

Program

PREDMAG-2023 Conference

June 26, 2023

10.00 Opening of the conference, a. 734 IMOP

Moderator: V.V. Krasnoshchekov

Director, Prof. Viktor Vladimirovich Krasnoshchekov (Higher School of International Educational Programs of Peter the Great SPbPU, Russia)

Academician of the Russian Academy of Sciences Alexey Pavlovich Glinushkin (Department of Agricultural Sciences of the Russian Academy of Sciences)

Academician of the Republic of Uzbekistan Ramizulla Abdullayevich Muminov,

Academician of the Republic of Uzbekistan Abdugafur Teshabayevich Mamadalimov,

Prof. Anarakhon Kasymakhunova (Fergana Polytechnic Institute, Uzbekistan)

Vice-Rector, Doctor of Economics Ildor Zhakhongirjon o'g'ly Zhakhongirov (Fergana Polytechnic Institute, Uzbekistan)

Vice-Rector, Prof. Alexey Yefimovich Godenko (Volgograd State Technical University)

Prof. E.I. Terukov (A.F. Ioffe Institute of Physics and Technology)

10.40 Multidisciplinary youth section, a. 734 IMOP

Moderator: V.Yu. Rud

Prof. Vladimir Tarabanov (Peter the Great SPbPU, Russia) Technosphere safety.

Yang Renyu (China) Development of preliminary design of the energy system of the Ningdong, Ningxia thermal power plant to increase its economic efficiency

Mehrdad Jamshidian (Iran) Hybrid Automobile Sayna (view)

Patrick Sanchez (Peru) Design and manufacture of a smart electric meter

Fedaa Sakr (Syria) Investigation of hydrogen diffusion in welded joints of submerged welding process

Furkan Ceylan (Turkey) Seismic characteristics of the filling brick wall

Le Chung Hieu, N.Z. Gotman (Russian University of Transport – MIIT) Analysis of the stress-strain state of the pile-barrette base (numerical experiments)

Oula Abbas (Syria) Analysis and design of a multi-store steel industrial building

Jesus Alejandro (Bolivia) Development of a small derivational hydroelectric power plant for the production of electricity in the city of Monteagudo in Bolivia

Chen Guanyu (China) Automatic greenhouse management system based on a programmable logic controller

Hafiz Ul Asad (Pakistan) Coconut shells as a partial replacement of aggregates in concrete

Abdullah Al Mansour (Syria) Designing equipment with specified parameters using reverse engineering

Sarik Trannuworth (Cambodia) National Laboratory Building of the Ministry of Industry and Science (view)

Lionel Pavolenk (Argentina) UV Radiation Reactor

13.30 Section 1, a. 700 IMOP

Integrated energy systems: materials and technologies

Moderators: Prof. E.I. Terukov and V.Yu. Rud (A.F. Ioffe Institute of Physics and Technology, Russia)

M.Z. Schwartz, M.V. Nakhimovich, P.V. Pokrovsky, N.A. Sadchikov, D.A. Malevsky (A.F. Ioffe Institute of Physics and Technology, Russia) Hybrid concepts for high-efficiency photovoltaic modules"

V.V. Elistratov (Peter the Great SPbPU, Russia) Methodology of energy supply in the Arctic using renewable energy

N. Sultanov, Z. Mirzajonov, F. Yusupov (Fergana Polytechnic Institute) Technology of production and photoelectric characteristics of AlB10 heterojunctions based on silicon

A.M. Kasimakhunova, M.I. Latipova (Fergana Polytechnic Institute, Republic of Uzbekistan) Technology of obtaining triple alloys for thermogenerators based on bismuth and antimony tellurides by zone melting

N.F. Zikrillaev, H.F. Zikrillaev, K. Vakhobov, F.E. Urakova, M.M. Shoabdurakhimova, N. Norkulov (Tashkent State Technical University, Republic of Uzbekistan) Efficient silicon-based solar cells for solar energy

D.Y. Berezanov D.A. Malevsky, P.V. Pokrovsky, M.Z. Schwartz (A.F. Ioffe Institute of Physics and Technology, Russia) Evaluation of energy output of hybrid concentrator-planar photovoltaic modules: features and solutions for control equipment

B.B. Boynazarov, M.O. Uzbekov (Fergana Polytechnic Institute, Republic of Uzbekistan) Programs of mathematical modelling of solar air heaters and analysis of their capabilities

Sh.B. Utamuradova, O.H. Kuldashov, A.O. Komilov, N.S. Rashidova (Research Institute of Physics of Semiconductors and Microelectronics of National University of Uzbekistan) Alarm sensor for Geothermal energy facilities

Zhang Yixuan (China, Moscow Automobile and Road State Technical University, Russia) Sino-Russian Energy Cooperation and Future Development Trends

A.V. Cheremisin (Peter the Great SPbPU, Russia) Features of the photosensitivity spectra of TIR GaP structures (view)

Sabbaghan Aref (Iran) Solar panel surface heating system to melt snow (view)

13.30 United section 2, a. 734 IMOP

Ensuring technological, food and energy security in the countries of the African Union: ideas, projects, difficulties.

Technologies for increasing soil fertility and ensuring food security of the country, ecological aspects of the use of agrochemicals

Ecology of crop production and protection of crops from weeds diseases and pests

Moderators: Academician of the Russian Academy of Sciences Alexey Pavlovich Glinushkin, Director of the HS IEP SPbPU Victor Vladimirovich Krasnoshchekov and Professor Issa Togo (SPbPU)

Academician of the Russian Academy of Sciences Alexey Pavlovich Glinushkin and Dr. Soumano Lassine, Director of the Rural Polytechnic Institute for Training and Applied Research, Katibugu, Republic of Mali, Introductory speech

B.R. Asadov, E.B. Asadov (EMERCOM University, Russia) BRICS and current problems of international assistance in ensuring food security in Africa

V.Yu. Fedorovich, V.V. Naumov (V.Ya. Kikot Moscow University of the Ministry of Internal Affairs of Russia) Actual problems of criminal law environmental protection in the context of global changes

Amira Burouied (Algeria) Development of express Covid diagnostics

Eniang Eniang Nsa (Nigeria), N.B. Shakhova (National Research Tomsk Polytechnic University, Russia)
Application of the machine learning method for the detection and prediction of breast cancer

Cheng Haodong (China) Development of an intelligent agricultural system (video)

Chen Guanyu (China) Automatic greenhouse management system based on a programmable logic controller

E.V. Stepanova, D.A. Zakharov, A.P. Glinushkin (Moscow Polytechnic University, Russia) On the issue of scaling up research on the regulation of the properties of the soil-absorbing complex (type)

Abbeykuaye Ernest (Ghana), N.B. Shakhova (National Research Tomsk Polytechnic University, Russia)
The potential of an aqueous extract of the leaves of *Launaea Taraxacifolia* (Dandelion) against *Helicobacter Pylori* (Helicobacter)

Younes Kherrati (Morocco) Characterization of viscoelastic behavior of nonwoven geotextile

Agnimel Memel Alex Paul Arthur (Volgograd State Technical University, Russia) Food and Energy Security Management in West Africa

Yuan Zhenyue, V.Yu. Rud, A.V. Cheremisin, E.I. Terukov, I.N. Trapeznikova, V.I. Tseyko (A.F. Ioffe Institute of Physics and Technology, Russia) Agro bio photonics and biological potential of organisms. (view)

Ahmad Khalid (Egypt) Computer modeling how to manage hotels

Muli David Kimau (Peter the Great SPbPU, Russia) Study of changes in vegetation cover using remote sensing and mapping (in the area of the Airport J.K.I.A.)

Zebase Njapou Zhizlein Anise (Volgograd State Technical University, Russia) Investigation of graphene doping with nitrogen

Mustafokul Khasanov (Tajikistan, Moscow Automobile and Road Engineering State Technical University, Russia) Features of the design and construction of roads in mountainous areas

Academician of the Russian Academy of Sciences A.P. Glinushkin (Department of Agricultural Sciences of the Russian Academy of Sciences) Perspectives of co-operation with African Universities and Scientific Centers in the field of Agriculture (video report)

13.30 Section 3, room 316, 16 academic building

Modeling of cyberphysical systems in technological processes and industries

Moderatorss: Professor Vyacheslav Vitalievich Potekhin and Associate Professor Roman Vadimovich Davydov

Taher Salamah (Syria) Improving the efficiency of projects based on an integrated methodology between the Value Added Management System (EVMS) and Building information modeling (BIM)

June 27 2023

10.00 Multidisciplinary Section 4, room 700 IMOP

Design and calculation of material sciences and biochemical research projects

Moderator Prof. Alexey Cheremisin (Peter the Great SPbPU, Russia)

Xu Weihong (China) Image enhancement in low light

Mohammad Azez (Syria) Signal Processing using Kalman Filter

Xin Jie (China) stamping dies for magnetic poles of magnets

Yorik Andelson (Cameroon) Numerical and natural simulation of a test bench for the study of material characteristics

Zhu Siyu (China) Investigation of the time process of arc separation of the contact network positioner support structures

Ruibao (China) Calculation of shut-off valve elements (type)

Mhemid Dbes Alaa (Syria) Wind Turbine Blade Voltage Study

Liu Huanghuan (China) Software development

Youssef Abbas (Syria) Forces acting on trucks in all traffic conditions

Hu Yuchuan (China) JAVA-based library reservation system development and implementation

Starostenko D.A., Starostenko A.A., Kalashov O.E., Potekhin V.V. (Peter the Great SPbPU, Russia)
Convolutional Neural Networks Application in Acoustic Monitoring of Industrial Objects

Msokar Souhair (Peter the Great SPbPU, Russia) Studying and using non-invasive measurements for express diagnostics of human health

Mohammad Salma (Syria) Improving the Security of Android Applications Using facial recognition Technology

Zhang Liyuan (China) Automobile windshield assembly workstation Based on ABB industrial robot

Suliman Khadur (Syria) The effect of heat treatment on the stretching of polyethylene pipes (view)

Fatemeh Mohammadi (Iran) Design of an information transmission system with connection of a carrier power line

Neupokoev O.D., Cheremisin A.V. (Peter the Great SPbPU, Russia) Engineering preparation of residential development area (view)

Wang Shan (China) A study of the block chain transaction model focused on game theory (view)

Shaikhetdinov A. (Peter the Great SPbPU, Russia) Discrete wavelet transform in EEG processing

Krasnoshchekov V.V., Rud' V.Yu., Davydov V.V., Cheremisin A.V., Semenova N.V., Ignatieva D.A. (Peter the Great SPbPU, Russia) Formation of engineering research competencies of foreign pre-masters' students: the best practices

Novikova O.A., Basek D., Krasnoshchekov V.V., Krasnov A.S., Krasnov S.V., Gorbenko V.D. (Peter the Great SPbPU, Russia) Formation of sustainable development and environmental ideas among graduates of pre-master program in economics

Nedelko P.S. (Peter the Great SPbPU, Russia) Features of interaction between the Russian education system and student environmental organizations

Said Reza Aulia (Indonesia) Concept of the Virtual World of a Greedy Integrated MMORPG System with Gamification using FURPS+

Valiullin L. R., Mukhammadiyev Rish. S., Rud V.Y., Javakhia V.G., Karimullina I.G., Gumerov V.G., Mukhammadiyev Rin. S. and Baryshev M. G. Search and isolation of new strains of bacteria-antagonists of phytopathogenic fungi of the genus *Fusarium*

Valiullin L.R., Mukhammadiyev R. S., Samsonov A.I., Raginov I.S., Egorov V.I., Gibadullin A.R., Gafiyatov R. K., Grabovskiy S.A., Golokhvast K.S. Study of the biological properties of new chemical compounds of the pyrimidine series

Closing

Moderators: Prof. N. Vatin, Prof. A. Kasymakhunova