

II International Conference "Essays of Mining Science and Practice"

Anatolii Bulat^{1,*}

¹Institute of Geotechnical Mechanics named by N. Poljakov of National Academy of Sciences of Ukraine, 49005, Dnipro, Simferopolska Str., 2a, Ukraine

Dear colleagues, participants of the II International Conference "The Essays on Mining Science and Practice"!

We are pleased to let you know that the N.S. Polyakov Institute of Geotechnical Mechanics of the National Academy of Sciences of Ukraine is arranging the II International Scientific Conference "The Essays on Mining Science and Practice."

More than 200 participants are going to attend our conference. Geography of the participants covers such countries as Belarus, Bulgaria, Great Britain, Vietnam, Germany, Georgia, Egypt, Jordan, Spain, Kazakhstan, Kyrgyzstan, China, Peru, Poland, Slovakia, USA, France and Czech Republic.

The conference will be arranged as scientific workshops in the following fields: rock mechanics; mining engineering; mining geotechnics and engineering; methane recovery; mining of uranium and gold ores; mineral geology; mine safety and labor protection; mineral processing and dressing; mine power-generating complexes; environmental aspects of the mineral mining; management and economics of the mining enterprises; etc.

Our participants will have an opportunity to get acquainted with the latest scientific achievements of the scientists from different regions of our planet and the most promising trends of the mining science and practice development.

Among the areas of discussion are the problems of exploration of lead and zinc ores in Cao Bang Province, Vietnam; Pb-Zn-Ag exploration in Nash Creek, Canada; mineral exploration in the northwestern part of Sudbury, the Canadian shield; gold ore dressing; borehole mining of uranium ore; development of CBM; development of gypsum reserves; iron ore mining; underground and surface mining technologies; technologies for underwater mining of placers; underground coal gasification; opencast mining; development of technogeneous deposits; and others.

Economic and legal aspects of the mining industry will also be in the spotlight of the conference: use of block-chain applications for managing mining enterprises; civil legal aspects of recodification of intellectual property rights; credit rating of mining enterprises; and industrial property management.

At the conference, great attention will be paid to safety of mining operations: designing of digital technologies for remote safety monitoring systems; determining of degree of mining, technical and geological factor influence on the safety of mine gas-drainage system; monitoring results of hydroimpulsive loosening of prone-to-outburst coal seams; identification of zones under the impact of exogenous fire damaging factors.

The problems of applying methods of classical mechanics and mathematical modeling

*Corresponding author: office.igtm@nas.gov.ua

for the mining engineering will be also in the focus of attention: numerical modeling of acoustic vibrations generated around the circular cylinders; vibroinsulation of mining machines under the long-term cyclic loads; mathematical modeling of vibrating multifrequency screen as a dynamic system with distributed parameters; study of vibrations of a platform on isotropic supports excited by the pendulum; construction of discrete mathematical model of the conveyor transport traveling wave.

Of course, the pressing environmental problems will be touched upon: environmental and economic aspects of operation of roads exploited by the mining industry; ultrasonic treatment of waste waters; and others.

Special attention will be paid to small power-generating complexes: for example, problems of effective use of freon-steam turbines in the mine power complexes will be considered.

The issues of mining mechanics and mechanical engineering will be traditionally widely discussed: heavy vibrating feeders for transporting minerals; screens for processing mineral raw materials; mills for mineral grinding; mine hoisters; flotation and gravity dressing; conveyors; mine wagons; use of explosion energy in the mining practice.

The conference will give the floor not only to well-known theoreticians and industrialists but to young specialists as well who are just at the beginning of their way to the science.

I believe that our conference will become a good tradition as this format presents a platform for exchanging information on urgent issues of the mining science and a tribune for discussing the latest achievements of the Ukrainian and foreign scientific schools and for bringing to the audience at large the findings of scientists from our Institute and other Ukrainian and international organizations concerning the problems of mining science and practice and progressive development of the Ukrainian scientific potential with its integration into the global scientific space.

I wish fruitful work to all participants of our conference!