem Koshcheev, Svetlana Roshchina, Nikolai Vatin and Mikhail Lukin

11. Stress-strain state of a reinforced concrete frame on the example of a pharmaceutical warehouse building

Alexander Gonshakov, Nazar Gonshakov, Marina Popova and Alexey Kryukov

12. Reinforced concrete coating of an industrial building with variable height beams and wooden deck

Michael Sergeev, Michail Lukin and Ivan Shishov

13. Reserves for intensification of technological processes in repair and construction production

Elena Korol and Ivan Drepalov

14. Compressed knots on glued-in rods of wooden structures

Aleksandr Pogoreltsev

15. Numerical simulation of steel columns of industrial buildings with local mechanical damage during exploitation

Nina Buzalo, Ivan Gontarenko, Boris Chernykhovskiy and Anastasia Alekseeva

16. Evaluate the risks affecting the construction projects

Boris Kim and Zainab Shakir

April 28, Evening sessions

1. Research of the engagement of Liquid aggressive environment and Concrete

Sergey Fedosov, Varvara Roumyantseva, Igor Krasilnikov and Irina Krasilnikova

2. Technology for the restoration of wooden beams by surface repair and local modification

Anastasiya Lukina, Svetlana Roschina, Mikhail Lisyatnikov and Nedzad Zdralovic

3. Numerical studies of the optimal parameters of the flange of a two-layered reinforced concrete element of a t- section with high strength concrete in a compressed zone

Yuri Rogatnev, Oleg Sokolov, Jeremi Minani, Dmitriy Panfilov and Yuri Ivanov

4. Assessment of wind load on billboards

Ruslan Sharapov and Nina Lodigina

5. Development of materials and technologies for restoration in order to prolong the life of architectural monuments on the example of Vladimir and Suzdal

Lyubov Zakrevskaya and Irina Lyuchina

6. Study of the mass effect of a complex node of underground pipelines of orthogonal configuration based on real earthquake records

Diyorbek Bekmirzaev, Ruslan Kishanov, Nodirakhon Mansurova, Shoista Sabirova and Ibraxim Mirzaev

7. Dowel connections with local wood modification

Artem Strekalkin, Mikhail Lukin, Alexey Kryukov, Svetlana Roshchina and Anatoly Naychuk

8. A study of pressure distribution in building model with ledges

Elizaveta Zdanchuk, Olga Nikitina, Aleksandr Galyamichev and Dmitrijs Serdjuks

9. Роль деформаций изгиба и сил трения в формировании напряжённого состояния бетонного экрана каменно-набросной ПЛОТИНЫ

Mikhail Sainov

10. Experimental research of compressed masonry elements made of gas silicate blocks with foam concrete cores

Михаил Новиков, Андрей Гойкалов and Татьяна Богатова

11. Polymer composite material for the manufacture of molds in the production of evaporative patterns

Vladimir Sharshin, Denis Sukhorukov and Elena Sukhorukova

12. Conducting technical expertise in the investigation of violations in the field of construction

Sergey Prohorov, Vladimir Fedorov and Alex Grafova

13. Mathematical modelling of unstable slow-moving water flow in South Mirzachul main channel

Anvar Sherov, Aziza Gafarova and Aziz Xasanov

14. Technologies for assembling a soft enclosing structure of a geodesic dome

Boris Strigin and Roman Korol

15. Influence of different types of aggregates on the structural properties of fiber-reinforced concrete

**Vladislav Alexeevich Martinov, Mikhail Vladimirovich Lukin,
Vladimir Ivanovich Rimshin, Rusak Kazimir and Andrey
Ivanyuk**

16. Investigation of the stress-strain state of wooden beams with rational reinforcement with composite material

**Svetlana Roshchina, Aleksey Gribanov, Mikhail Lukin and
Danila Chibrikin**

17. Ensuring the safety of train traffic with the use of a system for determining the state of a non-jointed trac

**Gali-Askar Khalfin, Aziz Mamadaliyev, Khasan Umarov, Fauziya
Nafikova, Mavjuda Mirkhanova and Khushnudbek Samandarov**

SECTION 2

FUNCTIONAL AND CONSTRUCTION MATERIALS IN CONSTRUCTION, INDUSTRIAL AND PRODUCTION ENGINEERING

April 26, Morning sessions

1. Improving the properties of a concrete composite reinforced with a dry plant additive

Tatiana Musorina, Daria Zaborova and Michael Petritchenko

2. Application of electrotechnological methods for improvement of water

Dilmurod Akbarov and Abduvali Turdiboyev

3. Influence of ion implantation on the performance of extra high loaded friction couple made of structural steel during sliding friction

Dmitry Kozlov and Лидия Kuksenova

4. New asphalt concrete mix design technology

Evgeny Varzin, Vladimir Shalin and Lubov Samoylova

5. Improving the characteristics of bitumen for asphalt concrete by modifying

Galina Provatorova and Ksenia Ryabinina

6. Dynamic measurement of moisture content of the wood by the conductometric method

Bogdan E. Sharynin and Vitaliy G. Kotlov

7. Modification of a bituminous binder using waste products from the polymer industry

Evgeniy Timakov, Yuriy Panov, Alexander Vihrev, Galina Provatorova and Yaroslav Timantsev

8. Composition based on one-component polyurethane modified with tetrapropoxysilane

Mikhail Lisyatnikov, Vladimir Chukhlanov and Anton Korshakov

April 26, Evening sessions

1. Коррозионная стойкость элементов конструкций из оцинкованного и черного металла при взаимодействии монолитного пенобетона

Kseniia Usanova and Vladimir Rybakov

2. Laser synthesis of aluminum oxide nanoparticles

Alena Kharkova, Dmitry Kochuev and Nikolay Davydov

3. Use of new technologies for operation of water inlets of hydropower plants and pumping stations

Aleksandr Gazaryan and Oleg Glovatskiy

4. Assessment of the effect of the lining material on the energy efficiency of starting up ball mills

Khakim Muratov, Oybek Ishnazarov, Abdusaid Isakov and Oybek Matchanov Matchanov

5. Using the efficiency of using various corrosion and scale inhibitors for long-term maintenance of the serviceability of water circulation and water cooling systems in industry

Danila Ptitsyn, Vladimir Ershov, Artem Podgornyy, Alexey Akulov and Elmira Akhmetzhanova

6. Investigation of surfactants that reduce the wear rate of rubbing surfaces

Danila Ptitsyn, Vladimir Ershov, Artem Podgornyy and Alexey Akulov

7. Study of yarn unequality produced on a new drafting device design
Nurilla Dadakhanov
8. Influence of media composition on the efficiency of membranefree fuel alkaline elements
Tarantseva Klara, Tarantsev Konstantin, Yachkind Michail and Mishra Ajay
9. The strength of wood-reinforced polymer composites in tension at an angle to the fibers
Mikhail Lisyatnikov, Anastasiya Lukina, Danila Chibrikin and Boris Labudin
10. Modern materials and methods for restoration of white stone structures of the XII century on the example of the Golden Gate in Vladimir
Ksenia Nikolaeva

April 27, Morning sessions

1. Grinded rubber modifier in asphalt concrete pains: statistical status in Uzbekistan
Kubaymurad Ismayilov and Kamola Karimova
2. Polyvinyl chloride compounds for the construction industry
Karina Rustamovna Khuziakhmetova, Lyailya Abdullovna Abdrakhmanova and Rashit Kurbangalievich Nizamov
3. Studying the influence of the temperature of heating the shell of the dryer drum on the process of drying raw cotton
Ziyodullo Ochilovich Shodiyev, Nortayloq Abdug'aniyevich Duskarayev and Nematjon Sadirovich Shodiyev
4. The peculiar properties of economically effective technology of forming of the ceramic coating based on aluminum oxide
Aleksandr Bolotov, Vladislav Novikov and Olga Novikova

5. Using CLT-panels with alternatively angled layers as overlappings

Dmitriy Lyapin, Alexander Karelskiy and Melekhov Vladimir

6. Fine-grained concrete as the basis of the mineral matrix of Textile-Concrete

Igor Bessonov, Nina Umnyakova, Aleksey Zhukov and Ravi Sagar Poudel

7. Process of high-pressure liquid metal casting

Maksim Denisov

April 27, Evening sessions

1. Modeling the influence of the steering wheel by the driver on the stability of the vehicle's motion

Doniyor Akhmedov, Shavkat Alimukhamedov, Ibragim Tursunov, Soyib Narziev, Davron Riskaliev and Javlon Yarashov

2. Strength of plasticized cement-sand mortars under heat-moisture treatment conditions

Andrei Leshkanov, Lev Dobshits, Sergey Anisimov and Anastasiia Lampego

3. Features of the use of waste heat stations in construction

Dmitry Yakonchuk and Aleksandra Ostyakova

4. Prospects for studying mobile photovoltaic plants for small agricultural needs

Nurullo Zikrillayev, Elyor Saitov, Usmonjon Akhmedov and Ogabek Kurbonboyev

5. Mathematical model of the forecast of moisture transfer in the soil, considering agrotechnical measures

Abdulkhakim Salokhiddinov, Andrey Savitskiy and Avazjon Khomidov

8. Plane problem on the extraction of perfect liquid from the nozzle

Asqar Zakirov

9. Determination of the coefficient of restitution upon contact of a steel ball with aluminum and steel surfaces

Vladimir Gusev, Alexander Sobolkov and Artemiy Aborkin

10. The increase of energy efficiency of ventilated facades using different insulation materials

Galina Medvedeva, Renat Sadykov, Dmitriy Kraynov and Aigul Ibragimova

April 28, Morning sessions

1. The movement of fluid in a channel with one outlet, which has a feature

Aybek Arifjanov, Quدراتjon Rakhimov and Abduhalil Rakhimov

2. Possibilities of processing agricultural waste at energy efficient facilities to produce gas, liquid and solid energy products

Iroda Ruzieva, Serik Alijanov, Shukhrat Kamilov, Makhammadzohid Safaev, Mahmud Safaev and Luqmon Samiev

3. The relationship of casting conditions with the structure and properties of tread materials

Andrey Kireev and Vladimir Kechin

4. Calculation of the efficiency of magnetohydrodynamic pumps

Aybek Arifjanov, Zokhidjon Abdulkhaev and Mamadali Madraximov

5. Исследование свойств порошково-активированных бетонов

Ruslan Salimov, Vladimir Erofeev, Anna Dergunova, Vladislav Moiseev and Анна Piksaykina

6. Исследование свойств порошково-активированных бетонов

Руслан Салимов, Анна Дергунова, Дмитрий Барабанов, Irina Maksimova and Ирина Ерофеева

7. Mathematical model of vertical vibration of the frame, cab and seat of the operator of a mobile wheeled vehicle, taking into account the Inverness of the roads

Dilafruz Ermatova, Shavkat Imomov, Farkhod Matmurodov and Sharofiddin Aynakulov

8. Electrophysics of the PbTe semiconductor thin films with bimodal distribution of nanoclusters on surface of the units; macroscopic quantum effects in electroconductivity

Sergei Arakelian, Timur Khudaiberganov, Alexey Kucherik and Dmirtri Bukharov

9. Optimization of daily operation mode of photovoltaic systems of enterprises

Tulkin Gayibov and Elnur Abdullaev

April 28, Evening sessions

1. Distance work in digital transformation: problems and opportunities

Salimbek Kholmuratov, Samandar Kurbonov, Abdusaid Isakov and Dilafruz Madalieva

2. Choice of material for cutting tools in order to increase wear resistance

Popova Olga, Pechenkina Larisa, Popova Margarita and Petrenko Vladimir

3. Modification of bituminous binders for guss asphalt

Marina Vysotskaya, Anastasia Kurlykina, Artem Shiryaev and Anna Tkacheva

4. Application of a complex modifier in gypsum compositions

Victoriya Petropavlovskaya, Tatyana Novichenkova, Kirill Petropavlovskii, Mikhail Sulman and Maria Zavadko

5. The mechanical properties of additively manufactured Al-Mg alloys modified by electron beam surface treatment

Yanfei Geng, Irina Panchenko, Xizhang Chen, Yurii Ivanov, Alexei Afanasyev and Sergey Konovalov

6. Factors affecting the operational stability of hydraulic concrete

Farida Yunusova, Turavoy Muslimov, Jamshid Choriev and Oybek Muratov

7. Ruslan Galeev and Rashit Nizamov

Ruslan Galeev and Rashit Nizamov

8. Labor costs for major and current repairs during the operation of buildings

Olga Barysheva and Yulia Nizamova

SECTION 3

APPLICATIONS OF PHYSICS IN THE HIGH-TECHNOLOGY INDUSTRY

April 26, Morning sessions

1. Modeling the structure of nano-modified aluminum alloy with the addition of B₄C

Dmitriy Bukharov, Sergei Arakelian, Evgeny Prusov, Alexey Panfilov, Vladislav Samyshkin, Igor Skryabin and Anton Osipov

2. The Laser for Indirect Optical Polarization of Noble Gas Atoms

Alexey Putilov, Alexandr Antipov, Alexandr Shepelev and Anton Osipov

3. The features of the simulation of the texture evolution at the early stages of the thermomechanical treatment of aluminum alloys

Evgenii Aryshenskii, Jürgen Hirsch, Sergey Konovalov, Vladimir Aryshenskii and Aleksandr Ragazin

4. Areas of improvement sewage treatment plants sewage

Starikov Albert and Borisov Boris

5. Paradigm of mechanical motion and its transmission

Albert Starikov

6. Calculation of heat transfer in the drying chamber of the mechanized chamber-chain plant for drying melon fruits

Nafisa Saidkhujaeva and Sovet Khudaykulov

7. Piece-quadratic interpolation method of a table-set function with a continuous first derivative based on linear combination of centrally symmetric parabols

Norayr Badalyan, Vyacheslav Shmelev and Stanislav Sbitnev

8. Prospects for the use of renewable energy sources in Uzbekistan using Matlab

Elyor Saitov, Temur Sodikov, Yusup Khamidov and Nuriddin Siddikov

April 26, Evening sessions

1. Increasing the life of the direct suspended LED lamp

Andrey Mitrofanov, Igor Shilov, Evgeny Chashchin, Norayr Badalyan and Galina Maslakova

2. Modeling of electrical network elements by the operator method

Norayr Badalyan, Dmitry Andrianov and Grigory Kolesnik

3. Main distortions in the networks from elevator drives

Norayr Badalyan, Dmitry Andrianov and Valery Afonin

4. Optimization of the parameters of electrical circuits described by differential equations

Norayr Badalyan, Dmitry Andrianov and Grigory Chashchin

5. Improving the energy efficiency of power transformers when operating in regulated modes

Norayr Badalyan, Andrey Mitrofanov and Evgeny Chashchin

6. Kinetic law of the drying process in drying units of continuous action

Nafisa Saidkhujaeva and Sovet Khudaykulov

7. Software product as a tool for studying quality indicators of anti-ice material distribution

Yana Sadovnikova, Konstantin Mandrovskiy and Anatoly Dotsenko

8. Morphology of rubidium silicide films according to the electronic spectroscopy

Ilkhom Bekpulatov, Burkhon Donaev, Ilkhom Turapov, Sevara Abraeva and Rustam Usanov

9. Ethanol oxidation on nonplatinum catalysts in membraneless fuel cell
Tarantseva Klara, Tarantsev Konstantin, Yachkind Michail and Julia Fayustova

April 27, Morning sessions

1. Optical synapses for artificial neural networks: digital or analog?
Egor Pritotsky and Mikhail Pankov
2. Effect of implantation of barium and oxygen ions on the emission properties of Mo, Pd, and Pd-Ba
Sardor Donaev, Ki Buem Kim, Eshboy Rabbimov, Baltokhodja Umirzakov and Ganjimurod Shirinov
3. Dependence of the parameters of energy bands on the depth of the ion-doped layer for Si impanted with ions Ba⁺
Sardor Donaev, Baltokhodja Umirzakov, Allanazar Tashatov, Ganjimurod Shirinov and Nilufar Mustafaeva
4. Threshold filtering of optical signals in spike neural networks
Mikhail Pankov and Egor Pritotsky
5. Forceful interaction of the profile cutter with the whorl zone of wood
Anatoly Fomin, Vladimir Gusev and Almaz Sadrtidinov

April 27, Evening sessions

1. Mathematical modeling of multi-support and multi-level mobile link damping energy functions in road inequality
Farkhod Matmurodov and Shokhrukh Ruziev

2. Optimal methods of controlling centrifugal pumps

Zokhidjon Abdulkhaev, Mamadali Madraximov, Aybek Arifjanov and Nosir Tashpulotov

3. Исследование влияния различных внешних воздействий на отрицательное магнитосопротивление кремния с нанокластерами атомов марганца

Jafar Usmonov

4. Применение и создать низкоскоростных генераторов с возбуждением от постоянных магнитов и дополнительными обмотками для микро ГЭС и ВЭУ

Sherzod Toshev, Shaxnoza Tosheva and Игорь Ролле

5. Development of technology for improvement of physical and mechanical properties and soil fertility at their compaction by propulsors

Farkhod Matmurodov, Sherzodbek Akhmedov, Isomiddin Tulanov, Sayfidin Asamov, Jamshid Khakimov and Oybek Daminov

6. Modern laser-technologies and nanotechnologies – next-generation on new physical principles

Sergei Arakelian, Grigory Evstyunin, Alexey Zdanov and Sergey Abrakhin

7. Adaptive control of laser surface hardening

V.F. Korostelev and A.D. Petrushin

April 28, Morning sessions

1. Modeling of the surface processes development under laser-induced melting in frame of diffusion approach

Sergei Arakelian, Alexey Kucherik and Dmitry Bukharov

2. Decision information support system in both the student education process and advanced training of different levels for Hi-Tech industry

Sergei Arakelian, Sergei Abrakhin and Artem Aleshin

3. Dynamics of knife shafts of adjustable machines

Kahramanjon Khusanov

4. The application of wireless sensor ultra-wideband networks for monitoring of the buildings and structures integrity

Oleg Butkovskiy, Aleksandr Dmitriev and Ryzhov Anton

5. Collective resonances with surface plasmon polaritons excited in arrays of quantum dots placed nearby the graphene

Mikhail Gubin, Alexander Shesterikov, Alexei Prokhorov and Valentyn Volkov

6. Deposition of GaN nanoparticles on the surface of a copper film under the action of electrostatic field during the femtosecond laser ablation synthesis in ammonia environment

Dmitriy Kochuev, Anton Chernikov, Ruslan Chkalov, Alexei Prokhorov and Kirill Khorkov

7. Local thermodynamic equilibrium in a laser-induced plasma channel formed by interaction of femtosecond laser radiation with argon

Dmitriy Kochuev, Anna Voznesenskaya, Arkadii Galkin, Ruslan Chkalov, Anton Chernikov, Kirill Khorkov and Anastasia Egorova

8. Nanostructuring of the tungsten surface under the action of femtosecond laser radiation

Kirill Khorkov, Dmitriy Kochuev, Anton Chernikov, Ruslan Chkalov and Sergei Arakelian

April 28, Evening sessions

1. Features of laser-induced periodic surface structures formation under the influence of femtosecond laser radiation with astigmatic beam
Kirill Khorkov, Dmitriy Kochuev, Ruslan Chkalov, Anton Chernikov and Sergei Arakelian
2. Investigation of the electric charges of laser erosion particles during laser ablation of aluminum oxide in an electrostatic field
Ivan Firsov, Dmitriy Kochuev, Artem Zolotov, Arkadii Galkin and Anton Chernikov
3. The control of the track shape in laser metal deposition technology by pulse-width modulation
Yury Zavalov, Alexander Dubrov and Pavel Rodin
4. The effect of laser beam focusing parameters on the track shape in laser metal deposition technology
Yury Zavalov and Alexander Dubrov
5. Диффузион типіндегі бір параметрлі адсорбция мәселесін шешу
Назгуль Кыргызбай and Периуза Пирниязова
6. Ensuring the safety and stability of radio-electronic and instrument-making industries under the impact of emergency situations
Aleksandr Tumanov and Vladimir A. Tumanov
7. Measuring complexes and accounting of climatic data in the development and design of complex solar and wind power plants
Elyor Saitov