

**Reports of the anniversary XXYth International
Scientific Symposium
«Miner's Week - 2017»**

NATIONAL UNIVERSITY OF SCIENCE & TECHNOLOGY "MISIS",
MINING INSTITUTE

INSTITUTE OF COMPREHENSIVE EXPLOITATION
OF MINERAL RESOURCES, RAS

SCIENTIFIC COUNCIL FOR PROBLEMS OF MINING SCIENCES, RAS

The anniversary 25th International Scientific Symposium
«Miner's Week - 2017»

23 - 27th of January 2017

Moscow, Mining institute, NUST "MISIS"

January 24 – Plenary Session 10:00-13:00.

January 24 – Plenary meeting on scientific directions 14:00-17:00.

January 25-27 – The work of the sessions of the international scientific symposium "Miner's Week-2017", the work of the exhibition.

January 26 – The meeting of the Board of the Federal Educational and Methodical Associations in Higher Education for enlarged group of specialties and training direction 21.00. Applied Geology, Mining, Oil and Gas Engineering and Geodesy. (10:00, aud. G-216/218, Assembly Hall).

January 26 – The meeting of the Scientific Council on the use of explosions in economic purposes (10:00, aud. G-250, Meeting Hall Mining Institute).

January 27 – The meeting of the Scientific Council on Mining Sciences, RAS (10:00, aud. G-250, Meeting Hall Mining Institute).

January 24-27 – Exposition.

SCIENTIFIC DIRECTIONS OF THE SYMPOSIUM. SESSION.

1. MINING GEOLOGY. GEOMETRY OF SUBSOIL. MINE SURVEYING.

Session 1.1. Mining geology.

Session 1.2. Problems of surveying, geometry and qualimetry subsoil.

Session 1.3. Natural stone. Design. Technology.

2. GEOPHYSICS. GEODYNAMICS. THE DESTRUCTION OF ROCKS.

Session 2.1. Problems of geophysical control the state of geological environment under technogenic impacts.

Session 2.2. Modern problems of physical processes of mining.

Session 2.3. Explosive processes and technologies.

Session 2.4. Geodynamic and environmental safety while mineral resources and the earth's surface development.

3. SAFETY OF MINING INDUSTRY. AEROLOGY. GASDYNAMICS.

4. GEOTECHNOLOGY. DESIGN OF MINING SYSTEMS.

Session 4.1. Geotechnology (underground, physical-chemical). Design of mining systems.

Session 4.2. Geotechnology (opencast).

5. MINING EQUIPMENT, ELECTROTECHNICAL SYSTEM.

Session 5.1. Transport systems of mining enterprises.

Session 5.2. Mining machinery and equipment.

Session 5.3. Up-to-date technologies for mining engineering.

Session 5.4. Electrification and energy conservation in mining industry.

6. ENRICHMENT AND DEEP PROCESSING OF MINERALS.

7. ECOLOGY. RESOURCE SAVING.

Session 7.1. Mining ecology.

Session 7.2. Engineering environment protection in mining.

8. GEOINFORMATICS. AUTOMATED SYSTEMS.

Session 8.1. Automation of technological mining processes and production.

Session 8.2. Intelligent GIS management of mining.

Session 8.3. Computer-aided design in mining.

Session 8.4. Technical means for mine safety.

9. ECONOMICS AND MANAGEMENT OF MINING PRODUCTION.

Session 9.1. Finance and management of mining.

Session 9.2. Technical regulation in the field of solid mineral fuels.

Round table. Ecological problems of utilization of industrial wastes from mining and mineral processing industry.

Round table. Development cooperation: innovation, risk, effectiveness.

Round table. Prospective transport systems for mining quarries in Arctic and Northern territories of the Russian Federation.

Round table. International collaboration in mining.

Round table. Joint research projects of MISIS and the republic of Kazakhstan in mining and metallurgical industry.

Round table. Modern problems of design and construction with the development of underground space and the subsoil of large cities.

Round table. Mining industry in Russia: history and the present.

1. MINING GEOLOGY. GEOMETRY OF SUBSOIL. MINE SURVEYING.

Session 1.1. MINING GEOLOGY

Moderator: Professor A.M. GALPERIN,

Professor V.V.MOSEYKIN,

Secretary engineer E.A. SEMENOVA

V.V.MOSEYKIN, A.M. GALPERIN, V.V. CHESKIDOV, S.A.PUNEVSKIY
(Mining Institute NUST «MISiS»)

Remote automated control of sloping structures improvement in mining enterprises

S.N. ZELENCOV, Y.Y. KUTEPOV (SPMU),

E.B. BORGER (JSC «SUEK-Kuzbass»)

A study of surface failures and their formation mechanism on the undermined lands of mine named after Ruban in Kuzbass

Y.Y. KUTEPOV (SPMU), E.B. BORGER (JSC «SUEK-Kuzbass»)

Numerical modeling of the rock mass subsidence in relation to geotechnical conditions of the mine named after Ruban in Kuzbass

NANDOR TAMASKOVICS (TU Bergakademie Freiberg, Germany)

Mining Subsidence Analysis with Geotechnical Methods

Y.I. KUTEPOV, A.D. VASILIEVA (SPMU)

Geotechnical conditions of the external dumping in open pits of Kuzbass

N.A. KUTEPOVA., T.N. KOROBANOVA (SPMU)

Features of the strain development in phosphogypsum dumps of Balakovo, Saratov region

F.G. ATROSCHENKO (LTD «Geostroyproekt»)

The experience of the ecologically safe method of the water disposal of the contaminated mining water at the mining deposit by M.V.Lomonosov

N.A. KUTEPOVA, E.S. KUDASHEV, S.M. DANILOV (SPMU)

Geotechnical control during bund wall construction in gypsum dumps

V.V. CHESKIDOV (Mining Institute NUST «MISiS»)
Mining facilities operating quality criteria Justification

Y.I. KUTEPOV, M.A. IVOCHKINA (SPMU), V.E. MIRONOV (JSC «URALCHEM»),
A.V. KOVYAZIN (JSC «Aerogeodeziya»)
Slope stability management in landfills of phosphogypsum

E.V. SERGINA (Coal company «Kuzbassrazrezugol»)
**Geomechanical problems in the formation of natural-technical
systems opencast mining coal in Kuzbass**

V.V. DEREVYANKIN (JSC «Stoilensky GOK »),
BUI QUOC DUNG (Mining Institute NUST «MISiS»)
**Forecast and monitoring stability of the man-made massives with the
help of the complex probing**

A.V. KIYANETS, A.A. FILENKO (JSC «VIOGEM»),
S.A. PUNEVSKY, A.M. PETRYAKOV (Mining Institute NUST «MISiS»)
Comprehensive hidro-mechanical monitoring of dump of Mokhailovsky GOK

E. B. YANITSKIY (JSC «VIOGEM»)
**Justification of rational parameters of operational operational sampling
apatite-staffelite ores of kovdorsky deposit**

D. V. GURIEV (KuzSTU)
**Prediction of stability of dams, taking into account spatial variability of
strength properties of technogenic soils**

R. M. BAGAMAEV (Center of geological exploration and assessment of subsoil)
Geological support of mining: practice and development of theory

A.N. KOCHANOV (IPKON RAS)
Studying of structure and microcracks of rocks

Y.A. KLIMASHEVSKY (JSC «Lebedinsky GOK»)
**Condition of the mining works at the Lebedinsky GOK and the questions
of the complex geological provision**

V.M. MELNIKOV, S.V. PONOMAREV (JSC «Lebedinsky GOK»)

Practical application GEOVIA Surpac software for block modeling tasks, scheduling and design of mining operations at the fields with a complex structure of ore bodies

Y.V. KIRICHENKO, A.S. KASHIRSKIY, A.E. ADIGAMOV,
G.S. IVASHCHENKO (Mining Institute NUST «MISiS»)

Assessment of a possibility of application of a cassette trawl for large-scale approbation of deep-water fields of ferromanganese concretions.

N. A. GODOVNIKO (JSC «VIOGEM»)

The integral situation of stability of benches in all edge portion of the career in the rock mass

S.V. SERGEEV, A.V. ZINCHENKO (JSC «VIOGEM»)

Formation of loadings on tubbing in difficult engineering-geological conditions

J. M. KAZIKAEV (Mining Institute NUST «MISiS»),
S.V. SERGEEV (JSC «VIOGEM»)

On the tendency of rocks on the KMA to rock bump

M. KOZLOVA, D. RYABTSEV (MIPT Center for Engineering and Technology)

The modern approach to geometallurgical mapping of ore deposits

D.V. TAYMASOV («EuroChem - usolskiy potash plant»)

Chemical zoning of ore deposits various types of deposits of Zapolyarnoe Murmansk region

A.A. SHAMSHEV (SPMU)

Enhancement of methodology for estimate the filtration parameters of anisotropic low permeable sediments using numerical modeling

V.V. CHESKIDOV, A.V.LIPINA, D.S. KURENKOV
(Mining Institute NUST «MISiS»)

Complex monitoring tasks on modern mining enterprises

P.A. SMIRNOV, I.A. VOROTYNTSEVA (Mining Institute NUST «MISiS»)

Exploration and development engineering geological gold deposits conditions in the permafrost on the "Valunistoye" field

A.E. KOKOSADZE (SC «Institute Orgenergostroy»)
Lithosphere in the underground nuclear and hydropower

V. T. GUDZENKO, A.A. VARENICHEV, M.P. GROMOVA (VINITI)
World energy and gas hydrates

V. T. GUDZENKO, A.A. VARENICHEV, M.P. GROMOVA (VINITI)
Ecological problems of gas hydrates

V.V. CHESKIDOV, E.V. GOROBENKO, A.I. MANEVITCH,
I.A. MELNICHENKO (Mining Institute NUST «MISiS»)
**Definition of engineering-geological elements develop based on cluster
analysis method**

V.N. TATARINOV, V.I. KAFTAN (Geophysical Centre),
A.I. MANEVITCH, D.A. BOCHAROVA (Mining Institute NUST «MISiS»)
**Deformation processes industrial waste disposal sites monitored global
navigation satellite systems methods**

F.A. GOLYNSKAYA (Mining Institute NUST «MISiS»),
O.S. SMIRNOVA (MSU),
R.A. NIKONOV (Institute of Oil and Gas Problems, RAS)
**Features of the application of methods of multidimensional classification
reference points for determining the degree Self ignition brown coal deposits
as an example Kharanor**

F.A. GOLYNSKAYA (Mining Institute NUST «MISiS»),
**Influence of tectonic disturbance on spontaneous combustion of coal
seam coals**

E.A. SEMENOVA (Mining Institute NUST «MISiS»)
**The use of acoustic correlating method of the crosshole testing to estimate
the state of the dumping massives**
A. N. KOCHANOV (IPKON RAS)
Studying of structure and microcracks of rocks

E.A. PRAVDINA (SPMU)
**Problems of valuation, calculation of losses and dilution at open cast mining
research**

A.N. DRONOV, T.V. ZAITSEVA (PFUR)
**To a question of carrying out geomonitoring at underground construction of
the subway**

Session 1.2.

***PROBLEMS OF SURVEYING, GEOMETRY
AND QUALIMETRY SUBSOIL***

Moderators:

Professor G.O. ABRAMYAN,

Professor M.A. IOFIS,

secretary

Associate Professor I.I. ERILOVA

G.O. ABRAMYAN, P.V.EAKOVLEV, E.A.TUKXEL, E.N.TOLCHKOVA
(Mining Institute NUST «MISiS»)

**On the standard forms of construction of the satellite surveying support
networks**

M.A. IOFIS, E.N. ESINA (*IPKON RAS*)

**Technique classification of geomechanical maintenance of mining in difficult
conditions**

V.N. GUSEV, E.M. VOLOKHOV (SPMU)

**Problems in training mining engineers - surveyors in modern conditions
development of industry in Russia**

E.M. VOLOKHOV, stud. A.M. SHIAPOV (SPMU)

**Study of regularities of the development of displacement and deformation of
rocks during the construction of double-track tunnel in Quaternary deposits of
Saint-Petersburg on the basis of the compilation of empirical data and
mathematical modeling**

V.I. KIREYEVA (SPMU)

**Features of displacement and deformations processes during the large
diameter tunnels construction at shallow depth using active exploration
technologies**

Postgraduate stud. D.K. RAKHATKULOV, M.G. VYSTRCHIL (SPMU), D.A.
NAUMENKO (OOO ZK «Mayskoye», OAO «Polimetall»)

**The process of shooting mining on structural lines with automation graphic
construction**

Postgraduate stud. E.M. MALIUKHINA (SPMU)

**Modeling of a Water Conducting Fracture Zone Development with Allowance
for Curvature Accumulations from Layer Suite Mining**

G.O. ABRAMYAN, Postgraduate stud. D.K. KUZMIN, stud. I.K. KUZMIN (Mining Institute NUST «MISiS»), U.O. KUZMIN (IPE RAS)

The state of stress fault zones according to the geodynamic monitoring of hydrocarbon deposits

I.I. ERILOVA (Mining Institute NUST «MISiS»)

Major Trends in Innovative Blended Learning for Mining Professions Students

S.S. SAYYIDKOSIMOV, U.F. NASIROV, F.I. UMAROV (TSTU), Republic of Uzbekistan

Static methods for evaluating the stability of mine workings in the conditions of underground mining of gold deposits

S.S. SAYYIDKOSIMOV, A.N. KAZAKOV, M.R. HAKBERDIEV (TSTU), Republic of Uzbekistan

Tectonic stress fields in rock mass models under the conditions of underground mining of gold ore deposits

M.H. RAKHIMOVA, A.P. PARDABOEV (TSTU) Republic of Uzbekistan

Rational technical decision on opening the mine «Angren» on the Northern side of the section «Angren»

M.B. NURPEISSOVA (KazNRTU named after K.I. Satpaev), Republic of Kazakhstan

Laws of development of geomechanical processes in the combined method of field development

K-K.M. KASSYKANOVA, G.K. JANGULOVA, V.B. TUREKHANOVA, B.K. BEKTUR (Al-Farabi Kazakh NU), Republic of Kazakhstan

Improved method for determining the fractured portions of quarry slopes and strengthening

V.V. ODABAI-FARD (Technische Hochschule Georg Agricola), Germany, postgraduate stud. M.R. PONOMARENKO (Center of geomechanics and issues of mining industry SPMU)

Earth surface and mining industry objects geodynamic monitoring with the help of radar interferometry method

N.N. GRICHENKOV, E.V. BLINNIKOVA (RANIMI), DPR

Mine surveying protection of pipe communications on undermined territories

B.K. NOREL, V.A. AZARENKO (National Mining Research Center «A. A. Skochinsky Institute for Mining»), Y.A. BOROVKOV (NUST «MISiS»)
Invariants and Deflectors Energy Strength Criterion of Rock Mass

U.M. LEVKIN (Mining Institute NUST «MISiS»)
The use of modern surveying instruments to ensure surveying of underground space monitoring secondary operation

K.V. KHALKECHEV (Mining Institute NUST «MISiS»)
Cluster surface subsidence and rock movements model

S.S. KWIATKOWSKA, R.S. NIKITIN (The limited liability company "Gazprom UGS"), U.O. KUZMIN, E.A. FATTAHOV (IPE RAS)
The analysis of surface deformation at Stepnovsky underground gas storage methods satellite and terrestrial geodesy

E.A. FATTAHOV (IPE RAS)
Spectral-time analysis speedlinking of observations at Kamchatka and the Ashkhabad geodynamic polygon

P.S. SHPAKOV (MIVISU), Y.L. YUNAKOV (IMG&G SFU)
Resistance to dump the field «Eldorado»

U.M. IGNATOV, A.A. GAGARIN (KuzSTU)
The application of the principles of GIS modeling to create a digital survey plan of the mine workings

S.U. NIKOLASHIN (SPU of the State Fire Service of EMERCOM of Russia), Y.M. NIKOLASHIN (Academy of Mining Sciences of Ukraine), postgraduate stud. J.V. KEBAL (Kryvyi Rih NU), Ukraine
Hydrogeochemical formation conditions internal dump in the flooded quarry

O.N. KOVALEVA, V.P. SPIRIDONOV, T.A. TKACHEVA (MSTU)
New uses of surveying-geophysical instrumentation to measure the deformation of mining objects

T.A. TKACHEVA (MSTU)
On process-precision indicators of the accuracy of geophysical and surveying measurements on the mineral deposits

M.B. KUZMIN, A.G. KRASAVIN (IPKON RAS), T.Y. USOVA (Institute of Mineralogy, Geochemistry and Crystal Chemistry of Rare Elements),
L.P. RYZHOVA (Russian State Geological Prospecting University)
Managing mineral potential ore and metal deposits based on subsoil geometrisation

S.V. KARABIBER (SUEK-Kuzbass OJSC)
Development of methods for the extrapolation of topographic surfaces of the main characteristics of the raw coal circuit

O.A. VESELOVA (Branch of LLC «Gazprom UGS» «Kaliningrad UPKHG»),
postgraduate stud. D.K. KUZMIN (Mining Institute NUST «MISiS»)
The creation of a system survey ground in the Kaliningrad underground gas storage facility

N.P. SAPRONOVA (Mining Institute NUST «MISiS»)
State and prospects of the design surveying works in Micromine

N.N. GORBUNOVA, stud. Y.A. ODYAKOVA (Peoples' Friendship University of Russia)
Use of satellite geodetic systems in surveying business

Postgraduate stud. D.B. BEREGOVOI (SPMU)
Creation quarry model using unmanned aerial vehicle

Stud. G.A. PETROV, S.O. KARTUNOVA (Magnitogorsk State Technical University)
Application of geoinformation technologies in monitoring deformation of open pit mines

Session 1.3. *NATURAL STONE. DESIGN. TECHNOLOGY*

Moderator: Professor E.P. MELNIKOV,

Professor Y.A. PAVLOV

Secretary

Docent L.P. IVLEVA

Plenary scientific reports. Educational-methodical work

E.P. MELNIKOV (NUST "MISiS")

Physic-chemical parameters quartz as indicators of genesis and quality quartz raw materials

A.V. NOZHKINA (JSC "VNIIMALMAZ"), V.I. KOSTIKOV (NUST "MISiS"),
A.I. LAPTEV (Research Lab. SHM- NUST "MISiS"), I.I. VLASOV (GFI RAS),
V.B. DUDAKOV (JSC "VNIIMALMAZ")

Structural and phase transformations in natural and synthetic diamonds containing lonsdalite with thermobaric treatment

P.N. LUSKINOVICH (JSC "Nano - Atto meters ")

Metrological complex nano- and pikometrical measuring ranges electric and magnetostrictive effects in materials

E.P. MELNIKOV, I. A. NAUMENKO, L.P. IVLEVA (NUST "MISiS")

The organization of training of masters on the program "diagnostic processes, receipt and processing of jewelry and materials" at the Department "Casting technology and artistic processing of materials"

I. A. NAUMENKO (NUST "MISiS")

Simulation of functional products of industrial design in the educational program "Engineering classes" for enrollee of NUST "MISiS"

Yu. A. PAVLOV (NUST "MISiS")

The project to create a multi-purpose educational and scientific center "art processing technology materials" at the department "Casting technology and artistic processing of materials"

Mineralogy, petrography, gemology and diamond

A.V. NOZHKINA, N.V. KOBZEVA (NUST "MISiS"), A. I. LAPTEV
(JSC "VNIIMALMAZ"), I.I. VLASOV, I.N. PETROV ("VNIITF" Snezhinsk)
**Influence of nanodiamonds cleaning methods on their physical and chemical
properties**

A.V. NOZHKINA (NUST "MISiS", JSC "VNIIMALMAZ"), A.A. JAMSHHIKOV, A.A.
SEDOV (NUST "MISiS")
Thermal stability of powders from natural and synthetic diamonds

G.A. YURGENSON
(Institute of Natural Resources, Ecology and Cryology SB RAS)
Decorative-facing, semi-precious stones Transbaikalia

V.I. SLAVOV (Cherepovets State University)
Symmetry polymorphs and atoms of zirconium dioxide

S.L. ZAKHAROV, A.Yu. TELYUK
(D. Mendeleev University of Chemical Technology of Russia)
Examination of precious metal extraction processes from aqueous solutions

E.A. AKHMETSHIN
(D. Mendeleev University of Chemical Technology of Russia)
Enhancement low-quality natural turquoise

V.A. ZBOYKOV (JSC Gemstones-Market)
Gemological research when analyzing the market of jewelry and technology

E.N. BIRYUKOV ("Fianit- Inteks" company), A.I. KHOKHLOV
(JSC "Giredmet"), Ph.D. T.B. TEPLOVA
**The impact fractured the uneven surface of the layer machined plates of
brittle materials on the quality of finished products**

D.A. PETROCHENKOV (MGRI-RGGRU)
Features of development of the field of colored stones Sherlovaya Gora

A.V. KRIVONOSOV (NUST "MISiS")
Analysis of promising non-traditional materials in jewelry

Research, design and engineering

Zh. A. KAZARYAN (JSC "Petrakomplekt")
Assessment of buildings, lined with carbonate rocks, in terms of the Moscow region and the possibility of their restoration

I. A. NAUMENKO (NUST "MISiS")
Simulation of functional products of industrial design

O.M. NAUMENKO, mag. R.V. LEVCHENKO (Department of computer engineering and design-NUST "MISiS")
3d-modeling of stone products using modern software

V.B. KLYUCHIKOVA (NUST "MISiS")
Research and application of high technologies in the field of art

A.P. POLEZHAEV, V.B. KLYUCHIKOVA, L.P. IVLEVA
(Ecotech-NUST "MISA")
**Integration of scientific and educational direction
"The technology of restoration work"**

Stud. L.M. RESHETNIKOVA, I.A. NAUMENKO (NUST "MISiS")
The use of natural and synthetic minerals with optical effects in the design of jewelry art nouveau

Stud. V.A. SHMANOVA, I.A. NAUMENKO (NUST "MISiS")
Polycaprolactone in technology creation in the style of designer accessories anatomical "cosplay"

L.P. IVLEVA (NUST "MISiS")
Methods of development design projects of natural stone product in the bachelors training process

Stud. S.A. MAZANAeva, stud. V.P. PONOMAREVA, A.P. POLEZHAYEV (NUST "MISiS")
An analysis of stylistic solutions in the development of perfume accessories design

Stud. A.G. SADONINA, A.P. POLEZHAYEV (NUST "MISiS")
Research and analysis of materials for the manufacture of smoking accessories with the author's design

Stud. S.N. BELOLIPETSKIKH, stud. A.A. KONKIN,
stud. L.L. RUMYANTSEV (NUST "MISIS")
**Conceptual solutions projects jewelry and decorative art products using
authoring**

Stud. A.A. VASILYEV (-NUST "MISIS")
Combinatorial modular 3d modeling stone products

Technology and automation of artistic material processing

Zh. A. KAZARYAN (JSC "Petrakomplekt")
**Methods and examples of simulation restoration of buildings in the historic
center of Moscow with the use of modern materials and technologies**

Yu.A. PAVLOV (NUST "MISIS")
System analysis of levels of automation of the stone production

A.P. POLEZHAYEV (NUST "MISIS"), V.S. CHERNAVTSEV
(Expert Gemologist)
Art processing technology decorative varieties serpentinite

Mag. K.V. KAZMINA, E.A. AKHMETSHIN
(D. Mendeleev University of Chemical Technology of Russia)
**Optimization of the single crystal quartz grinding process using different
cutting fluids**

Stud. E.Yu. NOSOVA, Yu.A. PAVLOV (NUST "MISIS")
**Analytical study of the effectiveness of industrial robotics in the stone
processing plants**

Stud. E.A. ARSENYEVA, Yu.A. PAVLOV (NUST "MISIS")
**Analytical study and practical application of technology of cultivation of
complex multi-jet decorative and artistic articles made of various materials**

A.Yu. RAZBEGAEV (GAPOU "College of business No. 11")
Organization specific area cut diamonds on the standard «Triple Excellent»

Stud. A.G. SADONINA, stud. E.Yu. NOSOVA, stud. V.I. OSKIEV,
V.B. KLYUCHIKOVA (NUST "MISIS")
**The concept of design solutions with artistic works based on field
investigations of the given object**

2. GEOPHYSICS. GEODYNAMICS. THE DESTRUCTION OF ROCKS

Session 2.1. **PROBLEMS OF GEOPHYSICAL CONTROL THE STATE OF GEOLOGICAL ENVIRONMENT UNDER TECHNOGENIC IMPACTS**

Moderators: *Professor V.L. SHKURATNIK,
Corresponding Member RAS V.N. ZAKHAROV,
Secretary* *Associate Professor V.V. NABATOV*

V.L. SHKURATNIK, E.A. NOVIKOV (Mining Institute, NUST "MISiS")
Thermally stimulated acoustic emission of rocks as a prospective tool for geocontrol tasks solving

A.P. AVERIN, V.N. ZAKHAROV (IPKON RAS)
Analysis of three-component seismic data for localisation of sources of signal in rocks

L.A. NAZAROV, L.A. NAZAROVA, N.A. MIROSHNICHENKO, A.V. PANOV (Chinakal Institute of Mining of the Siberian Branch of the RAS), T.V. LOBANOVA (Siberian State Industrial University)
Integration of deterministic and stochastic approaches to prediction of mining-induced seismicity

O.A. HACHAY, A.Y. KHACHAY (Institute of Geophysics UB RAS)
Analysis of the rock mass seismic response on the explosions with using of methods of the theory of catastrophes

V.A. TROFIMOV, Yu.A. FILIPPOV (IPKON RAS)
Influence of «rock bridge» in the roof of excavation on the nature of loading and deformation of the pillars

L.L. FEDOROVA (MIN SB RAS)
Evaluation humidity rocks by GPR

A.A. ANTSYFEROV, A.A. GLUKHOV (RANIMI)
Using diffracted waves to predict coal seam faults

A.A. ZHUKOV («VNII Galurgii» JSC)
Estimation of ground penetrating radar application in conditions of Verkhnekamskoye salt deposit

S. PETERS (DMT-Deutsche Montan Technologie)
New results of boreholes researches by video probes

V. TOKSAROV, N. BELTYUKOV, A. UDARTSEV (GI UB RAS)
The research of in-situ stress state in rock walls of the Sarbaj pit

O.A. HACHAY, O.Yu. KHACHAY, A.Yu. KHACHAY
(Institute of Geophysics UB RAS)
Integration of acoustic, gravity and geomechanical fields in hierarchical environments

L.A.NAZAROV, L.A.NAZAROVA (Institute of Mining SB RAS, Novosibirsk, Russia), M. VANDAMME, J.-M.PEREIRA (Ecole des Ponds, Paris, France)
Inverse problems of coal-rock mass

A. Z. VARTANOV (IPKON RAS)
Inspection of pipelines and of the surrounding geological medium in dense urban areas

L.L. FEDOROVA (MIN SB RAS)
Monitoring of cryogenic processes in soils of bases roads by GPR

O.S. KRAVCHENKO (OOO "Gazprom geotexnology")
Peculiarities of acoustic emission in rock salt when deformation at elevated temperatures

S.V. PEDCHENKO, A.B. YAGMUR, A.V. ANTSIFEROV (RANIMI)
Determination of no-effect level of flooding workings with water upon the liquidation of mines in Donbass

P. RYAZANTSEV (Institute of Geology Karelian Research Center RAS)
Geophysical survey for controls of nature stone deposits

R.M. GAYSIN, A.Yu. TSARIKOV (Mining Institute, NUST "MISiS")
Determining the orientation of the broken zones in underground electrical prospecting

Gh. RAFAT (DMT)

Two modern methods of investigation of exploratory wells and drilling cores of small diameter

A.V. SIDLYAR, M.I. POTAPCHUK, A.A. TERESHKIN (MI FEB RAS)

Geomechanical argumentation of safety provisions in the field development of bursting dangerous polymetallic deposit Nikolaevskoe

L.A. NAZAROV, L.A. NAZAROVA (Institute of Mining SB RAS, Novosibirsk, Russia), M.N. PETROV (Institute of Petroleum and Gas Geophysics SB RAS, Novosibirsk, Russia)

Filtration processes and deformation of porous-fractured rock mass

S.V. PEDCHENKO, A.V. ANTSIFEROV, A.B. YAGMUR (RANIMI)

Prevention of water intrusion from drowned goaf into producing mine under preservation of mining companies in Donbass by wet method

V.A. SHEKOV (Institute of Geology KRC RAS)

Qualitative evaluation of the stress-strain state of the massif investigation on the basis of its microstructural features

V.V. EFREMOV (MIPT)

Brittle- ductile failure of rock from the fault core of Korobkovskoe deposit (Belgorod region)

M.D. MOLEV (ISOP (branch) DGTU)

Forecasting the state of geological environment under the influence of the technological processes, liquidation of coal mines

R.M. GAYSIN (Mining Institute, NUST "MISiS")

Isolation of anomalous zones in underground electrical prospecting method of analytic continuation

V.V. NABATOV (Mining Institute, NUST "MISiS")

GPR-data processing for beyond lining voids detection

A.S. Voznesenskiy, Ya.O. KUTKIN, M.N. KRASILOV, V.V. KORYAKIN (Mining Institute, NUST "MISiS")

Assessment of the roof and the anchoring bolts in a gypsum mine with the NDT-device "Anker-Test"

R.M. GAYSIN (Mining Institute, NUST "MISiS")

Assessing the impact of disturbance zone provisions to the magnitude of anomalous signal in an underground electrical prospecting

V. ASANOV, A. UDARTSEV, I. PANKOV (GI UB RAS)

The experimental research of rock creeping by various temperature sampled from salt-marl strata of Verhnekamskoe potash deposit

V.V. ADUSHKIN, G.G. KOCHARYAN, S.B. KISHKINA (IDG RAS)

A new approach to monitoring of triggered earthquakes

E.E. DAMASKINSKAYA, D.I. FROLOV (Ioffe Institute), D.R. GAFUROVA,
D.V. KOROST (Lomonosov Moscow State University), Ya.O. KUTKIN, M.N.
KRASILOV (Mining Institute, NUST "MISiS")

Formation and evolution of macrodiscontinuity in deformed granite specimen: acoustic emission and X-ray tomography

O.S. PARSHAKOV (GI UB RAS)

Processing and interpretation of the results of well thermal measurements during ice wall formation

R.S. SHEMETOV, O.N. MALINNIKOVA, YU.A. FILIPPOV (IPKON RAS)

Justification of the location choice of structures and rock massive deformations geomonitoring observation station

M.N. KRASILOV (Mining Institute, NUST "MISiS")

Determination of the quality factor of rock in the mine by seismic method to assess their strength

A.V. GLADYR (MI FEB RAS)

Integration system of microseismic and geoacoustic data of geomechanical monitoring

V. ASANOV, A. EVSEEV (GI UB RAS)

The instrumental control of deformation elements of mining method in potash mines

DMITRY MOROZOV, IVAN A. SHIBAEV (Mining Institute, NUST "MISiS")

Measurement of local elastic moduli of marbles and pyroxenite

A.A. KORMNOV (Mining Institute, NUST "MISiS")

Physical basis of ultrasonic correlation method of geocontrol

E.V. KOLESOV (GI UB RAS)

Investigation of technological factors influencing on the ice wall formation and its conditions

Session 2.2.

**MODERN PROBLEMS OF PHYSICAL
PROCESSES OF MINING**

Moderators:

*Professor V.A.VINNIKOV,
Professor S.D.VICTOROV,*

Secretary

Associate Professor I.M.SHVEDOV

S.D.VICTOROV, V.M. ZAKALINSKY (IPKON RAS)

Large-scale blasting in the rock mass at the combined way coal mining

V.A.VINNIKOV (Mining Institute NUST "MISiS"), V.N.ZAKHAROV,
O.N. MALINNIKOVA, (IPKON RAS), E.B.CHEREPETSKAYA
(Mining Institute NUST "MISiS")

**Investigation of the structure and the elastic properties of samples
of geomaterials using the contact broadband ultrasonic structuroscopy**

G.G. KARKASHADZE (Mining Institute NUST "MISiS"),
E.V.MAZANIK, A.V. PONIZOV (JSC "SUEK-Kuzbass")

**Process modeling of hydraulic treatment and degassing of outburst-
hazardous coal seams with pillar system development with high performance
coal mining**

S.A. GONCHAROV (Mining Institute NUST "MISiS"),

**What should know and be able mining engineer, specialty "Physical processes
of mining production"**

N. G. CHERNYKH (SC "Gidrouglestroy")

**About the identity of the Genesis of hydrocarbons and ore bodies within the
Earth and ways of their delivery to the lithosphere (on the surface)**

A.N. KOCHUROV, V.V. SENKUS (LLC "Sibniigleobogaschenie"),
S.G. FOMICHEV (KemSU)

Study of hydraulic fracture of coal seams with layered structure

E.B. SHEVKUN, A.V. LESCHINSKY (PNU), J.A. LYSAK, A.J. PLOTNIKOV (Open
Company "AVT-Amur")

**Features of explosive loosening of rocky breeds at the increased intervals of
delay**

A.E. FRANTOV, A.S.PUGACH, I.E.KIM, A.E. DIDYUR (IPKON RAS)
Prospects for the use in the real sector of innovative technologies of rock mass destruction during the development of formation of mineral deposits

M. V. KHLOPTSOVA (LLC «GAZPROM GEOTECHNOLOGY)
The main tasks of geological and geomechanical modelling in the creation and operation of underground gas storages

K.V. KHALKECHEV (Mining Institute NUST “MISiS”)
Mathematical modeling of resonant destruction of nonuniform rocks

V.A. ISAEV, p. g. A.K. BATSALAI (Mining Institute NUST “MISiS”)
Analysis of the technological problems of deep cleaning of quartz and solutions

A. N. KOCHANOV (IPKON RAS)
Research of structural and physical properties of rocks in relation to explosive destruction

I.V. KOLYKHALOV (IM SB RAS)
Multiple rock fracturing by plastic material

D. MAKHMUDOV, B. BAYMIRZAEV (TSTU, TASHKENT)
Analysis of management methods the crushing of rocks by explosion of borehole charges in quarries

p. g. R. Y. MINGAZOV (IPKON RAS)
The methodology of reducing the seismic impact of mass blasting with the combined development of coal deposits

V. O. SOLOV'EV, G. V. MOSKVITIN, M. S. KELNER, M. S. PUGACHEV,
A. F. MELSHANOV (IMASH RAS)
The efficiency of the explosive charge, depending on the physical and mechanical properties of the material of its case

p. g. R. V. EMELJANOV (MGRI-RSGPU)
Study the influence of the shape of the mounting in the borehole with NDM (non-explosive destructive mixture) for redistribution on the perimeter

A.Y. ERMAKOV, A. V. VOLBERG (LLC "Sibniugleobogaschenie")
**Development of a method and a device for determining the constant of rate
of the of low temperature coal oxidation**

A. E. KOSHELEV, R. A. STAROSTIN (LLC «GAZPROM
GEOTECHNOLOGY»)
Modern methods determining the rate of dissolution of salt rocks

V. P. MALYUKOV (PFUR)
**The influence of the insoluble impurities in the process of building a horizontal
underground opening-capacity in rock salt**

p. g. V. A. AGEENKO, M. N. TAVOSTIN (Mining Institute NUST "MISiS")
**Experimental determination of physico-mechanical properties of frozen soils
under conditions of triaxle compression**

A. V. VORONOVA (LLC «GAZPROM GEOTECHNOLOGY»)
**Technical stability assessment of the underground reservoirs in permafrost
soils**

p. g. M. E. MEL'NICKAYA (St. Petersburg Mining University)
Physical modeling of geomechanical processes in the caving of cover

A. E. KOSHELEV, Y. V. OSIPOV (LLC «GAZPROM GEOTECHNOLOGY»)
Modern methods determination of the deformation properties of rocks

S. SAYYIDKOSIMOV, U. NASIROV, F. UMAROV (TSTU, TASHKENT)
**Evaluation of the dynamic characteristics of the sides of deep open pits under
tectonic influences**

p. g. N. Y. MELNIKOV (St. Petersburg Mining University)
**Investigation of quarry's slope stability based on physical modeling of
materials equivalent**

G.G KARKASHADZE, p. g. A.V. BABICH (Mining Institute NUST "MISiS")
**The possibilities of geomechanical unloading of the coal seam with the help
of wells drilled into the roof and the ground**

K.V. KHALKECHEV, R.K. KHALKECHEV, (Mining Institute NUST "MISiS")
**About widespread mathematical and experimental mistakes in geomechanics
and methods of their correction**

L. S. KUZYAEV, A. S. PUGACH (Mining Institute NUST "MISiS")
**The methods of computer prognosis of safe work off coal reserves at levels
of Vorkut's mines**

A.N. KOCHUROV (LLC "Sibniugleobogaschenie")
**Method of calculation of average volume of fall in the working entry at
hydraulic coal mining of layered structure seams**

A. V. VOLBERG, A.Y. ERMAKOV (LLC "Sibniugleobogaschenie")
**Physical and chemical justification for determining the constant of rate of the
of low temperature coal oxidation**

A.S. MALOLETNEV, K.I. NAUMOV (Mining Institute NUST "MISiS")
Obtaining mineral wax from bituminous brown coals

N. G. CHERNYKH (SC "Gidrouglestroy")
**The theory of deep abiogenic planetary formation of oil and gas from
seawater**

S. M. NIKITIN, (Laboratory of mechanics of rocks and ores), A.Ya. SKRIPNIK
(GEOKHI RAS), I.L. PANYKOV, I.A. MOROSOW (MIURB RAS)
**Some features of destruction of ordinary chondrites according to
petrophysical data**

Z. NOVRUZOV (IGG of National Academy of Science of Azerbaijan)
**Geodynamic features of the territory Azerbaijan according to paleomagnetic
data**

Stud. N. A. MOROZOV, I. A. PAVLOV (Mining Institute NUST "MISiS")
**Determination of the strength characteristics of sandstone Pavlovsk deposit
(N. Zemlya)**

Y. D. NOROV (Navoi State Mining Institute, Uzbekistan)
**Improving the efficiency of the process of underground leaching of uranium
physical impact**

Y. I. STAROVOYTOVA, V. P. MALYUKOV (PFUR)
**Improving the technology removal of rock particles limits the development of
hydrocarbon fields**

V. O. SOLOV'EV (IMASH RAN), I.M. SHVEDOV (Mining Institute NUST "MISiS")
New principles of explosive destruction of oversized

G.A. YANCHENKO (Mining Institute NUST "MISiS")
**Engineering method of calculation of conditional specific enthalpy by Ramzin
L. K. in the processes of drying rocks and products of their enrichment and
reprocessing**

D. V. KHLOPTSOV (LLC «GAZPROM GEOTECHNOLOGY)
**Stability of the hydrocarbons underground storages' uncased wells with
different trajectories**

N. M. OVCHINNIKOV, M. S. KELNER, A. A. ELISEEV (IMASH RAS)
Application of inertial penetration for destruction of rocks

V. M. SERYAKOV (IGD SO RAN)
**Method to Compute the Stress-Strain State in Rock Mass and Lining in
Heading Advance**

V. Y. MIRENKOV, A. A. KRASNOVSKIY (IGD SO RAN)
Stress state and failure of inclosing Rock Mass around an Excavation

I.M. SHVEDOV (Mining Institute NUST "MISiS")
Structural changes in minerals and rocks at microwave exposure

A.V. PLOTNIKOVA, V.S. KATASONOVA (NP CIGT)
**The use of magnetic-pulse treatment of carbon-containing minerals to ensure
the selective destruction in their crushing**

P.P. ANANIEV, A.V. PLOTNIKOVA, R.V. MESHCHERYAKOV,
K.O. BELYAKOV (NP CIGT)
**Problems of physical processes of space exploration of mineral resources
base**

A.F.MUKHAMEDGALIEVA, A.M.BONDAR, I.M. SHVEDOV (Mining Institute NUST
"MISiS"), M.A. KONONOV (Prokhorov GPI), V.B. LAPTEV,
N.N. NOVIKOVA (IS RAS)
**The study of features of structural changes on the surface of crystal and
amorphous quartz with different modes of action of pulsed CO₂ laser**

Stud. M. I. ZAKHAROVA (Mining Institute NUST "MISiS")
**Calculation of the safety distance between the tunnels based on the principle
of superposition geomechanical**

V. O. SOLOV'EV, V.V. LAVROV, A. A. ELISEEV (IMASH RAS)
**The influence of the front of electric discharge on the efficiency of initiation
of PETN**

A.V. IVANOV (FEFU)
New energy saving method of disintegration of mineral complexes

D.A. POPOV (Mining Institute NUST "MISiS")
**Explosives valuation techniques by a factor of dust suppression efficiency in
the explosions in the quarries**

Session 2.3.

EXPLOSIVE PROCESSES AND TECHNOLOGIES

Head:

Professor V.A. BELIN,

Dr. Sci. (Engineering) N.N. KAZAKOV,

Scientific Secretary

Dr. Sci. (Engineering) B.V. EKVIST

V.A.BELIN (GI NUST "MISA"), E.O. Astakhov (NOIV), M.G. GORBONOS
(GI NUST "MISA")

Influence of initiation on the efficacy and safety of blasting operations

N.N.KAZAKOV, A.V.SHLYAPIN (IPKON RAS)

Achievements and challenges of explosive works in mines

B.V.EKVIST (GI NUST "MISA")

Optimization of blasting in the destruction of non-uniform arrays

S.D.VIKTOROV, V.M.ZAKALINSKY, A.E.FRANTOV, A.E.DIDYURA (IPKON RAS)

On the issue of blasting at high temperatures of the rock mass in deep horizons

V.A.KUZNETSOV (GI NUST "MISA"), V.V. JULIKOV (NTF «VZRIVTEKNOLOGYA»)

Experimental studying the zones of the blasting disturbance in Limestones

M.I.GANOPOLSKIY, V.L.BARON (OOO «CPESSL BVR»)

Drilling and blasting operations during disassembly of buildings Central concentrating factory «Gornjackaja» JSC «Rostovugol»

I.V.BRIGADIN (PROMSTROYVZRYV LTD)

A regularity of index change in particle velocity amplitude damping at underground explosions in solid rocks

I.V.BRIGADIN (PROMSTROYVZRYV LTD)

Perfection of technology using gel high explosives (HE) for solid rocks destruction

S.A. KRASNOV (PROMSTROYVZRYV LTD)

A regularity of ground surface vertical movement at underground explosions in sand

A.N.KOCHANOV (IPKON RAS)

Dynamics of explosive destruction of rocks and some practical applications

A.A.DOBRYNIN, I.A. DOBRYNIN (OOO "PIROVZRYV")

Safe way to destroy explosives

R.S. BABKIN (Saint-Petersburg Mining University)

Influence of the initiation and downhole slowing the formation of fine dust

A.V.BIRYKOV, J.A.LYSAK, A.J.PLOTNIKOV, E.B.SHEVKUN, A.V.LESCHINSKY
(Pacific National University (PNU))

Increase of seismic safety at explosive works.

A.V. DUGARTSYRENOV (Mining Institute, NUST "MISIS"), B.N. ZAROVNYAEV,
G.V. SHUBIN, S.P. NIKOLAEV (North-Eastern Federal University (Yakutsk,
Russia))

Explosive destruction of complex freezing-mated arrays with different durability layers

F.I. GALUSHKO, I.A. DOBRYNIN (MINERAL AND CHEMICAL COMPANY
«EuroChem», «EuroChem»)

New porous ammonium nitrate of EuroChem company

S.S. ZAIROV (Navoi State Mining Institute)

Investigation of regularity formation of collapse and defining optimal parameters of retaining wall during mass explosion in open pits

S.S. ZAIROV (Navoi State Mining Institute)

Development of effective parameters and constructions of downhole charges of explosives at open-pits Kyzylkum region

N.A. LEONENKO (Mining Institute of the Far Eastern Branch of Russian Academy of Sciences)

The techniques of optimization of drilling and blasting on the gold ore field Albazino

N.A. LEONENKO (Mining Institute of the Far Eastern Branch of Russian Academy of Sciences)

Assessment of the current state of the study and use of the laser radiation in the processing of minerals

I.T. MISLIBAEV (Navoi State Mining Institute)

To study the changes of the sizes of the zones of weakening of strength of rocks depending on the design of the stemming of borehole charges of explosives.

D.I. MIKHEEV (Dmitry Mendeleev University of Chemical Technology of Russia)

Development of water gel explosives with lowered ecotoxicity containing propellants

V.E. ANNIKOV (Dmitry Mendeleev University of Chemical Technology of Russia)

Development of water gel explosives with lowered ecotoxicity containing propellants

V.A.KUZNETSOV, R.L.KOROTKOV (Mining Institute, NUST "MISiS")
Analysis of Boresky's formula with affinity method

A.V. MYSIN (Saint-Petersburg Mining University)

Computer simulation of the action of the downhole explosive charge

G.S. NUTFULLOYEV, Z.S. NAZAROV (Navoi State Mining Institute)
Theoretical studies on the action of cropped borehole charges of explosives with a cumulative effect in the rocks

Y.D. NOROY, G.S. NUTFULLOYEV (Navoi State Mining Institute)

Development of innovative technologies of drilling and blasting to improve the efficiency of conducting surface and underground mining

R.S.SABIROV (MI FEB RAS)

The techniques of optimization of drilling and blasting on the gold ore field Albazino

A.V.DUGARSURENOV (Mining Institute, NUST "MISiS")

Analysis of the effectiveness of the explosive destruction of complex arrays of rocks

P.S. SIMONOV (Nosov Magnitogorsk State Technical University)

Determination of the size of the middle piece and the output of the gauge during blasting in quarries

E.B.SHEVKUN, A.V.LESCHINSKY , J.A.LYSAK, A.J.PLOTNIKOV (Pacific National University (PNU)

Features of explosive loosening of rocky breeds at the increased intervals of delay

A.V.BIRYKOV, J.A.LYSAK, A.J.PLOTNIKOV, E.B.SHEVKUN, A.V.LESCHINSKY
(Pacific National University (PNU)

Consecutive delay of explosions of charges in chinks as the management factor mass explosion

A.B.TUHTASHEV (Navoi State Mining Institute)

Development of technology for the detuning of pit complex deposits of ores of nonferrous and rare metals.

A.B.TUHTASHEV (Navoi State Mining Institute)

The analysis of theoretical studies and operation of the quarry to establish the parameters of pit.

Session 2.4.

***GEODYNAMIC AND ENVIRONMENTAL SAFETY
WHILE MINERAL RESOURCES AND THE
EARTH'S SURFACE DEVELOPMENT***

Moderators:

*Professor A.S. BATUGIN,
Dr. Sci. (Engineering) V.N. ODINTSEV,*

Secretary

Cand. Sci. (Engineering) E.V. KHOTCHENKOV

A.S.BATUGIN, (Mining Institute NUST "MISIS"),
YU LIJIANG (China University of Geosciences, Beijing, China)

On the relationship of the geodynamical and geocological processes during coal mining in Huafeng, China

V.N.ODINTSEV (IPKON RAS)

Hydrogeomechanical aspects of safety and ecology of underground mining

V.N. MOROZOV, A.I. MANEVITCH, V.N. TATARINOV
(Geophysical Center RAS)

Modelling of the stress-strain state and geodynamic zoning in seismically active areas

ZHANG HONGWEI, LAN TIANWEI, LI SHENG (LITU, China) LIU ZHUN (Coal Company "IMA")

The using and development of the method of geodynamic zoning for forecast of geodynamic hazard in coal mines in China

ZHANG HONGWEI, LAN TIANWEI, LI SHENG (LITU, China)

Investigation of the influence of a complex geological structure on the manifestation of rock bursts in a coal mine Daanshan

A.K. KIRILLOV, T.A. VASILENKO (Saint-Petersburg Mining University, SPMU)
Ecological factors of electromagnetic nature that trigger outburst hazard of coal and methane

M.A. KUZNETSOV, R.N. DOSTOVALOV, I.YU. ROZANOV
(MI KSC RAS)

Experience of using space geodesy techniques for geomechanical monitoring of rock mass in open pit mining

I.E. SEMENOVA, I.A. AVETISIAN (MI KSC RAS)

Geomechanical justification for extracting reserves at the deep mines of the Kukisvumchorr deposit

A.N. KOCHANOV (IPKON RAS)

Some of the prerequisites of the possibility of forecasting rock bursts in the emission of submicron particles

M.B. NURPEISSOVA (Kazakh national research technical university(KazNRTU) named after K.I. Satpaev)

Innovative methods and means geomonitoring - effective development direction of security subsurface

A.V. SHADRIN (Federal Research Centre of Coal and Coal Chemistry of Siberian Branch of the Russian Academy of Sciences)

The influence of simplification techniques of the current forecast of outburst of coal seams on the accuracy of the forecast

A.G. CHERNIKOV, E.V. FEDOROV, N.V. LIBINA (Institute of Comprehensive Exploitation of Mineral Resources Russian Academy of Sciences)

Prospects of the use of Markov tomography in the study of the structure, properties and status of underground space of cities and industrial agglomerations

E.M. GORBUNOVA (IDG RAS)

Geodynamic setting areas of large-scale experiments

S.I. SERGEEV (Institute for Dynamics of Geospheres of the Russian Academy of Sciences IDG RAS)

Early detection of seismic activity in mining facilities areas with small aperture seismic arrays

A.A. KOZYREV, YU.V. FEDOTOVA (MI KSC RAS)

Influence of water inflow in geomechanics state hard rock mass

A.V. MOKHOV (IAZ RAS)

About influence of the fortress of rocks on the earth surface subsidence in the areas of coal deposits developed by underground methods

A.A.GAGARIN ("SUEK Kuzbass"), YU.M.IGNATOV (KuzGTU)
Ways of using digital forecast plans of geomechanical properties of the rock mass

S.V. KARABIBER ("SUEK-Kuzbass»)
Geometrization of geological indicators based of mining data

O.N. ARTEMOVA ("SUEK-Kuzbass"), A.I. EKIMOV ("SibNIIUgleobogaschenie")
Geological and geodynamical analysis of mine fields in Kuzbass

M.M. KORSUN (MI NUST "MISiS")
Impulse geodynamic processes and safety during of mining operations

A.V. LIMANSKY (SD "GURSH")
Using of GPR remote sensing techniques to monitor the negative effects of mining

V.S. PONOMAREV (SD "GURSH")
The comprehensive method for studying and monitoring of temperature state of coal rock dumps

I.V. GOLOVKO (MI NUST "MISiS")
Consideration of geodynamic factors in the functional zoning of the residential areas in the mining areas

V.R. MUSINA (MI NUST MISiS)
The analysis of geodynamic conditions of areas with location of coal rock dumps

A.A. KOVALENKO, V.V. LOBANOV, A.S. STRUCHKOVA,
A.Yu. KOREPANOV (Yakutian Diamond Industry Research and Design Institute of ALROSA PJSC "Yakutniproalmaz" Institute)
Addressing a Problem of Stabilizing the Composition of Salt Brines Drainage of the Udachnaya Diamond Pipe Deposit Containing Economic Concentration of Lithium and Other Valuable Components, for Ensuring the Economic Effectiveness of the Recovery of Said Components

V.V. LOBANOV, A.YU. KOREPANOV, A.S. STRUCHKOVA (Yakutian Diamond Industry Research and Design Institute of ALROSA PJSC “Yakutniproalmaz” Institute)

Justification for Increase of Volumetric Capacity of the Left-Bank Site for Pumping Down the Udachnaya Mine Salt Brines, Based on the Results of its First Phase Development

V.V. LOBANOV, A.YU. KOREPANOV, A.S. STRUCHKOVA (Yakutian Diamond Industry Research and Design Institute of ALROSA PJSC “Yakutniproalmaz” Institute)

Tentative Solutions for the Problems of Commissioning of the South Site for Pumping Down the Mir Mine Salt Brines Drainage

D.V. SERBIN (SPMU)

Providing environmentally safe penetration the subglacial lake Vostok in Antarctica

N.M. BULAEVA, A.V. ALIYEVA

Monitoring of the processes associated with the liquidation of mine shafts in mining area of the Leningrad region

N.M. BULAEVA, A.S. GADZHIHANOV

Development and construction of cartographic module mouths coal mines of East Donbass basin

YU.M. IGNATOV(KuzGTU)

Construction of cybernetic forecast models of mining conditions

A. ERMOLAEVA (MI NUST MISiS)

Rock bursts during construction of tunnels

O.G. ZHURAVLEVA, I.M. AVETISIAN, A.V. Zemtsovskiy (MI KSC RAS)

Complexing of seismic data and rock mass stress-strain state numerical modeling results in rock burst hazardous conditions

3. SAFETY OF MINING INDUSTRY. AEROLOGY. GASDYNAMICS

Moderators: Professor K.S.KOLIKOV,
Professor N.O. KALIEDINA,
Dr. Sci. (Engineering) V.A. BOBIN,
Secretary-Professor M. V. PAVLENKO

E. P. UTIAEV, E. V. MAZANIK, A. P. SADOV
("SUEK-Kuzbass")

Preparation of degassing of coal seams in the mines of "SUEK-Kuzbass"

V. V. KUDRYASHOV, A. S. KOBYLKIN (IPKON RAS)
The movement of particles in a turbulent flow mining

I. E. KOLESNICHENKO (URGPU (NPI)), ARTEMIEV B. V. ("SUEK"),
E. A. KOLESNICHENKO (URGPU (NPI)), V. G. CHERECHUKIN (VGSCHEM
EMERCOM of Russia), E. I. LUBIMENKO (URGPU (NPI))
Theory of combustion and explosion of coal dust

L. A. SHEVCHENKO (KuzSTU)
**Topical issues of aerological safety of extraction mine areas with intensive
mining of coal seams of Kuzbass**

E. V. ULYANOVA, O. N. MALINNIKOVA, M. O. DOLGOV,
I. V. ZVEREV (IPKON RAS)
**Changes in microstructure of fossil coals as a result of sudden emissions of
coal and gas**

E. V. ULYANOVA, O. N. MALINNIKOVA, M. O. DOLGOV,
I. V. ZVEREV (IPKON RAS)
**The connection of structure and mineral inclusions of fossil coal with his
vibroseparator**

V. D. NOSENKO (GShPO)
**A methane explosion in the mine "North" in February 2016
could not be**

T. A. VASILENKO (SPGI), A. K. KIRILLOV, A. N. MOLCHANOV
(IFGP of NAS of Ukraine)
**The volume and content of sorbed methane in fossil coals according to NMR
research**

G. G. KARKASHADZE, V. A. MAKAROV
(Mining Institute NUST "MISIS"), A. M.-B. HOUTEN ("SUEK-Kuzbass")
**Opportunities coal seam degasification by use of directional wells in the roof
of the coal seam**

G. G. KARKASHADZE (Mining Institute NUST "MISIS"),
S. G. NIKITIN (Rostekhnadzor)
**Modeling of hydraulic treatment of a coal seam through wells with the
purpose of increase of efficiency of degasification**

P. G. AGEEV, A. S. DESYATKIN ("Georezonans")
**Natural trigger mechanism of gas-dynamic events that trigger sudden
emissions during mining operations the mining method. The solutions to the
problem**

A. S. DESYATKIN, P. G. AGEEV ("Georezonans"), S. N. SHIRYAEV,
M. I. LEBEDEV ("Raspadskaya Coal Company")
**The results of the degassing with the use of plasma-pulse impact on the sh.
Erunakovskaja-VIII**

V. A. ZAYTSEV (MSU I. M. Lomonosov), A. S. DESYATKIN, P. G. AGEEV
(OOO "Georezonans"), S. N. SHIRYAEV, I. M. LEBEDEV
(OOO "Raspadskaya Coal Company")
**Three-dimensional geological and hydrodynamic modeling of plasma-pulse
action on coal layers (near sh. Erunakovskaja-VIII)**

B. S. MASTRYUKOV, A. V. SERJANIA
(EcoTech NUST "MISIS")
The influence of wind velocity on the effects of pool fire

E. FILIN, A. L. KOLESNIKOVA
(EcoTech NUST "MISIS")
Problems of psychological stability in relation to labor protection

V. S. LEBEDEV (MGRI-RGGRU), O. V. SKOPINTSEVA
(Mining Institute NUST "MISIS")
**Residual hydrocarbons coal dust as a factor that increases the fire and
explosion hazard in coal mines**

T. V. MIKHINA (PFUR)
The state of occupational injuries in the mining industry

M. K. IMAGESIN (AU them.With.Baisheva)
**The methodology for forecasting and risk assessment in enterprises
"TNK "Kazchrome"**

A.V. ZAITSEV (GI UB RAS)
**Development of resource-saving systems of normalization of microclimatic
conditions in mine workings of deep mines**

O. I. DUDAR (PNRPU)
**Use the package "MineClimate" to justify the effectiveness of local cooling in
deep mine**

V. M. HUBIEVA (NUST "MISIS")
Industrial safety and labor protection in the diamond industry

A. V. NIKOLAEV (PNRPU)
**Effective methods and systems for improving energy efficiency and ensuring
resource conservation in the preparation of the mine air**

N. TRUSHKOVA (GI UB RAS)
Application of partial reuse of air on the copper-Nickel mines

Y. A. KLYUKIN (GI UB RAS)
The study of heat and mass transfer processes in mines oil mines

G. G. KARKASHADZE, A. V. BABICH (Mining Institute NUST "MISIS")
**Study of the geomechanical process of unloading rockburst-hazardous coal
seam through wells sent to slaughter is not functioning**

V. P. DENISENKO (DonSTU, Donetsk, Ukraine)
**Some of the questions the possibility of removing restrictions
the load on the mining face by gas factor**

A. V. SHESTOPALOV (IPKON RAS)
Excavation at greater depths is the reactor of the cold nuclear synthesis

E. V. MAZANIK, E. M. MOGILEV ("SUEK-Kuzbass"),
K. S. KOLIKOV (Mining Institute NUST "MISIS")
The problem of utilization of degassing methane

P. V. PASHCHENKOV (Mining Institute NUST "MISIS")
Influence of the Langmuir sorption parameters on the volume of gas stope

V. V. YAROSHENKO (St. Petersburg State University)
Assessment of the impact of the collapse of the main roof on the aerodynamic processes at the excavation sites through the formation of "Triple" Vorkuta Deposit

V. P. MALYUKOV (PFUR)
The construction of underground tunnels-capacity in stone salt with high gas content

V. P. MALYUKOV, A. S., STOROZHEVA (PFUR)
Technology features thermo-gas effects on oil of the Bazhenov formation

E. A. EGOROVA, K. S. KOLIKOV, A. I. MANEVICH
(Mining Institute NUST "MISIS")
On the applicability of the methods of statistical data analysis of gazoobilnosti

G. G. KARKASHADZE, A. I. MANEVICH, E. A. EGOROVA
(Mining Institute NUST "MISIS")
Evaluation of the effect of the angle of incidence of the coal seam on the geomechanical state of coal-rock mass in mining

A.M. MERKULOVA, E. Y. MIKHAILOV (EcoTech NUST "MISIS")
The impact of career "Itaуз" North-Zhezkazgan mine of a branch of LLP "Kazakhmys Corporation" on the environment

A.E. FILIN, A. K. TOLESH, A. DANILOV (EcoTech NUST "MISIS")
New in the Russian legislation. Labor relations (legal status of the worker, labour and social law)

A.E. FILIN, A. K. TOLESH, A. SEMENIKHINA (EcoTech NUST "MISIS")
About learning models in the field of labor protection

S. V. BALOVTSSEV, N.N. MONASTYREV (NUST "MISIS")
Risk management in construction of underground structures and mining enterprises in the economic crisis

E. V. NAKARIAKOV (GI UB RAS)

The resiliency parallel to the axial fans installed in the system of automatic control of ventilation

M. V. PAVLENKO (Mining Institute NUST "MISIS"), M. P. KHAIDINA
(Gubkin Russian state University of oil and gas (national research University
named after I. M. Gubkin)

**The effect of oscillation frequency when working coal miner for the coal
metanotum array**

M. V. PAVLENKO (Mining Institute NUST "MISIS")

**Method for the separation of natural frequencies of a coal seam and the
effective frequency ranges of vibration exposure, and the existence of natural
frequencies of coal blocks Plast**

M. A. SEMIN (GI UB RAS)

**Improvement of methods of calculation of the required quantity of air for
ventilation of mine workings in copper-Nickel mines**

L. A. KIYANITSA (IGD SB RAS)

**To the question of the definition of analytical dependences of the heat flux
into the soil from underground structures of stations closed type shallow
metro tunnel with double track**

A. P. PONIZOV (mine THEM. S. M. Kirov, "SUEK-Kuzbass"),

V. I. GAVRILOV, Yu. A. SEMYKIN (Odium "SUEK-Kuzbass")

**Prospects of application and efficiency of underground fracturing on mine. S.
M. Kirov**

V. N. KOROLEVA (IMTS NUST "MISIS"), A. A. ZAKHAROVA

(Mining Institute NUST MISIS")

**Improvement of the physico-chemical effects on the coal seam "Boldyrevsky"
mine them. S. M. Kirov to ensure safe testing**

A. I. POŁCZYN (UD "ArcelorMittal Temirtau", Kazakhstan),

B. R. KHUSNUTDINOV (Mining Institute NUST "MISIS")

**Analysis and prospects of application works for gas-drainage mine workings
in the mines of Karaganda basin**

P. V. DOLGOV (KazNAU them. K. I. Satpaev, Republic Of Kazakhstan),
Yu. Yu. STEFLYUK (UD "ArcelorMittal Temirtau", Kazakhstan), S. V.
SLASTUNOV (Mining Institute NUST "MISIS")

**The analysis of the experience of work intensification in degassing coal mines
of Karaganda basin**

E. L. ALFEROVA, I. V. LUGIN (IGD SB RAS)

**Determination of the desired air balance in the warm period of the year for
metro tunnels**

E. L. ALFEROVA, I. V. LUGIN (IGD SB RAS)

**The question of creating and maintaining the required parameters of internal
air in the tunnels of the underground in the warm season**

A.A. LAPSHIN, V. I. LYASHENKO (SE "Ukrnipromtehnologii", Ukraine)

Improving the efficiency of ventilation of underground mines deep ore mines

E. P. ABROSIMOVA, N. I. ANDREEV (NEFU)

Working conditions – the truth is in the details

I. V. LUGIN, and A. M. KRASYUK (IGD SB RAS), O. A. KULIKOVA (NSTU)

**On the application of turbojet engine to provide the thermal regime of the
railway tunnels in harsh climatic conditions**

S. A. PAVLOV (Institute of mining SB RAS)

**The effect of the piston action of trains on the thermal regime dead-end
subway stations in the cold season**

A. M. ALEKSEEV, L. V. PETROVA, A. I. SIVTSEV

(North-Eastern Federal University. M. K. Ammosova)

**Analysis of the state of working conditions in the mining complex of the
Republic of Sakha (Yakutia)**

G. A. POZDNYAKOV ("NNTS GP – IGD im. A. A. Skochinskogo")

Problems of dust explosion safety of mining

4. GEOTECHNOLOGY. DESIGN OF MINING SYSTEMS.

**Session 4.1. GEOTECHNOLOGY (UNDERGROUND, PHYSICAL-CHEMICAL).
DESIGN OF MINING SYSTEMS.**

Moderators: Corresponding Member RAS D.R. KAPLUNOV,
Professor V.V. MELNIK, Professor V.Zn. ARENS,
Professor P.M.SOLOZHENKIN,

Secretaries: Professor V.V. AGAFONOV, Dr. Sci. (Engineering)
G.K. KHCHEYAN, Associate Professor V.I. MUSTAFIN

D.R. KAPLUNOV, D.N. RADCHENKO (IPKON RAS)

**Comprehensive exploitation of mineral resources as the mining science and
education basis**

V.V. MELNIK, V.V. AGAFONOV (Mining Institute NUST "MISiS")

**Synthesis and integrated optimization of functional structure of the
technological systems of coal mines**

V.Zn. ARENS (RANS)

Mining and its impact on the development of civilizations

P.M. SOLOZHENKIN (IPKON RAS)

**Studying of solubility of the complex basic bismuth and antimony minerals on
the basis of the further development of computer**

D.M. KAZIKAEV, G.A. KARASYOV (Mining Institute NUST "MISiS")

The content of the course "Integrated development of mineral resources"

Y. F. VASYUCHKOV, M.V. PAVLENKO (Mining Institute NUST "MISiS")

**Technology is increasing the productivity of wells in vibrational effects on
low-permeability coal seam**

V.A. EREMENKO, I.I. AINBINDER (IPKON RAS)

"Dynamic" support design for rockburst-hazardous mines

M. BYAKOV (SUEK-Kuzbass)

Monitoring of degasification wells

A.A. GOGOTIN, V.N. KALMIKOV, PhD stud. A.N. IVASHOV,
Y.D. MAMBETOVA (NMSTU)

Rationale for sequence mining group of fields

V.I. KLISHIN, G.Yu. OPRUK (FRC C&CC SB RAS)

Sustainability re-used mine workings by directional hydraulic fracturing

I.V. SOKOLOV, YU.G. ANTIPIN, I.V. NIKITIN (Institute of Mining UB RAS)
Principles of formation and the criterion of geotechnical strategy for the development of transition areas of ore deposits by underground method

S.N. STUPAKOV, D.N. PROSVETOV, P.A. MALININ, P.V. STRUNIN
(LTD «Construction company «InzhProektStroy»)

The technology of jet grouting of soils in the construction of the terminal-to-terminal tunnel at Sheremetyevo airport

A. Yu. FEOKTISTOV (CADFEM CIS)

Discrete element method applications for computer simulation of open pit and underground mining processes and equipment

V.S. ZABOURDYAEV (IPKON RAS)

Performance stopes in plenty methane mines

M.V. KAIMONOV (Institute of Mining SB RAS)

Cryolitezone gold placer mines treatment area support setting rational methods

V. N. ALLILUEV (LLC “Megastroyproyekt“)

Space-planning solutions of a construction of garages at development of city underground space in vacant territories

B. YUSIMOV («GOLDEN PROJECTS» LLC)

Problems of planning and quality control of salable ore in low flat veins mining

L. I. SHULYATIEVA (Murom Institute of Vladimir State University)

Problems of formation of effective strategy of reproduction of coal mine Foundation coal companies

A.V. SOKOLOVSKIJ, V.A. PIKALOV (STC-Geotechnology, Ltd)
Problems of implementation of innovative solutions in projects of mining companies

G.L. FEOFANOV (JSC "Urgalugol")
Features of deformation of the underground mine workings country rocks in an inhomogeneous field of tectonic stresses on the example of the coal seam of B-12 mine "Severnaya" AO "Urgalugol"

M.I. RUSAKOV ("VNII Galurgii" JSC)
Process of underground pulp preparation using mobile backfilling units

N. G. CHERNYKH (JSC "Gidrouglestroy")
On the establishment of regional mineral-raw complex development of bowels of the coal basin

D. K. BEKBERGENOV (Mining Institute of Kunaev, Kazakhstan)
Features technologists of ores re-extraction in the conditions of caved area by the underground method carried out at the Zhezkazgan deposit

A.S. KAZAKOV (Federal State Institution "VIMS")
Application of the complexes of the drilling-out of seams in complex geological conditions

I.V. SOKOLOV, A.A. SMIRNOV, Yu.G. ANTIPIN, Yu.M. SOLOMEIN (Institute of Mining UB RAS)
Features of pillar recovery and gob caving at exploitation of Kyshtym quartz deposits

PhD stud. A. S. FEDOROV (SPMU)
Rationale for ways to reduce stress in areas of high rock pressure in the development of adjacent seams

V.M. LIZUNKIN, V.A. BABELLO, M.V. LIZUNKIN, A.V. BEYDIN (Zabaikalskiy State University)
The grounding of methods and construction of stand for determination of parameters of mechanical characteristics of fragmented hard-rocks

A. Yu. ERMAKOV (LLC "Sibniigleobogaschenie")
Optimization of operating parameters for shearers on gas-oil ratio

A.A.GOGOTIN (NMSTU), A.A. ZUBKOV (LLC "UralGeoProekt"), E.P. STAROSTIN
(OOO "Rostra")

Substantiation of technology of waterproofing works in excavations

Y. F.VASYUCHKOV, M.V. PAVLENKO
(Mining Institute NUST "MISiS")

**Technology to improve gas recovery from coal deposits with the use of
complex effects via underground wells mobile seismic vibration**

I.I. AINBINDER, V.A. EREMENKO, P.G. PASKEVICH, I.A. SMIRNOV
(IPKON RAS)

**Estimation of sequence and involvement in the working off technology
reserves under quarry dividing pillars kimberlite deposits**

PhD stud. E.V. VOROPAEVA, V.V. AGAFONOV
(Mining Institute NUST "MISiS")

**Methodical positions of formation of the structure of production of
multifunctional mining system**

V.S. PESTRIKOVA ("VNII Galurgii" JSC)

**On changing stiffening parameters, equipment efficiency depending on the
corrosion rate of its elements in active mine shafts of Verkhnekamskoye
potash salt deposit by the example of the mine shafts of Solikamsk potash
mine 3**

PhD stud. A.S. BAZYUK, V.S. KOVALENKO (Mining Institute NUST "MISiS")
**Research and validation of the main parameters of a career in block order
mining career field (for conditions of Kuzbass coal deposits)**

A.M. MAZHITOV, stud. D.A. ASANOV (NMSTU), A.A. VYUGOV
(JSC "Safyanovskaya med")

**The technology of the formation of the concrete block in ascending order
mining of mineral deposit of Safyanovskoe**

PhD stud.K.S. MIROSHNICHENKO, N.I. ABRAMKIN
(Mining Institute NUST "MISiS")

**Justification downhole technology parameters thermochemical effects on the
coal seam**

I.D. KOICA (SUE "Grigoriopol mine", Transnistria)
**On the necessity of improvement of tax payments in the subsoil of the
Transdnestria Moldavian Republic**

PhD stud. A.I. BUHANIK (Mining Institute NUST "MISiS")
**Substantiation of parametres of development hydromechanized steep coal
seams stowing**

A.M. PAVLOV, PhD stud. D. S. VASILYEV
(Irkutsk National Research Technical University)
**Improving the technology of underground mining of steeply dipping veins thin
(on the field Konevinskogo example)**

PhD stud. T.I. SHAYMYARDYANOV, V.V. AGAFONOV
(Mining Institute NUST "MISiS")
Rationale for the development of thermal mining systems

B. RAIMJANOV, A.T. MUHITDINOV, B.B. BEKMURZAEV, A.R.HASANOV
(O'zGEORANGMETLITI, Uzbekistan)
**Substantiation and choice of systems of workings out for working off of ore
bodies on the bottom horizons of mine Zarmitan**

PhD stud. BAT-ERDENE DAVAATSERN (Mining Institute NUST "MISiS")
**Justification of design technological solutions for quality management of ore
at an open "Erdenetiyn ovoo" field development**

V.V. TARASOV ("VNII Galurgii" JSC)
**Method to eliminate flooding through tubbing lining by replacement of the
defective tubbing**

PhD stud. A.V. DORODNY, N.I. ABRAMKIN
(Mining Institute NUST "MISiS")
**Substantiation of technological solutions for the underground gasification of
brown coal and technogenic raw materials**

S. S. NEYGOMONOV, P. V. VOLKOV, PhD stud. V. V. LATKIN,
stud. O.M. BARDIN (NMSTU)
**Justification of fastening of excavations combined fasten on the basis of SZA
in the conditions of underground mines of the Eastern Kazakhstan**

A.M. MAZHITOV, S. KORNEEV, stud. D. A. ASANOV (NMSTU)
**Reasons for the technical decision mining of the contiguous ore bodies
longline occurrence during the development opening of a deposits of
Kamaganskoe**

D.I. SUKHOV (Mining Institute NUST "MISiS")
**Improving the efficiency of extraction of ore deposits with a difficult structure
when applied force block caving system with face drawing**

PhD stud. F. GULIYEV (Mining Institute NUST "MISiS")
**Justification settings coal mining technology in complicated geological
conditions**

A. ZUBKOV, I. KUTLUBAEV, PhD stud. M. MUHAMEDIYROVA (NMSTU)
Model of the interaction of the friction anchor with the wall of the hole

PhD stud. S.G. DORJU (Mining Institute NUST "MISiS")
**Formation of knowledge at the automated designing collieries high
technological level**

V.A. ROMANOV (Mining Institute NUST "MISiS")
**The impact of technological and structural parameters on the ore drawing
process with mass caving**

PhD stud. I.V. KOLESNIKOVA (Mining Institute NUST "MISiS")
**Substantiation of technological schemes trigeneration unconventional
resources mining production**

PhD stud. Y.I. NESTEROV (Mining Institute NUST "MISiS")
Organization of front-face ore drawing

PhD stud. A.A. ISAKOVA (Mining Institute NUST "MISiS")
**Substantiation of parameters of integrated development of coal deposits of
Kuzbass mine technical system**

PhD stud. E.O. VLASOVA, prof. G.G. LOMONOSOV
(Mining Institute NUST "MISiS")
**Substantiation of a way efficient use of in-line modes of transport in
flowsheet underground mine**

PhD stud. Y.V. VOLKOVA, PhD stud. M.S. KIRILENKO
(Mining Institute NUST "MISiS")

Substantiation of rational technology and space-planning solutions to simulate the coal reserves in the changing geological conditions

PhD stud. B.V. BRAGOVSKIY, V.A. ATRUSHKEVICH
(Mining Institute NUST "MISiS")

Developing an effective technology hydro mudflow release of ore in the development of copper-nickel ores

PhD stud. O.A. GLADKIH (Mining Institute NUST "MISiS")

Substantiation of technological solutions in the field of technical coal mines underground space

I.N. SAVICH, V.I. MUSTAFIN (Mining Institute NUST "MISiS"),
M.V. Tishkov (Institute "Yakutniproalmaz")

Bell drawing in kimberlite pipe "Udachnaya" underground mining

PhD stud. D.V. YAGUDIN (Mining Institute NUST "MISiS")

Substantiation of technology options mining steep coal seams

V.A. ATRUSHKEVICH, A.V. ATRUSHKEVICH, A.O. SALNIKOVA
(Mining Institute NUST "MISiS")

Multifunctional complexes for processing products and waste of mining

M.V. TISHKOV, D.P. SEMENOV (Institute "Yakutniproalmaz")

Stripping and mining of flooded blocks with gradual dewatering on the "International" deposit pipe by underground way

PhD stud. H.H. MESTOEVA (Mining Institute NUST "MISiS")

Justification underground coal technologies

PhD stud. D. S. IVANOV (Mining Institute NUST "MISiS")

Substantiation of technological solutions for improving the completeness of extraction of coal reserves

PhD stud. S.Y. PAVLOCHEV (Mining Institute NUST "MISiS")

Substantiation of technological solutions in the field of implementation of flexible technologies of coal mining

PhD stud. A.A. CHAGAROV (Mining Institute NUST "MISiS")
Justification of parameters of coal seams lying the development of technologies in the form brahesyncline

PhD stud. I.G. VETROVA (Mining Institute NUST "MISiS")
Substantiation of parameters of combined mining coal seams technology

PhD stud. R.I. SHAHVELADOV (Mining Institute NUST "MISiS")
Justification of rational parameters of the cutting mine fields

PhD stud. I.V. AGEEV (Mining Institute NUST "MISiS")
Justification settings hydromechanized technology mining reserves of shallow coal seams

M.S. KISLITSYN, V.V. YAROSHENKO (Saint-Petersburg Mining University)
The prospect of oilmine Yarega deposit

K. BEISEMBAYEV, M. SHMANOV, K. MENDIKENOV, N. MALYBAYEV (KSTU, Kazakhstan)
Development of case frame by a mountain range in the mode of feed-back

I.V. SOKOLOV, A.A. SMIRNOV, A.A. ROZHKOV (Institute of Mining UB RAS)
Breaking of the quartz of divided borehole charges in underground mining

I.U. KHALIMOV (Navoiy state mining institute, Uzbekistan)
Determination of the parameters affecting the kinetics of leaching

A.Y. MIKHAYLOV (FRC C&CC SB RAS)
MineFrame use for projection to bedded coal deposit of Kuzbass

A.V. MOROZOV, L.I. GENDLINA, S.Ya. LEVENSON, V.M. USOL'TSEV (Institute of Mining SB RAS)
Assessment of the impact of the working body vibration mode parameters for the power parameters of a loose material compaction process

O.A. TATARINOVA (FRC C&CC SB RAS)
The justification of access to the site of the coal mine

V. SKAZHENIK, PhD stud. A.V. TUPITSYN (DonNTU, Ukraine)
Flexibility of design solutions for coal mine based on computer simulation
E.A. EMELYANENKO (NMSTU), T.S. KRAVCHUK, D. V. KAUROV

(South Ural State University)

Ecological-economic substantiation of the choice of technology of processing refractory copper pyrite raw materials in integrated field development

M.V. TISHKOV, D.P. SEMENOV (Institute "Yakutniproalmaz")
Characteristics of stripping and preparation of "deep" levels of the "International" mine

I. T. MISLIBAEV (Navoi State Mining Institute, Uzbekistan)
Optimization technology using self-propelled complexes with underground mining of ores in the mines Kyzylkum region

V. I. LYASHENKO, B.N. ANDREEV P.M. KUCHA
(GP "UkrNIPIlpromtehnologii", Ukraine)
The development of mining technology of the underground block leaching of metals from rocky ores

I.V. SOKOLOV, YU.G. ANTIPIN, K.V. BARANOVSKY, N.V. GOBOV
(Institute of Mining UB RAS)
Experimental studies of combined development sloping deposits of quartz

S. S. ALIKULOV (Navoiy state mining institute, Uzbekistan)
Researches of kinetics of productive solutions in case of underground leaching of uranium

PhD stud. A.V. TUPITSYN, stud. R.A. TROITSKAYA (DonNTU, Ukraine)
Classification and systematization of factors to ensure an integrated and systematic approach of modelling the activities coal mines of Donbass

V. A. FEDORIN, V. J. SHAHMATOV, E. L.VARFOLOMEEV A.J. MIHAJLOV
(FRC C&CC SB RAS)
Geotechnological structure aspects open-underground method of mining

A.E. VOROBYOV, C. KARABAYEV (PFUR)
The use of SiO₂ nanoparticles in water flooding for enhanced oil recovery

A.E. VOROBYOV, J. MUGISHO (PFUR)
Burial of man-made CO₂ in the reactors of the lithosphere as a factor in reducing the number of its industrial emissions

A.E. VOROBYOV, TCHARO HONOR (PFUR)
Geomembrane in gold heap leaching technology

A.E. VOROBYOV, R. IBRAGIMOV, K.A. VOROBYOV (PFUR)
The main factors of the properties of burned rocks

A.B. MIKHEEVA, VO MIKHEEV (Mining Institute NUST "MISiS")
Substantiation of parametres of integrated coal extraction technologies

Session 4.2. *GEOTECHNOLOGY (OPENCAST)*

*Moderators: RAS Academician K.N. TRUBETSKOY,
 Professor D.V. PASTIKHIN,*

Secretary Associate Professor V.A. KAZAKOV

V.N. SYTENKOV (“VIMS”)

Regulatory requirements for the preparation of technical projects solid mineral deposits development in modern conditions

B.R. RAKISHEV (Kazakh national technical university named after K.I. Satpaev, Kazakhstan)

Energetic copper-ore pits of Kazakhstan

A.Y. CHEBAN, G.V. SEKISOV

(Russian Academy of Science Far Eastern Branch Mining Institute)

The current state of the mineral resource base of the mining industry of nonmetallic minerals Khabarovsk Territory

S.E. GAVRISHEV, K.V. BURMISTROV

(Magnitogorsk State Technical University named after G. I. Nosov)

Justification development system at different stages of development of deposits

A.V. GLEBOV

(Russian Academy of Science Ural Branch Mining Institute)

Efficiency evaluation of cyclic and line technologies for open cast mining

A.I. TUSHOV, M.V. MASLOVA, D.N. DUBOVA (JSC Ekoproyektkaryer)

Review regulatory documents on soil remediation, violated the development of mineral deposits by openway

A. N. VASIL'EV (Tversk state technical University)

Justification of size reserve in technology of extraction of milling peat

M.D. GORSCHKOV (LLC Sibniugleobogaschenie)

Rationale for the parameters of pressure and gravity hydrotransport for voids filling in the open cut

E.M. EVTUSHENKO («SUEK-KRASNOYARSK»)

Role of the technical director in the technician – technological development of the coal-mining enterprise

A.V. BONDARENKO (JSC VIST-GROUP)

Digital mining. New technologies of automation for open cast mining

S.E. GAVRISHEV, V.Y. ZALYADNOV

(Magnitogorsk State Technical University named after G. I. Nosov)

Integrated development of the subsoil plot on the basis of the mining enterprise diversification

V.A. BELYAKOV, A.N. BOLTUSHKIN

Improvement of technology of extraction of milling peat of low extent of decomposition

A.V. BIRYKOV (Open Society «Pokrovsk mine»),

J.A. LYSAK, A.J. PLOTNIKOV (Open Company «AVT-Amur»),

E.B. SHEVKUN, A.V. LESCHINSKY (Pacific National University)

Consecutive delay of explosions of charges in chinks as the management factor mass explosion

V.V. ZOTEEV («SUEK-KRASNOYARSK»)

Improving the efficiency of mining operations in the branch of JSC «SUEK-Krasnoyarsk» «Razrez BORODINSKIY named after M. I. Shchadov»

O.I. CHERSKIH («SUEK-KRASNOYARSK»)

Improving the organization and technology of work processes in the branch of JSC «SUEK-Krasnoyarsk» «Razrez BORODINSKIY named after M. I. Shchadov»

S.U. ABDRAHMANOV (LLP VOSTOKTSVETMET),

A.A. ZUBKOV, A.A. GOGOTIN, I. A. PYTALEV

(Magnitogorsk State Technical University named after G. I. Nosov)

Substantiation of the technology of storing tailings in a mined-out quarry «Nikolaevka»

I. A. PYTALEV

(Magnitogorsk State Technical University named after G. I. Nosov)

Methodological approaches and principles of designing of mining systems in the intended use of dump sand worked-out areas of the quarry

N. G. TOMILINA
(Magnitogorsk State Technical University named after G. I. Nosov)
Deepening a borehole bottom for «Maliy Kuybas» open pit

grad. stud. A. N. SHAKSHAKPAEV
(Magnitogorsk State Technical University named after G. I. Nosov)
**Increasing efficiency of open pit deep horizon`s working of using
dumptrucks**

A. M. IOFFE (JSC VNIPIpromtehnologii)
**Justification for rational parameters of boards of the superdeep integrated
pit of Muruntau – Myutenbay**

A.B. TUHTASHEV (Navoi State Mining Institute, Uzbekistan)
**Development of technology for the detuning of pit complex deposits of ores
of nonferrous and rare metals**

S.S. SAYYIDKOSIMOV, U.F. NASIROV, F.Y. UMAROV
(Tashkent state technical University, Uzbekistan),
**Predicting the state of critical engineering structures in deep pits on the basis
of the zoning of geomechanical performance of rock mass**

G. O. NAGOVITSIN (Mining Institute of the Kola Science Centre of the Russian
Academy of Sciences)
**On the issue of the transition to underground ore transportation in deep
open-cast mining**

D. A. TOROPOV (Mining Institute of the Kola Science Centre of the Russian
Academy of Sciences)
**Using Korobov algorithm for finding conditional landmark provisos of open-
pit**

M.V. KOSTROMIN (Zabaikalskiy State University)
**Geocryological problems and their solutions in the mining of placer deposits
dredges**

B. L. TALGAMER, M.E. SEMENOV
(Irkutsk National Research Technical University)
**Formation of productive deposits in the preparation of inventories to
dredging**

O.S. MISNIKOV, grad. stud. V. A. IVANOV (Tversk state technical University)
Fundamentals of peat extraction technology to produce a hydrophobic granules for modifying building materials

S.A. SOBOLEV, G.V. SEKISOV
(Russian Academy of Science Far Eastern Branch Mining Institute)
Current state and prospects of development of gold deposits in the Far East region

A.B. TUHTASHEV (Navoi State Mining Institute, Uzbekistan)
The analysis of theoretical studies and operation of the quarry to establish the parameters of pit

L.A. SHVABENLAND (VIMS named after N.M.FEDOROVSKY)
The choice of rational technological parameters of the portion they are digging in an open layered design of complex fields

S.A. SOBOLEV, G.V. SEKISOV
(Russian Academy of Science Far Eastern Branch Mining Institute)
The main geological features of regional ore deposits from the standpoint of development

L.A. SMORODINOVA (VIMS named after N.M.FEDOROVSKY)
Energy intensity production process with different technological levels

V. N. LAPAEV, A.V. SOKOLOVSKIJ («STC-Geotechnology»)
Performance evaluation in open pits

L.A. SMORODINOVA (VIMS named after N.M.FEDOROVSKY)
The energy balance coal mines in the Kemerovo region

O.S. MISNIKOV, A.V. KUPOROVA (Tversk state technical University)
Assessment of effectiveness of impact of silicon organic additives on structurization of the formed peat

O.V. PUHOVA, A.V. KUPOROVA (Tversk state technical University)
Water and technical properties of peat fuel with hydrophobic additive

G.E. STOLBIKOVA, E.Y. CHERTKOVA (Tversk state technical University)
Features of drying of milling peat with various specific loading and modes of drying

Y.V. LEVCHENKO (Mining Institute, NUST "MISiS")
Optimization of parameters of main trenches, laying by workers of pit

V.A. SUPRUN, K.S. VOROSHILIN, Y.V. LEVCHENKO
(Mining Institute, NUST "MISiS")
Practical application of transport crossing points on coal mines

A. V. SHILOV («VNII Galurgii» JSC)
Disposal experience and disposal prospects for clay-salt slurries in salt tailings piles of potash mines

A.L. MANSUROV (LLC Sibniugleobogaschenie)
The complex of mechano-hydraulic mined-land reclamation

V.V. SENKUS (LLC Sibniugleobogaschenie)
The technology of mechano-hydraulic reclamation of disturbed lands

V.V. SENKUS (LLC Sibniugleobogaschenie)
The technology of hydraulic reclamation of disturbed lands

G.V. SEKISOV, A.Y. CHEBAN
(Russian Academy of Science Far Eastern Branch Mining Institute)
Liquid deposits of construction rocks Amur region - the development of basic facilities

A.I. TUSHOV (JSC Ekoproeyektkaryer), V.V. ALIEV (PK«GEO»)
Software complex GIS Terra in the design and planning of mining operations at the quarries of building materials

grad. stud. E. V. LOGINOV (Saint-PetersburgMiningUniversity)
The minimum width of the working platform when using hydraulic excavators

S.A. RADCHENKO. V.A. KAZAKOV (Mining Institute, NUST "MISiS")
Justification of maximum permissible values of elements of system of development at use of hydraulic backdigger in a complex with dump trucks

N. G. CHERNYKH (PJSC «Gidrouglestroy»)
The method of complex open-underground mining of a coal seam (RF patent No. 2524709 from 09.06.14)

N.D. KURLAEV, V.A. STEPANOV (JSC Ekoproyektkaryer),

A. A. SAVEL'EV (Mining Institute, NUST "MISiS")

Experience perfection of hydraulic glass sand dredger 2000/63 on career

grad. stud. A.S. BAZUK (Mining Institute, NUST "MISiS")

Improvement of soil preserve technology of a pla block order of working off of career fields

stud. A.E. BASHLAKOV, V.G. BEHER (Mining Institute, NUST "MISiS")

Modeling of open mining operations of a site of Sokolovsky of the coal field "Field of the May mine" for advance planning taking into account losses and impoverishment

grad. stud. G.S. FEDOTOV, D.V. PASTIHIN (Mining Institute, NUST "MISiS")

Influence of the scheme of opening of the career field on amount of mined rock in a final contour of a pit

S.A. ERMAKOV, D.V. KHOSOEV

(Mining Institute of the North, Siberian Branch, Russian Academy of Sciences)

Rationale the efficient use of selective combine the development of complex reservoirs of the Elga coal Deposit.

A.S. KALYUZHNYI (Mining Institute of the Kola Science Center of the Russian Academy of Sciences)

Monitoring of water-saturated parts migration in the open pit wall to assess the stability

5. MINING EQUIPMENT, ELECTROTECHNICAL SYSTEM.

Session 5.1. TRANSPORT SYSTEMS OF MINING ENTERPRISES

*Moderator: Professor V.I. GALKIN,
Secretary Senior Lecturer E.S.SAZANKOVA*

V.I.GALKIN, E.E.SHESHKO (Mining Institute NUST "MISiS")
Influence of the stress - strain state of the belt on operating parameters of sandwich belt high angle conveyors

A.V.DUNAEV (Federal state budget scientific institution "Federal scientific engineering center VIM" (VIM FNAC))
Innovative methods of improving resource the worn-out equipment

I.V.ZYRYNOV (Yakutian Diamond Industry Research and Design Institute of ALROSA PJSC "Yakutniproalmaz" Institute)
The Prospects of Natural Gas as an Alternative Source of Fuel for ALROSA PJSC

A.L.SHEIN (Joint Stock Company "Razrez Berezovsky")
Automation tensioning system of belt conveyor on the example «Razrez Berezovsky»

N.V.MAKAROV (Ural state minig university)
Energy regulator for double-sided centrifugal fans

V.S.GORNOSTAEV ("SUEK - Kuzbass")
Improving and streamlining the delivery of works suspended diesel - hydraulic transport in the mines of JSC "SUEK - Kuzbass"

G.D.TRIFANOV, V.Y.ZVEREV (Perm National Research Polytechnic University, PNRPU)
Reduction of a dynamic loads in the wire ropes of mining hoisting plants

I.V.BRIGADIN, A.A.KUDRJVZEV, S.A.KRASNOV, R.A.VOSGRIN, A.J.TOROPOV.
S.J.NIKOLASHIN (Promstroyvzryv Ltd.)
Model of transport movement along the nonprofile roadway

V.Y.POTAPOV, P.A.KOSTYUK Graduate student, A.V.SEMENOV student (Ural state mining university)

The study of aerodynamic characteristics of the particles having a sail in order to create pneumatic systems

A.R.EFIMOV (NATIONAL RESEARCH UNIVERSITY "MPEI")
Comparing the options of using concrete feeder and ways of their improvement

R.K.BASOV Graduate student (NUST "MISiS")
The relevance of continuous monitoring geometric characteristics of the surfaces of the career track.

A.M.KEROPYAN (NUST "MISiS")
The relevance of continuous monitoring geometric characteristics of the surfaces of the career track

E.A.KOVROVA student (Mining Institute NUST "MISiS")
The calculation of the basic parameters and the economic Efficiency of the belt conveyor for Mikhailovsky GOK

A.S.MAKAROVA student (Mining Institute NUST "MISiS")
Setting of conveyor on the Mikhailovsky mining and processing combine and determination descriptions of its

E.S.SAZANKOVA (Mining Institute NUST "MISiS")
Global projects operating belt conveyors with a curved track for mining

V.V.ZOTOV, V.E.PEREKUTNEV, Graduate student (Mining Institute NUST "MISiS")
The use of robber-wire rope in mine hoist

M.M.BAZLIN, Graduate student (NUST "MISiS")
Overview suspension devices for lifting vessels for mining.

V.S.LAKSHINSKY, Graduate student (NUST "MISiS")
Ways of improvement of skips for mine hoist

K.K.MULUHOV, Z.N.BESLEKOEVA (North-Caucasian University of Mining and Metallurgy (state technological University))

Streamlined complex equipment of steeply inclined conveyor hoist for bulky run-of mine loads and deep quarries

A.V.DOLGANOV (Ural state minig university)

The influence of the hydroabrasive wear of a flowing part of centrifugal sectional pumps on the operational efficiency of main dewatering of chalcopyrite mines

E.P.TERYEKHIN, I.S.BULGAKOV (The influence of the hydroabrasive wear of a flowing part of centrifugal sectional pumps on the operational efficiency of main dewatering of chalcopyrite mines)

Development of hydrotransport swept - clay slime for a wet method of production of cement

V.N.SKLYAROV (State Educational Institution of Higher Professional Education "Donetsk National Technical University" (DonNTU)

Development of rollers mine belt conveyors with increased durability and maintainability

V.O.GUTAREVYCH, Y.L.IGNATKINA, Graduate student (DonetskNationalTechnicalUniversity (DonNTU)

Optimization of transient modes of movement mine suspended monorail

E.M.AREFYEV (DonetskNationalTechnicalUniversity (DonNTU)
Justification of parameters of the vibration conveyor belt cleaner

S.M.GORBATYUK, A.Y.ZAPARIN, N.A.CHICHENEV (NUST "MISA")
Modernization of the vibrating screen GIST-72-T2 of the Mining Society "Catoca" (Angola)

S.M.GORBATYUK, A.Y.ZAPARIN, N.A.CHICHENEV (NUST "MISA")
Reengineering spiral classifier 2KSN-30 of the Mining Society "Catoca" (Angola)

A.M.BUSIGIN (NRTU "MISIS", Institute «Ecotech»)
A power calculation mechanism of the handle crawler excavator with three degrees of freedom

V.D.BONDAREV, A.D.KOLGA (Nosov Magnitogorsk State Technical University (NMSTU)
Justification and a choice of parameters of the magnetic coupling weight load rail locomotives

Session 5.2.

MINING MACHINES AND THE EQUIPMENT

*Moderator:
secretary*

*the professor OF L.I. KANTOVICH,
the docent OF D.A. KUZIEV*

L.I. KANTOVICH (NUST "MISIS"), A.A. KHORESHOK, M.A. TULENEV (KUZBASS STATE TECHNICAL UNIVERSITY IM. T. F. GORBACHEV), D.A. KUZIEV (NUST "MISIS")

The use of mechanical and hydraulic excavators in mining are coal zones in the breakdown of Kuzbass

A.S. KOZHEVNIKOV, N.I. SYSOEV (URGPU (NPI). M. I. PLATOV)

The efficiency of the Shearer is equipped with a variable hydro-mechanical drive of the Executive body

I.V. ZYRYANOV ("ALROSA" (JSC INSTITUTE YAKUTNIPROALMAZ)

The Rational terms of mining equipment to AK ALROSA (OAO)

A.V. OTROKOV, G.SH. KHAZANOVICH, asp. A.N. BREUSOV (URGPU (NPI). M. I. PLATOV)

Study of the dynamics and formation of the optimal feed control loading machine continuous

G.D. TRIFANOV, S.R. ILYIN, S.V. VOROBEL (PNRPU)

Dynamic diagnosis and assessment of the reinforcement of shafts

V.V. GABOV, D.A. ZADKOV, A.V. STEBNEV, asp. N.V. BABYR (ST. PETERSBURG MINING UNIVERSITY)

The method of relocation section supports migration efforts to the support elements

G.A. BASALAY (BNTU, Belarus)

Optimization of milling an array of rock coaxial rotors roadheaders

G.D. BUALICH, M.K. KHUSNUTDINOV (KUZBASS STATE TECHNICAL UNIVERSITY IM. T. F. GORBACHEV)

Features of rolling cutter drilling tool for receiving a non-circular cross-section

I.V. GORLOV (TVGTU), M.G. RACHUTIN (NUST "MISIS")
The influence of pistocchi deposits on the reliability of peat machines

A.L.YABLONEV (TVGTU)
Digital tenzometric studies in a laboratory study of the process of milling peat deposits

A.A. EMELYANOV (LLC "IZ-KARTEKS IM. P. G. KOROBKOV")
Assessment of the impact of the skills of machinists on the residual resource mining excavators of large capacity with the use of modern simulators

asp. A.L. VASILIEV (ST. PETERSBURG MINING UNIVERSITY)
The hydraulic hardening of filling mixtures in the mined-out space

V.V. GABOV, A.V. STEBNEV, S.G. MUHORTIKOV, V.V. BUEVICH (ST. PETERSBURG MINING UNIVERSITY)
Test experimental block business logo regulation resistance gidravlicheskih racks of sections of powered support the lowering of the roof rocks

N.S. GOLIKOV, I.P. TIMOFEEV (ST. PETERSBURG MINING UNIVERSITY)
Determination of the angle of inclination of the longitudinal axis of the trajectory points of the working surface of the moving jaw jaw crusher complex movements

L.V. GORODILOV, D.V. VAGIN (IGD IM. N.A. CHINAKALA SB RAS)
Testing simulation program mud pulse systems

YU.A. LAGUNOVA, asp. D.V. BELYUSHIN (UGGU)
Protection of the working bodies of mining machines from shock loads

asp. E.A. RODIONOV (ST. PETERSBURG MINING UNIVERSITY)
The analysis of conditions vertical excavation of peat raw materials

B.F. ZYUZIN, A.I. ZHIGULSKAYA, O.V. SHAMBER, M.A. ZHIGULSKY, asp. I.S. BURMISTROV, stud. A.S. OGANESYAN (TVGTU)
The options for the structure of cell complexes of a full cycle of extraction and processing of raw materials torfobriketnoe

A.I. ZHIGULSKAYA, T.B. YAKONOVSKAYA, M.A. ZHIGULSKY, A.M. GUSEV, stud.
A.S. OGANESYAN (TVGTU)

**Equipment for neotechnology produce fuel from resources of peat deposits
and waste from agriculture and forestry**

YU.A. LAGUNOVA, V.S. SHESTAKOV, asp. A.E. KALYANOV (UGGU)

**The protection mechanism cone crushers fine crushing when hitting non-
crushable bodies in the working chamber**

A.P. KOMISSAROV, YU.A. LAGUNOVA, asp. I. V. TELIMAN, V.S. SHESTAKOV
(UGGU), O.A. LUKASHUK (URFU IM. B. N. YELTSIN)

The working characteristics of the excavator

A.P. KOMISSAROV, G.V. PROKOPOVICH, asp. S.S. GLAZYRIN (UGGU)

Design of drilling machines percussion

M.K. ABDULKARIMOV, V.I. SAITOV (UGGU)

Justification of parameters of the mast of the drilling rig

L.V. GORODILOV, asp. T. B. RASPUTIN (IGD IM. N.A. CHINAKALA SB RAS)

**The methodology and program of choice of parameters of hydraulic machines
volumetric type**

E.YU. RUSSKY (IGD IM. N.A. CHINAKALA SB RAS)

Principles for the design of impellers of axial fans

D.A. ZADKOV, N.V. BABYR, A.V. STEBNEV, S.G. MUKHORTIKOV

(ST. PETERSBURG MINING UNIVERSITY)

**Analysis of the stability modes of treatment mechanized complexes in the
conditions of the mines of JSC "SUEK-Kuzbass"**

S.L. IVANOV, asp. A.A. KOKONKOV (ST. PETERSBURG MINING UNIVERSITY)

**Evaluation of load at crushing of raw peat natural water content of rotary
crusher**

V.V. GABOV, asp. A.I. KOROLEV (ST. PETERSBURG MINING UNIVERSITY)

**Improving the adaptability of the treatment mechanized complex to changing
mining and geological conditions of the modernization of its downhole
scraper conveyor**

A.M. KRASYUK, E.Y. RUSSKY (IGD IM. N.A. CHINAKALA SB RAS)
The Study of the structure of the blades of impellers mining axial fans

A.V. MIKHAILOV, S.A. LAVRENIENKO, S.L. SERGAN, asp. A.O. LOPATYUK (ST. PETERSBURG MINING UNIVERSITY)
Study of geometric and operating parameters high speed milling cutter for excavation of peat

P.A. POBEGAILO (IMASH IM. A.A. BLAGONRAVOV RAS)
The Study load, powerful of hydraulic excavators

A.YU. PRIMYCHKIN (IGD IM. N.A. CHINAKALA SB RAS)
The simulation of an annular elastic valve in the air percussion machines

V.V. GABOV, asp. V.S. ROMANOVA (ST. PETERSBURG MINING UNIVERSITY)
Peculiarities of the process of crushing rocks in the high frequency cone crusher with a freely-rotating inner cone

V.YA. POTAPOV, asp. P.A. KOSTYUK, stud. K.K. SVIRIDOV (UGGU)
A study of the frictional and magnetic characteristics of asbestos ore

S.L. IVANOV, asp. D.D. SEVERIKOVA (ST. PETERSBURG MINING UNIVERSITY)
The Study of the process of forming peat raw materials of natural moisture content

D.A. YUNGMEYSTER, D.A. MELNIKOV, K.A. KIREEV (ST. PETERSBURG MINING UNIVERSITY)
Study the parameters of the collection device were established for different conditions of their occurrence on the sea bottom

A.S. GROMADSKY, V.A. GROMADSKY, V.A. GROMADSKY (KNU, UKRAINE)
Development and study of the effectiveness of the damping of transverse vibrations of the drill rod rotary drilling machine drilling overhead sliding the coupling halves

A.S. GROMADSKY, V.A. GROMADSKY, V.A. GROMADSKY (KNU, UKRAINE)
Development and optimization of parameters of shock absorbers transverse vibrations of the drill rod of rotary drilling machine

S.P. TARASOV, V.N. MAKAROV (UGGU)
Autonomous mobile localizer secondary failure of rock masses

asp. M. S. STOLYAROVA (ST. PETERSBURG MINING UNIVERSITY)
The Methodology of experimental studies to determine the minimum relative slippage of the driven and driving wheels, of friction mechanism with the aim of improving the traction ability of the drive

S.P. TARASOV, V.N. MAKAROV (UGGU)
Quasi-localization of oversized

V.V. TIMONIN, V.N. KARPOV (IGD IM. N.A. CHINAKALA SB RAS)
Ways of improving the efficiency of percussive-rotary drilling of wells for the development and operation of drilling equipment

T.A. TKACHEVA (MGPU)
Availability – a global criterion of control of the variability and efficiency of mining technology

S.A. LAVRENIENKO (ST. PETERSBURG MINING UNIVERSITY)
The study of the process of destruction of array of the Cambrian clays of the incisors of the Executive bodies of mining machines in the conditions of JSC "Metrostroy", Saint-Petersburg

V.V. TIMONIN, D.I. KOKOULIN, S.E. ALEKSEEV, B. KUBANYCHBEK
(IGD IM. N.A. CHINAKALA SB RAS)
Experience of drilling straight directional technical wells in the underground mines of Berezovskaya

M.G. TRIFANOV, D.I. SHISHLYANNIKOV (PNRPU)
Evaluation of the load drives the tunnel-Shearer "Ural" to select technically sound modes in actual operating conditions

L.S. USHAKOV, asp. V.E. KLIMOV (OGU IM. I. S. TURGENEV)
The Choice of the governing parameters for the development of a mathematical model of fracture of rocks percussion musical instrument collision type

K.V. FOMIN (TVGTU)
Method of calculation of the probability characteristics of the cutting forces on a single cutter in the destruction of rocks

K.V. FOMIN, I.A. ZHIGULSKAYA (TVGTU)

Modeling the damaging effects on the cutting elements of the working body of peat milling Assembly

O.V. SHAMBER, asp. I.S. BURMISTROV, stud. A.S. MKRTCHYAN, stud. A.D.

SAMOILOV, stud. A.S. OGANESYAN, stud. D.V. GALIEV (TVGTU)

Adaptive machines and systems for resource-saving technology of extraction of raw materials torfobriketnoe

A.A. KHORESHOK, L.E. MAMETYEYEV, A.M. ZHEHIN, V.I. NESTEROV, V.YU.

BLUMENSHTEIN, A.YU. BORISOV (KUZBASS STATE TECHNICAL UNIVERSITY

IM. T. F. GORBACHEV)

The definition of the stability of roadheaders dvuhkolonchataja with swept by the Executive body

A. YU. CHEBAN (IGD DVO RAN)

Excavation-and-loading plant for open cast mining

V.G. CHERNYCH (URGPU (NPI). M. I. PLATOV)

General principles of solution of the problem of forming the optimal system THOR mining equipment

I.O. SHAHTORIN (IGD IM. N.A. CHINAKALA SB RAS)

Selection and justification of parameters of submersible hydropercussion machine small diameter

YU.V. ZUEV ("SHU "SADKINSKAYA")

Select options roadheaders of selective action for particular operating conditions (a theoretical approach)

YU.V. HOLODNIKOV (OOO "SKB-THOUGHT"), asp. I.A. VOLEGZHANIN, V.N.

MAKAROV (UGGU)

Additive technologies use of composites in the production of mining machinery

A.A. KHORESHOK, L.E. MAMETYEYEV, A.M. ZHEHIN, V.I. NESTEROV, V.YU.

BLUMENSHTEIN, A.YU. BORISOV (KUZBASS STATE TECHNICAL UNIVERSITY

IM. T. F. GORBACHEV)

Justification of parameters of drive power dvuhkolonchataja swept the Executive body, with the disk tool on the prism

S.A. SHEMYAKIN (TOGU)

Economic feasibility of application of the drop-down excavation buckets and excavation-transport machines with complex motion of the canopy during the unloading of the breed

YU.V. ZUEV ("SHU "SADKINSKAYA")

Study of indicators and increasing the efficiency of harvester penetration at the mine "Sadkinskaya"

D.I. SHISHLYANNIKOV, L.I. STARKOV, G.D. TRIFANOV (PNRPU)

Combine "Ural-Rotor"

stud. P.G. ZELENOV, stud. S. S. EVSTRATENKO (ST. PETERSBURG MINING UNIVERSITY)

Reliability analysis of hydraulic excavators

D.A. YUNGMEYSTER, R.YU. URAZBAKHTIN, P.D. NAUMOVA (ST. PETERSBURG MINING UNIVERSITY)

Justification of impact of the Executive body of the tunnel system for rescue operations

S.A. SHEMYAKIN (TOGU)

Economic feasibility of application of the drop-down excavation buckets and excavation-transport machines with complex motion of the canopy during the unloading of the breed

A.S. GROMADSKY, asp. D.I. KUZMENKO (KNU, UKRAINE), F.I. KARAMANIC (PJSC "KRIVBASSZHELEZRUDKOM")

The creation and study of new crowns for drilling compensation holes and wells in the rocks

V.P. STEPANENKO (NUST "MISIS"), V.I. BELOZEROV ("ECOCARRIER")

Prospects of application of combined energy-power gas turbine plants in mining industry

D.A. KUZIEV, stud. D.YU. GORBIKOVA (NUST "MISIS")

A study of loading parameters of screw actuators of the Executive bodies of the Shearer

P.YA. BIBIKOV, stud. E.V. AFONICHEV (NUST "MISIS")

The substantiation of necessity of application of adaptive impact destruction of rocks of varying strength in vibration mills

V.A. SUBBOTIN, O.V. TELEGINA (NUST "MISIS")

The latest tunnel shield machine non-circular cross-section

V.N. MAKAROV, V.YA. POTAPOV, N. V. MAKAROV (UGGU)

Improving the efficiency of the aeration classifying separator

D.A. KUZIEV, asp. M.M. JANUSH (NUST "MISIS")

Innovative solutions in mining machines Wirtgen

V.V. ZOTOV, asp. M.M. BAZLIN, asp. V.S. LAKSHINSKY (NUST "MISIS")

Modern designs of skips for mining

V.A. MOSTAKOV (NUST "MISIS")

Possible options for the schemes and structures of the Executive bodies of heading machines selective action, are equipped with a roller tool

P.YA. BIBIKOV, A.D. BARDOVSKY, K.S. SIDOROV (NUST "MISIS")

The new constructive scheme of mesh pneumocystitis for fractionation thin-dispersnykh materials

P.YA. BIBIKOV, stud. N.N. AFONICHEVA (NUST "MISIS")

Scraper the conveyor belt cleaners with discrete scrapers as the primary method of cleaning a conveyor belt

B.V. VORONIN (NUST "MISIS")

Model technological design mining machine

V.V. DEVYATYAROVA, E.V. KONDRATENKO, P.M. VERZHANSKY (NUST "MISIS")

Prospects for the use of core drilling in quarries the extraction of natural stone

A.V. DOLGANOV (UGGU)

The study hydroabrasive wear of a flowing part of centrifugal sectional pumps chalcopyrite mines

E.G. KULIKOVA, L.I. GENDLINA, S.YA. LEVENSON
(IGD IM. N.A. CHINAKALA SB RAS)

Features of the mode and method of implementation when fibrolipoma of cohesive bulk materials

N.P. OVCHINNIKOV (SVFU IM. M. K. AMMOISOV)

Experimental study of the influence of the hydroabrasive wear varying degrees of the elements of working wheel vibration condition of the pump-motor Assembly

I.N. KAZICHEV (TVGTU)

Study of the structure and parameters of the mixer for the production of fuel lump peat

V.S. VAGIN, ASP. A.A. KARPESH (MGTU IM. G. I. NOSOV)

Principles of control circuits for direct drive of the hydraulic excavating mobile installations

A.M. KRASYUK, asp. P. V. KOSYKH (IGD IM. N.A. CHINAKALA SB RAS)

About design scheme for the study of Flexural vibrations of a rotor of a main mine fan

L.V. KOPENKINA (TVGTU)

The Characteristics of the bearing capacity of peat deposits in the theory and calculation of peat machines

E.G. KULIKOVA, L.I. GENDLINA (IGD IM. N.A. CHINAKALA SB RAS)

The Results of numerical simulation of the dynamics of a vibratory feeder for production of cohesive geomaterials

A.I. KUROCHKIN, V.S. VAGIN (MGTU IM. G. I. NOSOV)

The choice of the rational dynamic parameters high-torque hydraulic drive mobile sinking hoisting plants

stud. V.S. OSHCHEPKOV (KNU, Ukraine)

Computer simulation of working process of a submersible hydropercussion machine P-110

A.A. RECHKIN, D.O. CHEZCHIN, B.B. DANILOV (IGD IM. N.A. CHINAKALA SB RAS)

Experimental determination of the location of the center of rotation of the body controlled punch

stud. E.A. SAVTSOV (TVGTU)

Regulation of the drying process influence on the characteristics of the fan of the dryer

A.O. KHARITONOV (NUST "MISIS")

Improving performance in grind-classification of equipment for weak rocks

A.D. KOLGA, asp. S. V. PODBOLOTOV (MGTU IM. G. I. NOSOVA) **Substantiation of rational constructive and dynamic parameters two-stage centrifugal turbine with coaxial arrangement of driving wheels**

V.YA. POTAPOV, V.V. POTAPOV, asp. P.A. KOSTYUK, stud. A.V. SEMENOV (UGGU)

Development and investigation of an aerodynamically active apparatus for the separation of ores, with windage

V.F. SINITSYN, L.V. KOPENKINA (TVGTU)

The Characteristics of the bearing capacity of peat deposits in the theory and calculation of peat machines

V.YA. POTAPOV, V.V. POTAPOV, S.V., SITDIKOVA (UGGU)

The study of thermophysical characteristics of asbestos ore with the aim of creating separation devices

asp. G.A. YUSUPOV, V.I. BOLOBOV (ST. PETERSBURG MINING UNIVERSITY)

The possibility of extending the range of the fortress of rocks, destructible roadheaders.

I.A. KOROLYOV, I.P. TIMOFEEV, stud. E.V. KOLOTVIN (ST. PETERSBURG MINING UNIVERSITY)

Justification of geometric and force parameters walking installation for the extraction of solid minerals of the shelf area

T.M. SLOBODYANIK (NUST "MISIS"), O.A. NIKITINA (MGTU IM. G. I. NOSOV)

Economic aspects of rational design of drives of mining machines

Session 5.3.

***UP-TO-DATE TECHNOLOGIES
FOR MINING ENGINEERING***

Moderators:

*Professor Yu.F. NABATNIKOV,
Professor A.P. VERZHANSKIY,*

Secretary:

Professor V.U. MNATSAKANYAN

Yu. F. NABATNIKOV, V.U.MNATSAKANYAN
(Mining Institute NUST “MISiS”)

Modern principles of the organization of technical preparation of mining machines production

Yu. F. NABATNIKOV (Mining Institute NUST “MISiS”)

Import substitution in the mining machinery and ways of realization of this process

B.I. LAKTIONOV, Yu.F.NABATNIKOV
(Mining Institute NUST “MISiS”)

A comprehensive model of quality management system of production

S.K. FYODOROV, L. V. FYODOROVA, Yu. G. ALEKSEEVA
(Bauman Moscow State Technical University.
National Research University)

Increase durability of equipment electro-mechanic processing

A.P. BATALOV, I. A. KOROLYOV
(Saint-Petersburg Mining University)

Fundamentals of calculation method of cone fit

A.B. TULINOV («Mosinrast»)

Technic Support of Equipment in Mining.

E.I. KOMAROV, st. A. Sh. PULATOV, st. V.A. SMIRNOV
(Moscow Polytechnic University)

Assessment of wear resistance of two-component teethes of the safety stem of EKG-10 excavator

B.I. LAKTIONOV, Yu.F. NABATNIKOV (Mining Institute NUST “MISiS”)
The evolution of the quality management system of production

A. F. KAIZER (JSC «Borodino RMZ»)

The use of high-strength wear-resistant steel sheet in mining industry.

B.I. LAKTIONOV, Yu. F. NABATNIKOV (Mining Institute NUST “MISiS”)

Activities in the field of quality management

E.I. KOMAROV, st. K.A. KANCHURIN, st. M.M. SHILKIN

(Moscow Polytechnic University)

Development of a design of two-component teeths of buckets of excavators by 3D method -modeling

V.I. LEVCHUK, gr. st. AA. BOLORHONOV (MSTU "STANKIN")

Modeling of technological solutions in the calculation of allowances and operating sizes

G.N. IVANOV (MSTU "STANKIN") Yu. N. TYMOSHENKO (LLC “Skilak”)

Technology of network-centric principle of mode self-locking in the maintenance and repair of mining machines

V.A. TIMIRJAZEV, st. A.V. MUKHIN (MSTU "STANKIN")

The use of adaptive control for self-programming of the trajectory of the cutting tool on CNC lathes

gr. st. R.V. PCHELNIKOV (MSTU "STANKIN")

Increase productivity by organizing small-scale production batch processing

gr. st. I. A. KHVOROV (MSTU "STANKIN")

Increased productivity of manufacturing parts on CNC machine bar-by creating a group installation

gr. st. E.Yu. ZIBOROVA, V.U. MNATSAKANYAN
(Mining Institute NUST “MISiS”), T.A. NERETINA
(JSC «NPP «Istok», named A.I. Shokin»)

Topical issues of forming and sintering powders of alumina ceramics

gr. st. S.E. USHANOVA, V.U. MNATSAKANYAN
(Mining Institute NUST “MISiS”)

Analysis of the factors that cause processing errors, when drilling deep holes

M.Z.HOSTIKOJEV

(RSU of oil and gas named after I. M. Gubkin. National Research University)

The use of thread rolling technology to increase productivity and quality of manufacture of pipe threads

V.N. AGEEVA

(RSU of oil and gas named after I. M. Gubkin. National Research University)

The use of laser technology to improve the quality of manufacturing drill bits and locking thread

A.A. IVANOV (MSTU "STANKIN")

High-technology machining cones on modern multi-task machines.

V.Yu. NOVIKOV, gr. st. Y.S.KARAVAEV (MSTU "STANKIN")

Monitoring and evaluation of the cast billet size with help of 3D-scanner.

st. S.V. SEVAGIN, N.S. MASLYAKOV (Mining Institute NUST "MISiS")

The identification of design-engineering parameters of the parts of mining machines for re-engineering of spare parts

N.S. MASLYAKOV, st. O.K. NIKIFOROVA, st. J.V. VAVILOVA, st. E.A.

KIRICHENKO (Mining Institute NUST "MISiS")

Application of modular, additive and information technologies in the repair production of mining machines components

N.V. SURINA (Mining Institute NUST "MISiS")

Technology of machining deep hole of small diameter

O.V. BELYANKINA (Mining Institute NUST "MISiS")

Modern principles of the organization of repair production

E. I. SIZOVA, st. I.I. PALEYEV (Mining Institute NUST "MISiS")

Increased productivity of the processing spindles drilling rigs

gr. st. A. Y. GORELOVA

(Volgograd State Technical University)

On the formation of the errors appearing during the pneumatic cylinder deep hole's machining as a result of technological heredity

D. V. KOVGAN

(Mining Institute of the Ural branch of the Russian Academy of Sciences)

The chassis of the tracked vehicle

P.I. TARASOV

(Mining Institute of the Ural branch of the Russian Academy of Sciences)

The concept of increasing the effectiveness of the clutch specialized tracked vehicles

K. I. SHAKHOVA, T.N. RODINA (Mining Institute NUST "MISiS")

Materials for parts heavy machinery

A.L. SHEIN (Joint Stock Company "Razrez Berezovsky")

**Automation tensioning system of belt conveyor on the example
«Razrez Berezovsky»**

V.V. POVETKIN, M. ISAMETOVA, I.N. ISAYEVA, A.Z. BUKAYEVA

(KazNRTU after K.I.Satpaev, Almaty, Kazakhstan)

**Development of dynamic model of the drive spherical mills taking into
account the damping properties of his elements**

V.V. POVETKIN, M. F. KERIMZHANOVA, I.N. ISAYEVA, A.Z. BUKAYEVA

(KazNRTU after K.I.Satpaev, Almaty, Kazakhstan)

**About improvement of the equipment for transportations of the hidromix in
mining production**

gr. st. N.V. POLEZHAYEV (Volgograd State Technical University (VSTU))

Calculation mutual influence loads on a solid model drilling head

st. A. G. ISKHAKOV, V.U. MNATSAKANYAN

(Mining Institute NUST "MISiS")

**Reducing the complexity of machining of molybdenum alloys due to the use of
high-performance machining centers**

M.V. PESIN

(Perm National Research Polytechnic University (PNIPU))

Deep roll threads is modern technology of hardening of details

M.V. PESIN

(Perm National Research Polytechnic University (PNIPU))

Features of the formation of residual stresses in the thread by deep roll

Session 5.4.

ELECTRIFICATION AND ENERGY CONSERVATION IN MINING INDUSTRY

*Moderators:
Secretary*

*Professor A.V. LYAKHOMSKIY,
Associate Professor A.V. PICHUEV*

A.V.LYACHOMSKY, L.A.PLASCHANSKY, I.V.ZYRYANOV,
N.A. SOLOVIEVA (Mining Institute NUST "MISiS")

The theoretical justification for calculating the electrical load on the diamond-mining companies that develop open-pit mining in the permafrost zone

S.LUZYANIN, A. B.PETROCHENKOV (PNRPU),
A. V. LACHOMSKY (Mining Institute NUST "MISiS")

Development of software-technical complex for structural and functional analysis of commercial power systems

S.YAKUBOV (JSC "Uzbekugol"), B.RAIMJANOV ("UzGeoRangMetLITI")
To one of the problematic issues of JSC «Erosti gaz»

A.SHIMOKHIN (LLC «Nazarovomountain-mountingupmanagement»)
Prikluchatelny career point

K.STASHKO (JSC «Open coalmine Nazarovsky»)
Reduction of specific energy consumption in the draglines

A.SEMENOV (PI NEFU), A.EGOROV (ST «Almazavtomatika» PJSC «ALROSA»)
Assessment of efficiency of modernization of the main fan installation in the mine "International"

M.NAZAROV (TSTU)
Application of a method of deep utilization of heat of combustion gases in the boiler CHP

S. MALAFEEV, A.NOVGORODOV, V.KONYASHIN (Joint Power Co, Ltd)
Excavator EKG-10M: Development, research and experience in operating the new mechatronic complex

S. MALAFEEV, A.DUDULIN (VISU)
Development and research of the thyristor switch for an induction motor

M.GUSAKOV (VISU)
Hybrid mechatronic systems for mining shovels

I.LUZYANIN (PNRPU)
Developing of Software and Hardware Package for Structural and Functional Analysis of Industrial Power Supply Systems

N.KOROLEV (Saint-Petersburg mining university)
Reducing the power consumption of electromechanical units by assessing the technical condition and remaining life based on a comprehensive analysis of its parameters

D.BELOLAPOTKOV (Saint-Petersburg mining university)
Substantiation of optimum modes of mine drainage installations

I.BABANOVA (Saint-Petersburg mining university)
Development of natural network models for the control and forecasting of energy consumption for enterprises of the mineral resource complex

K.KOPYLOV (JSC "SCEC"), S.KUBRIN (IPKON RAS),
S.RESHETNYAK (Mining Institute NUST "MISiS")
Experience of application of modern methods of coal mining on mine "Polysaevskaya" JSC "SUEK-Kuzbass"

G.BABOKIN (Mining Institute NUST "MISiS"), D.SPRECHER, E.KOLESNIKOV (NF RCTU)
The monitoring and forecasting of the technical parameters of Electromechanical systems of mining machines

G.BABOKIN (Mining Institute NUST "MISiS")
Methods of evaluation of energy efficiency equipment

S.KARPENKO (Mining Institute NUST "MISiS")
Current aspects of improving the energy management in mining

D.ZOLKIN, V.VASILENKO (Mining Institute NUST "MISiS")
The natural damping ability of the drive of a belt conveyor

O.KOSAREVA-VOLODKO, I. KHOSHMUKHAMEDOV (Mining Institute NUST "MISiS")
Predicting the reliability of traction motors of trolleybuses and trams

N.SHEVYREVA (Mining Institute NUST "MISiS")

Modern means to address the negative effects of electric drives with semiconductor converters in power supply systems of the enterprises of mineral resource industry

Y.SHEVYREV (Mining Institute NUST "MISiS"), O. FEDOROV (NNSTU),
A. ZAVAROV (MGTU)

Resource providing new technological ways in the mining industry

B.ABRAMOV, L.GACKOWSKI, I.KUZMIN (OOO "Electrical industrial company"),
Y. SHEVYREV (Mining Institute NUST "MISiS")

The work "Electrical industrial company" in the field of electric drive of mining machines and installations

A. PICHUEV (Mining Institute NUST "MISiS")

Energy assessment of technological processes on the Kostomuksha GOK

A.PICHUEV (Mining Institute NUST "MISiS")

Predictive modelling based on the analysis of the dynamics of electricity consumption and production areas to the Kostomuksha GOK

Mag. I.MIRZAEV (Mining Institute NUST "MISiS")

Analysis of ways of improvement of a shape of voltage and current in oilfield networks in the presence of variable frequency drives

Mag. E.KIREEVA (Mining Institute NUST "MISiS")

The synthesis parameters direct drive motor feeders

Mag. A.PRIGODICH (Mining Institute NUST "MISiS")

Evaluation of the efficiency of the adjustable speed drive of belt conveyors bucket wheel excavator

Mag. I. MALSHAKOV (Mining Institute NUST "MISiS")

The prospects for application in the mining industry supercondensators storage of renewable energy

Mag. D.TIMOFEEV (Mining Institute NUST "MISiS")

The use of hydrogen as a renewable source of energy in the Republic of Sakha (Yakutia)

Mag. A.OSPANOV (Mining Institute NUST "MISiS")
The choice of generators for Autonomous power plants

Mag. G.DORJIEV (Mining Institute NUST "MISiS")
Development of a model of an electric network with voltage up to 1 kV with various systems of grounding

E. V. ANTIPOV, A. M. ISTOMIN ("SHELAH"), G. M. PETROV (Mining Institute NUST "MISiS")
The study of electric networks of illumination in underground mining for industrial enterprises

Mag. A.CHERKASOV (Mining Institute NUST "MISiS")
Analysis of various sources of electricity from the point of view of energy efficiency

6. ENRICHMENT AND DEEP PROCESSING OF MINERALS

Moderators: RAS Academician V.A. CHANTURIYA,
Professor T.I. YUSHINA,
Secretary Engineer P.R. MALOFEEVA

V.A. CHANTURIA, I.V. SHADRUNOVA (IPKON RAS), O.E. GORLOVA, N.N. OREHOVA (Nosov Magnitogorsk state technical university)

Formation of resource-saving technologies of processing of secondary raw metal-based adaptation of the principles

V.A. BOCHAROV, V.A. IGNATKINA, T.I. YUSHINA, E.L. CHANTURIA
(Mining Institute NUST "MISiS")

Technology of complex processing of non-ferrous metals on the basis of deep dissection of mineral components

I.M. PETROV (Market research group "INFOMINE"),
T.I. YUSHINA (Mining Institute NUST "MISiS")

Analysis of the degree of "criticality" of the Russian software industry minerals beneficiation products

G.V. SEDELNIKOVA (Central research institute of geological prospecting for base and precious metals (TsNIGRI)

Progress of gold and copper biohydrometallurgy

A.A. ABRAMOV (NUST "MISiS")

Ways to improve the efficiency of the flotation

P.I. PILOV (National Mining University (NMU), N.S. PRYADKO (Institute of Technical Mechanics of NASU)

Scientific bases of stage ore grinding

L.A. ANTIPENKO, A.E. KRAVCHENKO (LLC "Sibniugleobogaschenie")

Current state and prospects of development of water-slurry systems coal preparation plants

L.A. ANTIPENKO (LLC "Sibniugleobogaschenie")
Technology and equipment for coal preparation

L.A. ANTIPENKO (LLC "Sibniugleobogaschenie")
Research and evaluation of coal washability

T.N. ALEKSANDROVA, A.V. AFANASOVA (Saint-Petersburg Mining University)
Precious metals in carbonaceous sulfide ores and its beneficiation prospects

G.I. GAZALEEVA (OJSC «URALMEKHANOBRR»)
Modern mineralogical methods using for the creating beneficiation technology of wastes for example “Donskoy GOK

S.V. TERESHCHENKO, D.N. PAVLISHINA (MI KSC RAS)
X-ray fluorescent separation of poor apatite-containing ores

E.L. CHANTURIYA (Mining Institute NUST “MISiS”), E.S. ZHURAVLEVA (IPKON RAS)
Using electrochemical effects at the beneficiation of magnetite concentrates

E.I. GEDGAGOV, A.V. TARASOV, V.G. GIGANOV, M.A. LUNKOVA (OAO “Research Institute of Non-Ferrous Metals “GINTSVETMET”)
Prospects of the use of sorption processes in the technology of obtaining high-purity rare earth metals during the processing of the total concentrates

V.V. MOROZOV, B.A. VISNYAK, T.S. NIKOLAIEVA
Combined model-based control of the drying-filtered complex

B.V. KOMOGORTSEV, A.A. VARENICHEV (Russian Institute for Scientific and Technical Information of Russian Academy of Sciences (VINITI))
Improving technology flotation fine sulfide gold ore

N.Y. SVECHNIKOVA, E.A. IGUMENSHEVA, N.S. KONOVNITSYNA,
O.G. KUKHARENKO (Nosov Magnitogorsk State Technical University),
A.A. LAVRINENKO (Institute of Complex Exploitation of Mineral Resources of the RAS)
Study of thermal properties of coal flotation tailings for use as a complementary fuel in the furnaces of STAP

A.A. KAYUMOV (Mining Institute NUST “MISiS”)
Study of contrasting flotation properties mono-mineral fractions of non-ferrous sulfides and iron

T.N. MATVEEVA, N.K. GROMOVA, T.A. IVANOVA, L.B. LANTSOVA (IPKON RAS)
Adsorption of components of plant extracts on the sulfide minerals in the flotation of complex gold ores

A.O. GAPCHICH (IPKON RAS)

Using prospects of thermomorph polymers diphenylphosphine group in the process of gold ore flotation

D.V. SHEKHIREV, B.B. SVAYLOV, A.B. SMAYLOVA, B.N. NAMZHILOV (Mining Institute NUST "MISiS")

Calculation of sampling errors with rare material point inclusions

D.V. SHEKHIREV, S.A. MELNIKOVA (Mining Institute NUST "MISiS")

Simulation of mass transfer in the separation column flotation cells

G.V. SHIRMAN (Mining Institute of the North, Siberian Branch, Russian Academy of Sciences (IGDS SO RAN))

Improving the efficiency of the disintegration of clayey sands

O.J. OCHOSOV (Mining Institute of the North, Siberian Branch, Russian Academy of Sciences (IGDS SO RAN))

Separation by density-particles in a centrifugal concentrator new type vibration due to the use of directional vibrations

I.A. MATVEEV (Mining Institute of the North, Siberian Branch, Russian Academy of Sciences (IGDS SO RAN))

Modelling of flattened particles moving on the inclined surface upstream water

V.V. BIRUKOV (MI KSC RAS)

Development of a mathematical model for magnetic-gravity separation of mineral ferromagnetic suspensions' components

V.V. BIRUKOV (MI KSC RAS)

Mathematical modeling of drum drying of apatite concentrate

A.S. OPALEV (MI KSC RAS), A.V. SHERBAKOV (AO "OLKON")

Improvement of technics and technology of enrichment of ferruginous quartzite in the JSC «Olcon»

A.S. OPALEV, M.S. KHOKHULYA, A.V. FOMIN, E.D. RUKHLENKO (MI KSC RAS)

Magnetite-hematite concentrate production from iron quartzites and stored tails based on mineralogical and technological researches

S.V. TERESHCHENKO, S.A. ALEKSEEVA, E.D. RUKHLENKO, I.P.
KREMENETSKAYA, I.A. MOSENDZ (MI KSC RAS)

On potential to process mining-induced phlogopite wastes

E.V. GOOSEN, S.M. NIKITENKO (SB RAS Kemerovo Science Center)
**Problems and perspectives of the natural resources integrated development
on the public-private partnership principles**

K.I. LUKINA (Moscow Polytech University)
Analysis study of filter fabrics for drying iron concentrate

(17: 30-19: 00) Laboratory of the Department of OPI
Round table on topical problems of mineral processing

P.P. SAS (MINING INSTITUTE THE FAR EASTN BRANCH OF RUSSIAN
ACADEMY OF SCIENCES)

**Problems and prospects of development of placer deposits using gateway
devices and jigs**

N.K. ALGEBRAISTOVA, O.Y. PERFILOVA, D.M. KOLOTUSHKIN, E.S. KOMAROVA
(Siberian federal university)

The material composition and technology of extraction of impact diamonds

A.A. MUKHTAR (Chemical and metallurgical institute by name of J. Abishev
(CMI name of J. Abishev)

**Development of technology for thermal-magnetic enrichment of brown iron
ores of the Republic Kazakhstan**

V.M. GUBAIDULLIN (Promstroyvzryv Ltd), V.V. ZYRYANOV
(Nanopowdertechology Ltd), A.V. SAMOYLOV (EverytagLtd)
On the issue of autoenrichment of granite quasi-micron fractions

O.A. YAKUSHINA, D.A. KOZHEVNIKOV, M.S. KHOZYAINOV, E.G.OZHOGINA
(Dubna University)

**Methodological features of rocks, ores and its products morphostructural
study for technological tasks' on X-ray CT**

O.A. YAKUSHINA, E. G. OZHOGINA, K. G. KRIVOKONEVA, I. G. BYSTROV, Y.M. ASTAKHOV, S.V. SOKOLOV, V.V. RYZHITSKIY, V.A. RASSULOV, V. T. DUBNICHUK (Dubna University)

Comprehensive mineralogical analysis of rare metals ores and products of their enrichment (methodological support)

A.A. LAVRINENKO, G.Y. GOLBERG, I.V. KUNILOVA, M.M. RADZHABOV (IPKON RAS)

Mechanisms of sludges dewatering by drainage on belt press filters

N.T. KISIEV ("MMC" Norilsk Nickel), N.B. KOKOEVA, L.A. VOROPANOVA (NKMMI STU)

Removing iron and copper ore processing at complex

T.M. BALDAEVA (Saint-Petersburg Mining University SPMU)

The efficiency of bulk minerals's vibration screening for different types of oscillations

N.A. LEONENKO (Mining Institute of the Far Eastern Branch of Russian Academy of Sciences)

The techniques of optimization of drilling and blasting on the gold ore field Albazino

N.A. LEONENKO (Mining Institute of the Far Eastern Branch of Russian Academy of Sciences)

Assessment of the current state of the study and use of the laser radiation in the processing of minerals

N.A. PERMYAKOVA (All-russian scientific-research institute of mineral resources named after N.M.Fedorovsky (VIMS))

The features of the behavior of REE in the hydrometallurgical processing of pyrochlore-monazite-goethite ores

V.A. TSUKERMAN (Luzin Institute for Economic Studies of the Kola Science Centre of Russian Academy of Sciences (IEP KSC RAN))

The process of milling of copper-nickel converter matte: the theoretical foundations and practices

A.L. SAMUSEV (IPKON RAN)

Leaching of gold from refractory mineral raw materials solutions chlorine

K.A. LEVCHENKO (State Higher Educational Institution "National Mining University" (NMU)

Possibility of stadia separation of magnetite concentrate

T.N. MATVEEVA, N.K. GROMOVA, T.A. IVANOVA, L.B. LANTSOVA (IPKON RAS)

Possibility of stadia separation of magnetite concentrate

L.Z. BYKHOVSKY, V.N. SOKOLOVA (All-Russian scientific research institute of mineral resources named after N.M. Fedorovsky (FGBI "VIMS")

Man-made mineral formations are the real sources of some building strategic rare metals

A.A. LAVRINENKO, D.V. MAKAROV, E.A. SHRADER, L.M. SARKISOVA, N.I. GLUHOVA, I.N. KUZNETSOVA (IPKON RAS)

Extraction of non-ferrous metals sulphides and PGM from copper-nickel ore of Monchegorsk region

WEN YAFENG, U.D. IZABAEV (Altynken Co. LTD), T.V. CHEKUSHINA, E.A. ZAVARUKHINA (IPKON RAS)

Reduce the negative effect of copper on the process of cyanidation of gold

WEN YAFENG, U.D. IZABAEV, A.K. UKUBAEV (Altynken Co. LTD), E.A. ZAVARUKHINA (IPKON RAS)

Introduction of technology of selective extraction of copper sulfides from gold concentrate

N.E. ANASHKINA (IPKON RAS)

Influence of energy pulse impacts on physico-chemical, structural and technological properties of diamond and kimberlite rock-forming minerals

G.A. ARYSTANOVA (Institute of metallurgy and ore beneficiation (IMO)

Comparative study of the effective methods for processing of technogenic mineral raw materials to produce gold concentrate

I.V. ALUSHKIN (Mining Institute NUST "MISiS", ZAO Thrane Teknikk), T.I. YUSHINA (Mining Institute NUST "MISiS")

Beneficiation of Tungsten ore by means of XRT-separation method

R.E. NIKIFOROV (ZAO Thrane Teknikk)

Application of Derrick Screens for Ash reduction in Coal Circuits

T.I. YUSHINA, A.M. DYMOV (Mining Institute NUST "MISiS")

Study the possibility of obtaining a masterbatch, with the total content of iron not less than 70% of silica and no more than 2.2% using a combination of ultrafine screening and mag-netic separation

A.G. VORONOV, O.L. DUDCHENKO, G.B. FEDOROV (NUST "MISiS")

Intensification of process of dissolution of rock salt in the acoustic field

T.I. YUSHINA, I.O. KRYLOV, E.V. HALUEVA, P.A.SYSA (NUST "MISiS")

Study on concentration of waste limonite ore

T.I. YUSHINA (Mining Institute NUST "MISiS"), O.A. MALYSHEV, S.A. SCHELKUNOV (OOO "Innovative resource", K.S. POPOVA, VU VAN TOAN, KALIM SEBASTIAN DELIA YANES (NUST "MISiS")

Features of flotation of nonferrous metal ores and carbonaceous materials reagents based on acetylene alcohols

S.E. LEVKOVETS (OJSC "Square Plus"), V.I. RYABOY (OJSC "Mekhanobr-Orgsintez-Reagent"), T.I. YUSHINA (Mining Institute NUST "MISiS"), L.M. RUD'MAN (LLP "Altyntau Kokshetau", the Republic of Kazakhstan)

Perfection of technology of enrichment of gold ore the Vasilkovsky Deposit with the use of modified dialkyldithiophosphates

L.N. KRYLOVA (NUST "MISiS")

The use of immobilization of microorganisms to improve the leaching of metals from sulfide ores

KHURELCHOLOON ISHGEN («ERDENET mining corporation», A.M. DUDA, V.V. MOROZOV (NUST "MISiS")

Development of control system crushing process at the processing plant of "erdenet mc"

I.V. PESTRYAK, ASP. S.P. LEZOVA (NUST "MISiS")

Development schemes of treatment and conditioning of water industrial units of mining and processing plant

V.V. RAPSHIS, V.V. MOROZOV (NUST "MISiS")

Improving of optical analysis procedure of mineral composition of copper ore

GANBAATAR ZORIGT, ERDENEZUUL JARGALSAYKHAAN («ERDENET mining corporation», NUST "MISiS")

Development of algorithms optimization mode of enrichment copper-molybdenum ores on the basis of economic and statistical models of processes

7. ECOLOGY. RESOURCE SAVING

Session 7.1.

Moderators:

MINING ECOLOGY

Professor A.V.MYASKOV,

Professor I.V.SHADRUNOVA,

Secretary

Associate Professor T.V.CHEKUSHINA

A.V. MYASKOV (Mining Institute NUST "MISiS")

**The prospects of development of mining in the 21st century
and the education for the mining**

I.V. SHADRUNOVA (IPKON RAS), O.E GORLOVA (Magnitogorsk STU),

E.V. KOLODEZHNAYA (CJSC "Ural-Omega")

**Processes centrifugal impact disintegration in the schemes of dry mineral
processing**

N.N. MELNIKOV, V.M. BUSYREV, O.E. CHURKIN (MI KSC RAS)

Valuation of reserves and efficient management of mining-induced deposits

S.P. MESYATS, S.P. OSTAPENKO (MI KSC RAS)

**A methodological approach to estimate aerosol mining-induced pollution
based on satellite observation data in the context of the Murmansk mining
region**

S.P.MESYATS, M.YU.NOVOZHILOVA, N.S.RUMYANTSEVA (MI KSC RAS)

**Investigation of dynamics of formation of phytocenosis with a structure of a
surrounding natural landscape when restoring disturbed lands with the aim to
give them back to biosphere foundation**

E.N. LEVCHENKO (FSUE "IMGRE")

**Technogenic mineral raw materials: the material composition and
technological properties, geological and technological mapping**

E.G. OZHOGINA, E.A.GORBATOVA (VIMS)

**Problems of processing of technogenic raw materials.
Mineral support**

A.A. PETROV, A.M. ZOTOV (MI KSC RAS)

**Informational provision of investigation complex for developing rare-earth
and rare-metal deposits at the Northern-Western Arctic in reliance with the
ecological strategy of mining development**

L.V. SHUMILOVA («TRANS-BAIKAL STATE UNIVERSITY»)

The composition and properties of waste gold mining and metallurgical complexes and innovative technology of their processing on the example of Zabaykal region

G.I. GAZALEEVA (OJSC «URALMEKHANOBRR»)

Modern mineralogical methods using for the creating beneficiation technology of wastes for example "Donskoy GOK"

G. SEDELNIKOVA (T_SNIGRI)

Non-cyanide gold leaching reagents and prospects of its using

P. KOZLOV, V. BANNIKOV (V.I. VERNADSKY SGM)

Development of dry mineral processing technologies to minimize environmental damage in mining regions

Y. WEN, U. IZABAEV (ALTYNKEN CO.LTD, Kyrgyzstan),
E.A. ZAVARUKHINA, (IPKON RAS)

Ecological aspects of introduction of technology of selective extraction of copper sulfides of gold-bearing concentrate at enrichment of ore deposits "Taldybulak Levoberezhny"

Y. WEN, U. IZABAEV (ALTYNKEN CO.LTD, Kyrgyzstan),
E.A. ZAVARUKHINA, (IPKON RAS)

Reduce of the negative effect of copper on process cyanide leaching process gold

Y. WEN, U. IZABAEV, A. UKUBAEV (Altynten CO.LTD, Kyrgyzstan),
E.A. ZAVARUKHINA (IPKON RAS)

Introduction of technology of selective extraction of the copper from the sulphide concentrates containing gold

V.A. TSUKERMAN, E.S. GORYACHEVSKAYA (IEP KSC RAS)

On the environmental performance of mining companies in the Russian Arctic

D. OCHIROVA (PFUR)

Monitoring geoecological condition develops territory of oil and gas fields in the Arctic

V.I. PAPICHEV (IPKON RAS)

The indicator of integral load for determining the best available technology

A.S. TKACHEVA (PFUR)

Economic aspects of the implementation of the best available technologies in cement production

N. PALYANOVA (MGUA O.E. Kutafin)

Improvement of normative-legal base of Russia for ensuring sustainable ecological and economic development of the coal industry

A.I. PETROVA (IPKON RAS)

Criterion assessment of ecological danger ranking for mining enterprises

V.A. UVAROVA («ScC VostNII»)

Control of fire and toxic properties of polymer materials used in mines

V.A. UVAROVA («ScC VostNII»)

Environmentally friendly polymer materials in the new technologies of mining

A.A. DOBRYNIN., I.A. DOBRYNIN ("PIROVZRYV")

Factors affecting the ecological state of the environment by explosions of charges of industrial explosives

O.B. KOTOVA, D.A. SHUSHUKOV (INSTITUTE OF GEOLOGY RAS)

New technologies of fly ash utilization: synthesis of zeolites

M.N. SABANOVA, I.V. SHADRUNOV (IPKON RAS),

N.N. OREKHOVA, I.V. AKULENKO (MSTU)

Technological and ekologo-economic aspects of extraction of non-ferrous metals from clinker

T.N. ALEKSANDROVA (SAINT-PETERSBURG MINING UNIVERSITY),

K.M. GUMENICHENKO (PYOSAGRO)

Resource saving technologies for processing poor apatite-nepheline ores

E.A. GORBATOVA, V.A. BIGEEV, E.G. OZHOGINA, O.A. AKUSHINA, I.G. BYSTROV,

A.N. LEBEDEV, E.A. EMELYANENKO

Forecast quality assessment of metallurgical slag of JSC "Magnitogorsk metallurgical combine"

M.S. STEFUNKO (IPKON RAS)

Anthropogenic effects of cadmium and zinc on the ecosystem

L.V. SHUMILOVA (TRANS-BAIKAL STATE UNIVERSITY),
O.S. KOSTIKOVA («SILVER OF MAGADAN» (OMSUKCHAN)

The enhanced complex utilization of mineral raw materials on the example of silver-polymetallic ores of the «Goltsovoye»

O.S. KOSTIKOVA («SILVER OF MAGADAN», ZabGU)

The improvement of the management system environmental protection Omsukchan concentrator on the basis of complex use of raw materials.

O.E. SHESHKO (Mining Institute NUST "MISiS")

Comparative assessment of nature intensity of open pit dump trucks and diesel electric trucks

A.S. LESKOV (OOO "Kimkano-sutarsky GOK", «Trans-Baikalstate University»)

The implementation of the regional waste management Strategy of mining enterprises of this region

T. SKAKOVA (Moscow Polytechnic University)

Obtaining by a chemical dispersing the raw material for the production of refractories

A. TCHEMEZOV, E. HOLEWA (ESI SB RAS, INRTU)

Separation and recycling of mine methane as one of the areas of reducing greenhouse gas emissions in the coal industry

I.V. SHADRUNOVA (IPKON RAS), N.N. OREKHOVA, G.A. TARYBAYEV (MSTU)

Technical and economic assessment of the selective deposition of metals from miner and subdump waters

N.L. MEDYANIK (NOSOV MGTU)

Resource reproducing technology of acid mine water recycling from copper pyrite deposits

O. MISHURINA (NOSOV MGTU)

Flotation methods of extraction of metal-containing dispersed systems from aqueous solutions

G.A. YURGENSON (ZABGU)

Geoenvironmental and geothetical issues of historical mining areas of Transbaikalia

G.A. URGENSON (ZABGU)
Decorative-facing, semi-precious stones Transbaikalia

M.F. PROSTAKISHIN (Baikal Mining Compan», ZabGU)
Passing the commercial production of magnetite concentrate in the processing of ores of Udokan Deposit as an indicator of rational use of natural resources

E.V. LEONTYEVA (NOSOV MGTU)
Study of the mechanism of precious metals recovery in chloro-ammonium processing of old flotation tailings of copper-pyrite ores

O.S. KOROBOVA (PFUR), T.V. MIKHINA
(All-Russian research institute of Labour)
Economic aspects of environmental management and labour safety of the mining region

K.S. SAVIN (Lomonosov MGU)
To a question about the use of public-chasnoe partnership to prevent the negative effects of forest-peat fires

V.I. MURKO (TF Gorbachev KuzSTU)
Creation of a pilot plant for the preparation and combustion of coal-water slurry fuel with flue gas cleanin

M.D. MOLEV (SOP (branch) DGTU)
Comprehensive assessment of the status of the environment in coal mining areas

A.V. REZNICHENKO (Moscow Polytechnic University)
Features of chemical and electrochemical dispersion of metals and alloys as a method of obtaining ultradisperse oxide powders for the production of ceramics

A.E. VOROBEV, R.R. IBRAGIMOV, K.A. VOROBEV (PFUR)
Technology to enhance the sustainability of an array of during his long-lasting of the burning

O.S. KOROBOVA, D.V. FILIPPOVA (PFUR)
The impact of civil aviation facilities: case study of Sheremetyevo International Airport

O.S. DANILOV, A.V. BELOV, I.V. GREBENIUK
(Far Eastern Federal University)

Recycling ash waste with recovery rare metals as a key factor of social and economic and environmental well-being coal producing countries

V.I. LYASHENKO (GP «UKRNIPROMTEKHNOLOGII», Ukraine),
A.A. GURIN (KRIVOY ROG NATIONAL UNIVERSITY, Ukraine)

Rationale for environmental technologies and for dust control surfaces tailings hydrometallurgical production

L. PETROVA (IGMOF NAS of Ukraine)

Regional factors controlling the concentration and dispersion of metals in mining and mineral processing

T.V. CHECKUSHINA (IPKON RAS), A.V. YANKEVSKY, N.O. PIMENOVA (PFUR)
**Forecasting of ecological problems at the stage of pipelines
3D -modeling**

G.P. METAKSA, G.Zh. MOLDABAEV (A. Kunaev Mining Institute),
T.V. CHEKUSHINA (IPKON RAS)

On the mechanism of synthesis of hydrocarbons on the boundary of phases "water-air»

A.E. VOROBEV, R.R. IBRAGIMOV, K.A. VOROBEV (PFUR)

The main of the methods for improving the sustainability of the array during his long-lasting burning

E.A. SAVTSOV (TSTU)

Organization of technological control over the quality of solid fuels in thermal power plants

E.A. SAVTSOV (TSTU)

Modernization of the valuation system of emissions into the atmosphere from thermal power plants

A.E. VOROBEV, TEHERIN-BORYSENKO CHEM RUS (PFUR),
T.V. CHEKUSHINA (IPKON RAS)

The application of nanotechnology in environmental protection in the petroleum industry of Mexico

A.E. VOROBEV, TAHIR MUSA, K.A. VOROBEV (PFUR)

Features monitoring of oil pollution of the territories of the space-based images

V.P. MALYUKOV, A. MATENIN-TRAORE (PFUR)

Environmental problems in the development of oil fields on the shelf of the Gulf of Guinea

Session 7.2.

**ENGINEERING ENVIRONMENT
PROTECTION IN MINING**

Moderators:

*Professor E.A. ELCHANINIV,
Dr. Sci. (Engineering) Y.P. GALCHENKO,*

Secretary

Senior Lecturer N.P. UDALOVA

E.A. ELCHANINOV (Mining Institute NUST "MISiS")

The main directions of thermodynamic processes control in permafrost massifs during the industrial development of northern territories of Russia

Y. GALCHENKO, I.E. KIM (IPKON RAS)

On the development of ideas in the field of geotechnology nature similarity comprehensive development of mineral resources

R.G. MELKONYAN (Mining Institute NUST "MISiS")

Ecological problems of disposing of mining waste for the production of glass and building industry

L. M. MAKALSKIJ, A.V. KUHNO (NRU MPEI), O.M. TSEKHANOVICH («Gzhel State University») (GSU)

Mine water treatment to reduce the salt content jelektrorazrjadnymi methods

A.E. KOKOSADZE (SC «Institute Orgenergostroy»)

Lithosphere in the underground nuclear and hydropower

M.D. MOLEV (ISOP (branch) DGTU)

Improving the system of waste management of coal production

A.D. LAZARENKO, S.S. SIBAGATULLINA, E.I. KHABAROVA (Mining Institute NUST "MISiS")

Indicator and diagnostic potential of higher plants, suitable for use in the mining industry

D.V. VELICHKO, A.V. SELEZNEV (JSC VNIPIpromtehnologii)

Geomechanical support of tailings reclamation project of radioactive waste.

L.L. AFANASYEV (PlekhanovRussianUniversityofEconomics)

InnovativeDevelopmentStrategyofdevelopmentofundergroundspacetoimprove theecologyofmegacities

A.D. LAZARENKO, S.S. SIBAGATULLINA (Mining Institute NUST “MISiS”), E.I. KHABAROVA (MIREA)

Phytomeliorative potential of higher plants suitable for use in the mining industry

L.N. LIPINA, V.I. USIKOV (MI FEB RAS)

Use of geoinformation technologies for the assessment and prediction of environmental protection

V.I. LYASHENKO (GP «UkrNIPIIpromtehnologii»)

Radiation safety, and nadezhnoe systemnoe prybornoe provision

V.P. MALYUKOV, D.G. SUPRYAGA (PFUR)

Protection of the environment in the development of low productivity gas condensate fields with horizontal wells

A.A. KHAZYKOVA (PFUR)

Features of environmental safety monitoring in the Republic of Kalmykia

G. KAZBEKOVA (Aktobe University named after S.Baishev)

Backwash oil field water cleaning up with borehole leach uranium

S.V. CHMYKHALOVA, S.S. SIBAGATULLINA (Mining Institute NUST “MISiS”)

Assessment of technogenic environmental capacity of Bashkortostan

S.V. CHMYKHALOVA, S.S. SIBAGATULLINA (Mining Institute NUST “MISiS”)

Analysis of indicators of the ecological state of the environment (on the example of Republic Bashkortostan)

S.V. SHENTSEVA (Mining Institute NUST “MISiS”)

Assessing the impact of mining on the environment, a systematic approach.

V.P. MALYUKOV, V.D. FEDIN (PFUR)

Environmental Engineering in the development of Prirazlomnoye oilfield offshore

T.A. KHARLAMOVA (NUST “MISiS”), E.A. BEDRETDINOVA (IIDM RAS)
Cleaning droundwater from iron(II) cftions electrochemically generated oxidants

K.S. KOLIKOV, A. URUZBIYEVA (Mining Institute NUST "MISiS")
Features of the forecast of atmospheric pollution mining objects

M.S. VINOGRADOV (Bauman Moscow State Technical University)
**Intensification of flotation treatment of industrial wastewaters with the use
of conditioning chambers**

K.S. KOLIKOV, N.P. UDALOVA, P.P. GANGAN
(Mining Institute NUST "MISiS")
**Using cindery waste as material backfill for mine. Problems and ways of
solutions**

B. KSENOFONTOV, E. ANTONOVA
(Bauman Moscow State Technical University)
**Development of a setup for pumping out and treatment of wastewater from
quarries**

8. GEOINFORMATICS. AUTOMATED SYSTEMS

Session 8.1. AUTOMATION OF TECHNOLOGICAL MINING PROCESSES AND PRODUCTION.

***Moderators: Dr. Sci. (Engineering) A.A. LAVRINENKO,
Professor L.D. PEVZNER,***

Secretary Associate Professor N.V.OSIPOVA

M.E. KOZLOV, L.D. PEVZNER (NUST “MISiS”)

Automatic control system of process of digging career excavators with intelligent adaptive control

A.A.LAVRINENKO (IPKON RAS),

V.P. TOPCHAEV, G.V.FEDIN (JSC “Soyuztsetmetavtomatika”)

The gravity system for the dosing of reagents in flotation of ores of nonferrous

A.O.ANPILOV (STI NUST “MISiS”)

The application of neural network technologies for the organization of indirect measurements in the control system of dewatering process of iron ore concentrate

N.V. OSIPOVA, V.T. SAMOYLOVA (NUST “MISiS”)

Automatic control system of process of wet magnetic separation of iron ore

E.N.GRISHCHENKOVA, M.G.MUSTAFIN (SPMU)

Spatial visualization of the displacement process using 3ds max scripting tools

KAUNG PYAE AUNG (NUST “MISiS”)

Simulation modeling of belt conveyor with twin-engine drive

N.V. OSIPOVA, D.V. PIPIYA (NUST “MISiS”)

The automatic control system of the pulp density in the stirrer TK-13 concentrator

L.V.MARKARYAN (NUST “MISiS”)

Analysis and modeling of the compression mechanism signals with methods of wavelet transform

V.A.PETROV (STI NUST "MISiS")

On adaptive speed PI-controller parameters adjustment of DC drive laboratory model

D.A.POLESHCHENKO (STI NUST "MISiS")

Study on experience of industrial use of ball mill fill level monitoring automated system

V.G.ULYANOV (ALROSA PJSC "Yakutniproalmaz" Institute)

Algorithm Design for Dynamic Formation of an Integral Criterion of Separation in X-ray Separators Fitted with Video Cameras

A.V.FOMIN (STI NUST "MISiS")

On neural network based adaptive control system application to reject disturbances influencing heating plants of ore mining and smelting industry

Y.A.TSYGANKOV (STI NUST "MISiS")

Ball mill identification on basis of plant industrial operation data

Y.A.CHEPRASOV (JSC "Razrez Berezovskiy")

Automating the process of optimal utilization of the conveyor KLM-4500

M.REUTER, M.KRACH, U.KIESSLING, JU.VEKSLER (Marco Systemanalyse und Entwicklung GmbH, Marco)

The fully automated, highly productive face with the marco "Digital Face" control system

Session 8.2 .

***INTELLIGENT GIS
MANAGEMENT OF MINING***

Moderators:

Professor I.O. TEMKIN,

Professor S.S. KUBRIN,

Secretary

Associate Professor I.S. BONDARENKO

I.O. TEMKIN (NUST "MISiS"), D.A. KLEBANOV (Company "VIST Group"),
S.A. DERYABIN, I.S. KONOV (NUST "MISiS")

**Development of the mechanisms for open pit mine robotized transport
objects interaction**

S.S. KUBRIN, D.A. MESHCHERYAKOV (IPKON RAS)

**The control system and monitoring of volume of gas of methane and its
concentration in the extinguished spaces and technogenic collectors**

S.S. KUBRIN (IPKON RAS)

**The implementation of Regional and local forecasts shock and the outburst
condition of a mine field with the Multifunctional monitoring system of
geodynamic and gas-dynamic state of rock mass**

A. M. VALUEV (NUST "MISiS")

**Technologies of generation and choice of logistic process scenarios for
operative control of a quarry operation**

E. I. ZHURAVLEV (IPKON RAS)

**Visualization of geodynamic phenomena in underground mining operations in
coal mines**

E. I. ZHURAVLEV, S. S. KUBRIN (IPKON RAS)

**Intelligent system for prediction of risk of dynamic phenomena at the
production sites of coal mines**

K. N. KOPYLOV (JSC "SUEK"), S. S. KUBRIN (IPKON RAS)

Matters of operational management of production site coal mine

V. V. DEGTEREV, S. S. KUBRIN (IPKON RAS)

Remote monitoring of dust content in mine workings of coal mines

D. KARAMYSHEV (JSC "VIST Group")

Radar system control the stability of pit walls. The role and purpose of the industrial safety of mining enterprises

T. TRUSHIN (JSC "VIST Group")

Automation of drilling and blasting. Current state and prospects of application of new technologies

G. POPOV (JSC "VIST Group")

Role in the application of the anti-collision technology career

S.V. SOLODOV, M. I. NEZHURIN (NUST "MISIS"), M. G. KRUGLOV (QC "Expert Index")

Conceptual model of the system of quality control of sheet metal

V. A. ANTONOV (The Institute of Mining UB RAS)

The methodology of GEO-information display experimental mining-technological regularities

V. V. KUPRIYANOV, O. MATSKEVICH (NUST "MISIS")

Parametric and nonparametric model prediction of emergency situations in underground mines

K. MUENDO (NTU Bogota)

Tasks of automation of processes of the tunnel loop tunnel construction in the XXI century

O. BORTNIKOVA, E. S. MOGIREVA (NUST "MISIS")

The use of simulation modeling for optimization of business processes

A. V. KOZLOV, O. E. FOMICHEVA (NUST "MISIS")

Using the mechanism of project tasks realization in the highly structured entities on the basis of multidimensional matrices

I. V. LUDVIG, E. S. MOGILEVA (NUST "MISIS")

Time-series analysis in problems of mining

A. A., LITVINOVA, O. E. FOMICHEVA (NUST "MISIS")

The introduction of intelligent systems and use of data in management of technological processes on the example of "1C: Enterprise 8"

A. L. MINULLIN, O. E. FOMICHEVA (NUST "MISIS")
Project planning in a highly structured entities on the basis of multi-dimensional matrices

I. N. SOROKIN, E. S. MOGIREVA (NUST "MISIS")
Development of deterministic and stochastic models for assessing investment risks

I. O. TEMKIN, A. AGABUBAYEV (NUST "MISIS")
Modern information technology and coal mining in the Russian Federation

TRAN NGOC FU, I. O. TEMKIN, I. S. BONDARENKO (NUST "MISIS")
Methods and models of operative assessment of design solutions in the construction of underground metro lines in Hanoi (Vietnam)

R. K. KHALKECHEV (NUST "MISIS")
Framework approach to development of the scientific researches automated systems in mining industry

A. M. CHUKOV, O. E. FOMICHEVA (NUST "MISIS")
Data mining in quality control problems of the educational process for the mining industry

I. MAZHIBRADA, I.V. BARANNIKOVA (NUST "MISIS")
Prediction of the probability of failure of the hydraulic system of single-bucket excavators

S. A. DERYABIN, I. O. TEMKIN, I. V. BARANNIKOVA (NUST "MISIS")
Model control of the automated vehicles in different technological and functional conditions

I. LEPIKHOV (NUST "MISIS"), S. S. KUBRIN (IPKON RAS)
Modeling of the treatment phase

BUI TRUNG KIEN (NUST "MISIS"), S. S. KUBRIN (IPKON RAS)
The management of electrical equipment at a coal mine in the Republic of Vietnam

KAUNG AUNG PLAY (NUST "MISIS"), S. S. KUBRIN (IPKON RAS)
The simulation of the conveyor line coal mine

A. A. ALESHIN (NUST "MISIS"), S. S. KUBRIN (IPKON RAS)
Issues of transportation of liquid hydrocarbons from oil fields on the Arctic shelf of the Russian Federation

I. S. KONOV, I. O. TEMKIN (NUST "MISIS")
On the possibility of postoroeniya 3-d map of the transport network career in auto mode

Session 8.3.

Moderators:

Secretary

COMPUTER-AIDED DESIGN IN MINING

Professor V.A. GORBATOV,

Professor A.E. PETROV,

Associate Professor A.O. ARISTOV

A.V. GORBATOV, M.V.GORBATOVA, S.S. GORBATOVA (NUST «MISIS», College of IT & Automated Control Systems)

Using the tools of discrete mathematics in the mining industry

A.E. PETROV (NUST «MISIS», College of IT & Automated Control Systems)

Network models of complex systems and non-plannar graphs

V.V. OVCHINNIKOV (NUST «MISIS», College of IT & Automated Control Systems)

Prospects for implementation in different types of economic activity of artificial intelligence

V.V. OVCHINNIKOV (NUST «MISIS», College of IT & Automated Control Systems)

Artificial intelligence in quality management systems

A.M. VALUEV (College of Economics & Industrial Management NUST «MISIS»)

Problem-oriented approach for optimization methods implementation as add-ons to software systems of mining enterprises design

V.M. EREMIN, A.M.BADALYAN ("INEMDorTrans" Ltd.)

Evaluation of the efficiency of intelligent transport systems based on computer simulation of the operation of the road network for the transit traffic flows

V. B.SKAZHENIK (Donetsk National Technical University)

Complex of software for modeling of mining systems

A.V. TSUKANOV (АО ВНИПИИПТ)

Custom CAD software for Open Cast Mining based on Autocad Civil 3D

A.O. ARISTOV (NUST «MISIS», College of IT & Automated Control Systems)

Computer simulation and visualization Transport Logistics of sand quarry on the basis of quasi-cellular nets

E.E.KARPOVICH (NUST «MISIS», College of IT & Automated Control Systems)
Modeling of software reliability characteristics

KALITIN D.V. (NUST «MISIS», College of IT & Automated Control Systems)
Graph-theoretic approach to the problems arising from the formalization of object lifecycle

O.L. DERBENEVA, R.S. KUZMINA (NUST «MISIS», College of IT & Automated Control Systems)
Computer-Aided design of work sites with a zero balance earthworks in Autodesk AutoCAD Civil 3D

GORBATOVA M.V. (MEPhi), PROKHOROVA L.V. (NUST «MISIS», College of IT & Automated Control Systems)
The use of numerical methods in engineering calculations

PROKHOROVA L.V. (NUST «MISIS», College of IT & Automated Control Systems)
Stages of IT-products

K.V. MORGACHEV (NUST «MISIS», College of IT & Automated Control Systems)
Features of the test bench for collision with other objects

A.E. BURAEVA (MOSCOW POLYTECH)
The research aspects of the use of micro and macromodelling traffic flows for decision support systems

Yanush R.M. (NUST «MISIS», College of IT & Automated Control Systems)
Computer-aided research systems at the stage of interviewing focus groups

E.O. SAVITSKAYA (NUST «MISIS», College of IT & Automated Control Systems)
Overview of modeling approaches evacuation enterprise employees during emergencies

A.Y. NAZIM (NUST «MISIS», College of IT & Automated Control Systems)
Using of Artificial Intelligence in Education

D.V. USTYUZHANINA (NUST «MISIS», College of IT & Automated Control Systems)
Expert systems in the practice of law

BOLTAEVA D.Sh. (NUST «MISIS», College of IT & Automated Control Systems)
3D- modeling and visualization of fire safety systems

S.A. UHANEV (NUST «MISIS», College of IT & Automated Control Systems)
Problem of enterprise automation equipment choosing

Yu.S. PAVLOVA (NUST «MISIS», College of IT & Automated Control Systems)
Problems of application of three-dimensional models of how elements of the technical documentation of devices

A.Yu. YAKOVLEV (NUST «MISIS», College of IT & Automated Control Systems)
Geometric modeling of reservoir oil industry facilities

T.V. TINGAEV (NUST «MISIS», College of IT & Automated Control Systems)
Route search problem in building complexes

E.M. SHISHLAKOVA (NUST «MISIS», College of IT & Automated Control Systems)

Problems of design and development of information support of metrology

T.V. EFREMOVA (NUST «MISIS», College of IT & Automated Control Systems)
Problems of design and simulation elements of intellectual commercial and industrial buildings

A.E. DUDKIN (NUST «MISIS», College of IT & Automated Control Systems)
Problems of design and automated production of specific products on the example of automotive part

M.A. GAVRILOVA (NUST «MISIS», College of IT & Automated Control Systems)
Problems of design and automated production of molds for casting jewelry

I.B. DIACHKOV (NUST «MISIS», College of IT & Automated Control Systems)
Problems of designing of mining enterprises of power supply systems

Session 8.4.

TECHNICAL MEANS FOR MINE SAFETY

Moderators:

*Professor S.Z. SHKUNDIN,
Professor V.V. KUDRYASHOV,*

Secretary

Associate Professor V.V. STUCHILIN

S.Z. SHKUNDIN, L.E. BAKHAROV (NUST “MISiS”)

Integral anemometry - a breakthrough in the coal mines ventilation control

V.V.KUDRYASHOV, E.S.IVANOV, T.A. SOLOVEVA (IPKON RAS)

Hydrothermal chemical reagent treatment of coal array – a method for reducing dust formation and strength of coal

A.A. SIVKOVA, M.V. KOLISTRATOV, M.S. ANISIMOVA (NUST “MISiS”)

Module for the analysis of lighting in the workplace

V.V. STUCHILIN (NUST “MISiS”)

Features of designing of automated systems of safety of underground productions

A.I. DYACHENKO (Prokhorov General Physics Institute, Russian Academy of Sciences, Institute of biomedical problems, Russian Academy of Sciences)

Role of respiratory flow dynamics in biomechanics of respiratory and cardiovascular systems: why to preset and control breathing pattern

Y.E.BABICHEV, S.Z. SHKUNDIN (NUST “MISiS”)

Training of engineers in the industry safety support in information systems sphere

V. A. RUMYANTSEVA, D. S. BELIKOV (NUST “MISiS”)

Aeroacoustic interaction in a laminar flow modeling

A.A. ZHERDEV, M.T. CHAPANOV (NUST “MISiS”)

Changes Effectiveness Analysis in Mining Safety Requirements

V. SH. BERIKASHVILY (NUST “MISiS”)

Electric generators on the base strong stabile magnets.

V.V. STUCHILIN, D. RUDAKOV (NUST “MISiS”)

Development of the hardware of sensors of shock and inclination

P.N. TANTSOV (NUST "MISiS")

The estimation of the reliability of determining aerodynamic parameters of the mine ventilation networks by means of airflow measurements

V.V.KUDRYASHOV, E.S.IVANOV, T.A. SOLOVEVA (IPKON RAS)

Research of parameters of radiometric knot of sensors of a pyleotlozheniye

V.V.KUDRYASHOV, A.S. Kobylkin (IPKON RAS)

Influence of an arrangement of sensors of a pyleotlozheniye in a ventilating shtrek on sedimentation of dust in them

A. AFONASEV (NUST "MISiS")

The analysis and realization in practice of the existing theoretical methods of an integrated anemometriya

S.V. DANILCHENKO (NUST "MISiS")

Developing CAD Systems for Integrating Anemometers Used in Mining Industry

A.A. ZHERDEV (NUST "MISiS")

Modern software development methodologies overview

N.A. MAXIMOV, Y. B. SKLEYMIN (MAI)

The scheduling algorithm of work of a complex of technical means and its application for capacity planning of equipment plant for production of pipes

V.V.KUDRYASHOV (IPKON RAS)

Calculation of a share of the particles which have arrived from a radiation source on the detector in radiometric knot of the sensor of a pyleotlozheniye

S. I. BUYANOV, V. A. RUMYANTSEVA, A. YU. DMITRIEVA (NUST "MISiS")

Piezoelectric Transducers of Acoustic Anemometer Sensor Modeling

T.S. SHITIKOVA, YU.P. PONOMAREVA (NUST "MISiS")

Technique estimation of students progress in semi-semester certification in NUST "MISiS"

V.V. STUCHILIN, E.V. PARFENOVA (NUST "MISiS")

Methods of search of optimal hardware solutions in systems of safety

R. MURIN (NUST “MISiS”)

Developing remote control information systems for city lighting

Y. LYAMIN (NUST “MISiS”)

Developing mobile applications for various lighting control systems

S.V. GLUKHOV (NUST “MISiS”)

Character recognition methods which are received from the mobile device

V.V. KORYAKIN (NUST “MISiS”)

Algorithms stabilization speed of the conveyor when moving the plastic mass.

S.Z. SHKUNDIN, M.V. HIVRIN (NUST “MISiS”)

Information channel optimisation in the polyfunctional system for mine safety support

M.V. KOLISTRATOV (NUST “MISiS”)

The method of determining the aggregate state of the metal in the smelting

A.T. YARULLIN, A.A. SIVKOVA (NUST “MISiS”)

Software for remote monitoring and management of lighting control system

V. SH. BERIKASHVILY (NUST “MISiS”)

Noncontact electric current sensor for high voltage nets on the base domain structure of ferromagnetic films/

V. SH. BERIKASHVILY (NUST “MISiS”)

Creation hair cleaning system on coal mines.

I.V. NEMIHIN (NUST “MISiS”)

Removing noise from images and video

O. L. DUDCHENKO, G.B. FEDOROV (NUST «MISIS»)

The use of currents of low frequency to determine the location of the wells from the mine workings.

A.V. KARPISHUK (NUST «MISIS»)

Distributed computing in simulating fires in mines

9. ECONOMICS AND MANAGEMENT OF MINING PRODUCTION.

Session 9.1.

MINING FINANCE AND MANAGEMENT

Moderator:

Professor M.K. PESHKOVA,

Secretary

Senior Lecturer D.S. KIRYUSHIN

M.Kh. PESHKOVA, G.V. FEDOROVA, N.V. GALIYEVA, Zh.K. GALIYEV (NUST
"MISiS")

Management of negative external effects on the industrial enterprises

M.V.BUKETA (branch of JSC "SUEK-Krasnoyarsk" "Borodino PTU")

The development of responsibility managerial staff in the organizational structure of transport mining companies

K.I.DYACHENKO, L.S.PLAKITKINA (THE ENERGY RESEARCH INSTITUTE OF
THE RUSSIAN ACADEMY OF SCIENCES)

The prospects for the coal industry, given the trends of plumcot GDP of the countries preparability

M.A.ELISEEVA (CDB Corall)

Development Risk assessment parameters for objects of mining

B.S.MADJIDOV (Joint Tajik-Canadian Limited Liability Company "Aprelevka")

Analysis of MSB for gold and silver (precious metals) in Tajikistan

M.M.MISURA (NPO "GEOSPETSSTROY")

Improving the process of enrichment and deep processing of minerals

I.P.SAVENKO («SUEK-Kuzbass»)

The economic security strategy as a tool for sustainable development integrated coal mining companies

V.A.TSUKERMAN, V.S.SELIN, E.S.GORYACHEVSKAYA (Luzin Institute for
Economic Studies of the Kola Science Centre of Russian Academy of Sciences
(IEP KSC RAN)

The main challenges in the innovative development of mining corporations of the North

A.V.TCHEMEZOV, L.N.TAKAISHVILI, A.D.SOKOLOV
(Melentiev Energy Systems Institute of Siberian Branch of the Russian
Academy of Sciences (ESI SB RAS))
**Prospects for exports of coking coal of Eastern Siberia and the Far East to
Japan**

A.S. CHAADAEV, I.V. ZYRYANOV, O.N. SHALATOVA
(Yakutian Diamond Industry Research and Design Institute of ALROSA PJSC
Yakutniproalmaz Institute)
**Yakutniproalmaz Institute's Experience in Mastering of the Novel ISO
9001:2015 Requirements**

L.I.SHULYATIEVA (Murom Institute of Vladimir State University)
**Economic substantiation of expediency of investments in mining complex coal
deposits**

D.A.RAIKOVA, T.V.TVERDOHLEBOVA (Siberian Federal University (SFU)
SIE OOO SFU «UBK»)
**Motion and time study utilization as an approach of estimation of ore mining
and smelting equipment usage efficiency**

A.A.PETROSOV, A.S.NASONOVA (NUST "MISiS")
Problem of long – term forecasting uranium prices

I.A.BAKHTEREVA (NUST "MISiS")
Choice of development strategy Polyus Gold

ZH.A.FRANKEVICH, A.Y. GAGARINA (NUST "MISiS")
Risk analysis of the investment project and its evaluation methods

D.Y.SAVON, S.I.LAPATINA (NUST "MISiS")
**The economic justification of introduction of multiple-inclined elevator
installation on trucks AO "Kovdor GOK"**

D.V.LATYPOV
(Institute of Complex Exploitation of Mineral Resources Russian Academy of
Sciences (ICEMR RAS))
**The principles of economic management system in enterprises for the
production of natural building materials**

M.M. LATYPOVA (NUST “MISiS”)

The tasks of improving the management system in the mining enterprises industry of construction materials

Y.N.LOZOVSKAYA, E.P.GRABSKAYA, I.M.BOGDAN (NUST “MISiS”)

Efficiency evaluation of Application of the Concept of Strategic management by costs of the entity

Y.N.LOZOVSKAYA, M.V.Mikhaylov (NUST “MISiS”)

Modern Management Concepts Production: Merits and Demerits

Y.N.LOZOVSKAYA, A.S.NOVIKOV (NUST “MISiS”)

The Analysis of Criteria of Methodological Assessment of the Contract Organization Considering Ecological Indicators of Activity

Y.G.SOLOVYEVA, ZH.A. FRANKEVICH (NUST “MISiS”)

Analysis of the planning system of the cost price of products and ways of its reduction

E.V.SHANGARAEVA (NUST “MISiS”)

Justification of methodical approach on formation of ways of increase in financial stability in the conditions of JSC «Alrosa» (PJSC)

A.M.VALUEV (NUST “MISiS”)

Hybrid models and methods for dynamical resource sharing in mining project scheduling

V. KUBINSKI, E. KUBINSKA-YABZON, A. PETROV, D. SALA
(AGH University of Science and Technology in Cracow, Poland)
Risk analysis in the mining industry, related to work safety

O. STEFANOVSKAYA (National Research Irkutsk state Technical University)
Improving the competitiveness of the coal companies through innovation

O. KAIMONAVA (National Research Irkutsk state Technical University)
Trends in the development of the coal industry in Eastern Siberia

Session 9.2.

***TECHNICAL REGULATION IN THE FIELD
OF SOLID MINERAL FUELS***

Moderator
Secretary

*Professor S.A. EPSHTEIN,
Principal Engineer I.M. NIKITINA*

G.P. SIDOROVA, D.A. KRYLOV (Transbaikal State University, National Research
Centre "Kurchatov Institute")

Problems of radiation hazards in coal energy

L.A. ANTIPENKO (OJSC Sibniiugleobogascheniye)

Methods of study of coal washability

N.V. ZHURAVLEVA, R.R. POTOKINA (OAO Zapadno-Sibirskii Ispytatel'nyi
Tsent), Z.R. ISMAGILOV (Institute of Coal Chemistry and Chemical Materials
Science, Siberian Branch, RAS)

**Study of macro- and microcomponents distribution in Kuzbass coal waste
from mining and processing**

S.YU. FEDOROV, LIBOR VACEK, K.A. KHANIN, R.V. ROGOZIN
(LLC ENELEX RUSSLAND)

Designing and construction of complex systems of coal quality management

A.V. TCHEMEZOV (Melentiev Energy Systems Institute of Siberian Branch of
the Russian Academy of Sciences)

**Development of the Russian coal industry in the framework of reducing
greenhouse gas emissions**

S. DYSKIN (SIEBTECHNIK, Germany)

**Quality control of solid mineral fuels by means of an automatic system of
sampling and sample preparation**

E.E. BARABASHEVA, T.O. GUSHINA (Transbaikal State University)
Hypothesis and methods the conformational analysis of coal-bearing strata

E.V. ULYANOVA, O.N. MALINNIKOVA, I.V. ZVEREV, M.O. DOLGOVA (Institute of
Comprehensive Exploitation of Mineral Resources of RAS)

**Connection between structure and mineral inclusions of fossil coals and their
outburst hazards**

E.V. ULYANOVA, M.O. DOLGOVA, I.V. ZVEREV (Institute of Comprehensive Exploitation of Mineral Resources of RAS)

The dependence of the rate of thermal decomposition of coals from their structure and mineral components

G.P. SIDOROVA, N.P. OVCHARENKO (Transbaikal State University)
Assessment of radiation state territory of The Urtuysk brown coal open mine

A.V. NASTAVKIN (SFEDU)

Coal mineral components and a problem of pneumoconiosis

V.L. GAVRILOV, S.A. BATUGIN, E.A. KHOYUTANOV (Chersky Institute of Mining of the North, Siberian Branch, RAS)

On additional evaluation of mineral impurities in coal seams at mining of deposits with complicated structure

L.N. TAKAISHVILI, A.D. SOKOLOV (Melentiev Energy Systems Institute)
Estimation of energy use possibility of coal deposits of Eastern Siberia and Far East

V.A. REVIN (Engineering Centre Irkutskenergo, LLC), S.L. IVANOV (OJSC Vostsibugol), V.B. KLEINERMAN (OJSC Vostsibugol), O.A. TERENTIEVA (OJSC Irbeysky razrez)

Unification of the experience for combustion of coals of Irbeysky razrez using boilers with liquid slag removing units of the Irkutskenergo Heating plant-6 branch

V.L. GAVRILOV, S.M. TKACH (Chersky Institute of Mining of the North, Siberian Branch, RAS)

On quality management of coals at their supply to the polar districts of Yakutia

M.YA. SHPIRT (Topchiev Institute of Petrochemical Synthesis, RAS), S.A. EPSHTEIN, N.A. FOMENKO (Mining institute, NUST MISiS), S.A. SILYUTIN, I.M. VOROBIEVA (Siberian Coal and Energy Company (SUEK))

On methods of Germanium contents determination in coals

S.YU. FEDOROV, LIBOR VACEK, K.A. KHANIN, R.V. ROGOZIN (LLC ENELEX RUSSLAND)

Methods and measures for prevention of coal spontaneous combustion at coal storage units and for coal quality conservation during storage

I.M. NIKITINA, N.A. FOMENKO, T.A. SOZONOVA
(Mining institute, NUST MISiS)

Perspectives for solid fossil fuels humic acids using at technology and environment protection

N.V. ZHURAVLEVA, T.N. VOROPAEVA, S.N. SHUSHUNOVA
(OAO Zapadno-Sibirskii Ispytatel'nyi Tsentr)

Status and perspectives of reference samples development for coals at OAO Zapadno-Sibirskii Ispytatel'nyi Tsentr

A.V. ZUBENKO (Thermo Techno LLC)

Thermo solutions for on-line coal analysis and for a control of industrial waste

S.A. NAZIMOV, L.E. KIM (CJSC «LECO M»)
LECO equipment for coal laboratories

A.D. IONIN (LLC "Fritsch-Laboratory devices")

Maintenance of sample preparation and particle size analysis

T.S. DUBEYKO ("LABPORTAL" LLC)
Modern equipment for coal laboratories

D.A.MOSKOVKIN (LLC "SARTOROS")
Weighing and moisture analysis. Criteria for the selection of scales and moisture analyzers. Anti-crisis solutions.

S.A. EPSHTEIN (Mining institute, NUST MISiS),
S.I. SHUMKOV (Russian Ministry of Energy)

**On the formation of the list of standards for technical regulations
"Requirements to coals and refined products"**

ROUND TABLE

«Maintenance of accuracy measurements using standard and instrumental analysis of coal»

**EXPANDED MEETING OF TECHNICAL COMMITTEE FOR STANDARDIZATION
"SOLID MINERAL FUEL"**

On security of TR TC "Requirements for coals and their products" by normative documents

Round table

***DEVELOPMENT COOPERATION:
INNOVATION, RISK, EFFECTIVENESS***

*Moderator
Secretary*

*Dr. Sci. (Engineering) V.E. ZAYDENVARG,
Cand. Sci. (Engineering) V.F. CHERKASOV*

A.B. JANOWSKY M.M. VERZILOV (Ministry of Energy, Russia)

A Greeting

On the state and prospects of development of the coal industry of Russia

V.E. ZAIIDENVARG (“Karakan Invest”, Center for Strategic Management and
Conjuncture of Raw Materials Markets, Russia)

Performance and risks - activities of modern mining

A.B. KOVALCHUK (“Russky Ugol”, Center for Strategic Management and
Conjuncture of Raw Materials Markets, Russia)

**Mining machinery and raw materials markets - innovation and efficiency:
modern conditions**

S.B. NIKISHICHEV (IMC Montan, Moscow, Russia-Great Britain-Germany)

**New solutions of IMC Montan in the optimization of production processes in
the mining industry**

U. DEBERNITZ, B. KORMUSH (CFT GmbH Compact Filter Technic, Germany)

**New developments in the field of mine ventilation and mine atmosphere dust
removal. Integrated Holding Solutions**

N. SCHARFENBERG, A. WELIKANOW (Tenova TAKRAF, Germany)

Experience of operating IPCC-system of Tenova TAKRAF

M. ZAKLIKA (BARTEC, Germany)

**Frequency converters using experience for conveyors drive units in mining
industry**

A.Y. KONDRASHIN, N.V. TKACHENKO (NOVOTRANS Ltd., Russia)

Operating experience of modern FLEXCO conveyor belts cleaning systems

A. ANDREEV

Presentation of Metals & Mining industry conferences program

Round table

ECOLOGICAL PROBLEMS OF UTILIZATION OF INDUSTRIAL WASTES FROM MINING AND MINERAL PROCESSING INDUSTRY

Moderator

Professor R.G.MELKONYAN

Secretary

Cand. Sci. (Engineering) O.V.SUVOROVA

R.G.MELKONYAN (Mining Institute NUST "MISiS")

Ecological problems of disposal of mining waste for the production of glass and building industry

R.G.MELKONYAN (Mining Institute NUST "MISiS"),

D.N.MAKAROV, O.V.SUVOROVA (KSC RAS)

Экологические проблемы использования техногенного сырья в производстве стекла и керамики

L.T.KRUPSKAYA (Pacific National University), R.G.MELKONYAN (Mining Institute NUST "MISiS"), V.P.ZVEREVA (), D.A. GOLUBEV (Pacific National University)

Ecological rehabilitation of the territories affected exposed objects accumulated environmental damage (tailings) as a result of past business activities of the former mining enterprises in the Far Eastern Federal District

D.A. GOLUBEV (Pacific National University)

R.G.MELKONYAN (Mining Institute NUST "MISiS"), L.T.KRUPSKAYA (Pacific National University), V.P. ZVEREVA, S.A. ABUBEKIROV, M.YU. FILATOVA

Рекомендации по использованию токсичных отходов хвостохранилищ в Приморском крае»

D.A. GOLUBEV (Pacific National University), R.G.MELKONYAN (Mining Institute NUST "MISiS"), L.T.KRUPSKAYA (Pacific National University), V.P.ZVEREVA (), S.A.ABUBEKIROV (), M.YU.FILATOVA ()

Recommendations on the use of toxic waste tailings in Primorsky Krai

N.K.RASTANINA, L.T.KRUPSKAYA (Pacific National University), V.P. ZVEREVA, D.A. GOLUBEV (Pacific National University) M.YU. FILATOVA

Assessment of human health risk associated with anthropogenic pollution from the waste of the former mining enterprise "Hrustalnensky GOK"

V.A.MORIN (Far Eastern Research Institute of Forestry)
**Restoring forest vegetation on technogenic contaminated waste mineral
processing areas in DFO**

Б.С. ЧЕРЕПАНОВ (ООО «Керапен»)
**Энергоэффективные и экологичные инновационные технологии в
промышленности строительных материалов**

Б.С. ЛИСЮК, А.А. СВИТЦОВ (Мембранный центр)
Хибинский нефелин для стройиндустрии

Y.M. SHERSHNEV, V.A. KUZNETSOV ("High Tech" company ICI)
A new generation of Building materials: stekloperlit and termoperlit

B.S. CHEREPANOV ("Kerapen" LLC)
**Energy-efficient and eco-innovative technologies in the building materials
industry**

B.S. LISYUK, A.A. SWITZ (Diaphragm center)
Khibiny nepheline for building industry

Round-table

***JOINT RESEARCH PROJECTS OF
MISIS AND THE REPUBLIC OF KAZAKHSTAN IN
MINING AND METALLURGICAL INDUSTRY***

***Moderator
Secretary***

*prof. MICHAIL FILONOV
NATALIA KOROTCHENKO*

Rector A.A. CHERNIKOVA (NUST "MISIS")

Opening speech

M. FILONOV (NUST "MISIS")

Applied science of NUST "MISIS"

A. AN (CONSORTIUM «R&IID»)

Grant programs for commercialization of research projects "Stimulation of productive innovation" and their support by the industrial enterprises of Kazakhstan.

T. MAGZUMOV (KAZAKHMYS Corporation)

Industrial tasks of various enterprises of "KAZAKHMYS Corporation"

V. TARASOV (NUST "MISIS")

Industrial Technology Engineering Center NUST "MISIS"

D. SHEHIREV (NUST "MISIS")

The technology of processing industrial waste chromite beneficiation

L. KRYLOVA (NUST "MISIS")

Biobleaching of chalcopyrite concentrates and copper and zinc concentrates from complex ores, biotechnology of arsenic removal from sulfide concentrates.

V. ZHURAVLEV (NUST "MISIS")

Extraction of copper from copper ores with the use of processes of leaching of concentrates with the subsequent cementation or sedimentation of copper

T. YUSHINA (NUST "MISIS")

Flotation of ores of non-ferrous metals with use of reagents on the basis of acetylene alcohols

S. KALUGIN (AL-FARABI KAZAKH NATIONAL UNIVERSITY)

New heterocyclic series of flotation reagents

V. CHESKIDOV (NUST "MISIS")

Complex assessment of engineering, geological, hydrogeological and ecological conditions of coal deposits for ensuring safe conducting mining operations

G. DJANGULOVA (AL-FARABI KAZAKH NATIONAL UNIVERSITY)

Improved method for determining the fractured portions of quarry slopes and strengthening

K. KOLIKOV (NUST "MISIS")

Environmental problems of the development of coal deposits

G. ABRAMYAN (NUST "MISIS")

Satellite support surveying network

A. OGNEV ("KAZZINC")

Industrial tasks of various enterprises of «KAZZINC» company.

G. SBORSHIKOV (NUST "MISIS")

Development of new technologies of extraction and processing of mineral raw materials and man-made structures

A. FEDOROV (NUST "MISIS")

Modernization of pyrometallurgical processes of receiving lead and zinc

A. PAVLOV (NUST "MISIS")

Searching for cheaper reducing agent instead of coke, coke braize and anthracite with preservation of all their properties

S. GALKIN (NUST "MISIS")

Release of titanium products for the oil and gas industry

Round table

***MODERN PROBLEMS OF DESIGN AND
CONSTRUCTION DURING UNDERGROUND SPACE
DEVELOPMENT OF THE SUBSOIL AND MAJOR
CITIES***

**Moderator
Secretary**

Professor A. N. PANKRATENKO,
Associate professor A. V. TOMILIN

**B. A. KARTOZIA (NUST "MISiS" Mining Institute)
The reform of Higher Mining Education (1958-2016)
1:00 – 5:00 p.m.**

**V. E. MERKIN (Scientific-Research Center of Tunnel Association of Russia)
Modern State and Prospects of Development of Metro and Tunnel
construction in Russia**

**A. N. PANKRATENKO (NUST "MISiS" Mining Institute)
Systematization of Terms and Definitions used in Modern Micro-tunnel
Construction Technologies**

**S. G. YELGAEV, S. V. MAZEIN (Tunnel Association of Russia)
The monitoring of Tunneling by shield ERV Technology without Upsetting the
Earth's surface**

**M. A. POTAPOV (Joint Stock Company "Transinzhstroy")
Current State and Prospects of Mining Operations Development at JSC
"Transinzhstroy"**

**I. M. PLANKOEV (Joint Stock Company "Soyuzspetsstroy")
Perspective Development of JSC "Soyuzspetsstroy" from 2017 to 2025**

**SERGEYEV S. V. (JSC "VIOGEM"), E. V. Kolontaevsky (Design center GSK
"Szakhtproject")
Problems of Design, Construction and Operation of Underground Structures in
Complex Geological Conditions**

**E. Yu. KULIKOVA (NUST "MISiS" Mining Institute)
Criteria Assessment of Geochemical Risk while Underground Space
Development**

**A. N. PANKRATENKO (NUST "MISiS" Mining Institute), A. S. SAMMAL, S. V.
ANTSIFEROV, P. V. DEEV (TSU)
The technological Features of Shield Tunneling Method in the Calculation of
the Tunnel Lining**

**B. I. FEDUNETS (Tunnel Association of Russia), F. A. BOYKO (JSC "Association
INGEOKOM")
Selection of Vehicles for High-speed Excavation of Metro Tunnels**

Round table

***PROSPECTIVE TRANSPORT SYSTEMS FOR MINING
QUARRIES IN ARCTIC AND NORTHERN TERRITORIES
OF THE RUSSIAN FEDERATION***

Moderators

*Corresponding Member of RAS V.N. ZAKHAROV,
Ph.D. A.S. CHAADAEV*

secretary

Dr. Sci. (Engineering) I.V.ZYRYANOV

I.V. ZYRYANOV, A. P. KONDRATYUK ("Yakutniproalmaz" Institute)
**Regarding efficient arrangement of multiple roadtrains for the delivery of ore
from distant deposits**

M.A. MAKEEV (JSC "VIST Group")
**The use of robotic technology for mining quarries in the Arctic and northern
areas of the Russian Federation**

G.L. AKKERMAN (Ural state University of railway engineering)
Features of design of a longitudinal profile of roads in Yakutia

O.V. GOLUBEV (Ural state University of railway engineering),
P.I. TARASOV (Institute of Mining of Ural Branch of RAS)
**Problems of use of dead rocks and production wastes of mining and
processing works for construction of thoroughfares**

O.V. GOLUBEV (Ural state University of railway engineering)
**Ways of development of multimodal transport corridors in the Arctic and
Northern territories of the Russian Federation (on the example of the region
Yakutia)**

D.N. ANDRYUSHENKOV (Uralsmashplant)
Selection of main parameters for loading and transport machine

I.V. ZYRYANOV ("Yakutniproalmaz" Institute), P.I. TARASOV
(Institute of Mining of Ural Branch of RAS), M.L.KHAZIN (USMU)
New specialized types of vehicles for Arctic

I.V. ZYRYANOV ("Yakutniproalmaz" Institute), P.I. TARASOV
(Institute of Mining of Ural Branch of RAS), M.L.KHAZIN (USMU)
Yakutia's transportation network

Round table

***MINING INDUSTRY IN RUSSIA: HISTORY
AND THE PRESENT***

*Moderator
secretary*

*Candidate Historical Sciences V.V. BOKAREV,
Candidate Historical Sciences V.B. KUZNETSOV*

**A.N. KORSHUNOV, O.V. POLAYKOVA (IBO NUST “MISiS”)
The mining education in Russia in the eighteenth century**

**V.B. KUZNETSOV (NUST “MISiS”)
The social status of the mining engineer in Russia in the nineteenth century**

**A.F. SYTNIKOV (NUST “MISiS”)
The development of the mining industry in the period of forced
industrialization**

**E.V. SAKHAROV (EDITION ERA)
The stakhanovism**

**V.V. LAVRIK (RUSSIAN PHILOSOPHICAL SOCIETY)
The fuel victory of the USSR over the Nazi Germany and its Axis**

**E.P. MAKSIMENKO (NUST “MISiS”)
The coal-mining industry of the USSR in poster graphic**

**V.V. BOKAREV (NUST “MISiS”)
Miner’s movement in Russia in 90 th years of the twentieth century**

**K.K. KUZMIN, L.S. OSIPOVA (NUST “MISiS”)
The role of information technology in training and education of the mining
engineers**