

BRICS International Youth Forum-Contest "Topical Issues of Rational Use of Natural Resources" at Saint-Petersburg Mining University, Russia

Dates of Youth Forum in Russia: 21-31 July 2020

Completed application submission deadline: March 25, 2020

Online application submission email: adean_ir@iitism.ac.in

1. **Concept:** The idea of holding the BRICS Youth Forum can be implemented within the framework of the UNESCO Centre's programme "Leaders of Science and Education of Mineral Resources Complex", the winners of which will receive a grant covering all costs of participation in the event, including transportation and accommodation costs. The detailed concept note is attached.
2. This is an internationally competitive programme among candidates from BRICS nations.
3. The participants from each BRICS country (Brazil, Russia, India, China, South Africa) are 100; total 500
4. Participating IITs: IIT (ISM) Dhanbad, IIT Kharagpur, and IIT (BHU) Varanasi.
5. Coordinating IIT: IIT (ISM) Dhanbad
6. The topics selected from the list for the three IITs are:
 - Oil, gas and hydrocarbons
 - Mining, geology, geophysics and geodynamics
 - Minerals processing
 - Economics (related to mining and minerals)
 - Ecology, sustainable nature management and environment protection (related to mining and minerals)
7. **Applicants:** Individuals - resident of BRICS countries - students, masters, post-graduate students, researchers under 35 years of age of both national and foreign universities - are eligible to participate in the Grant Competition
8. **Application procedure (for National level Screening):** An obligatory condition is the submission of an abstract of a scientific article of at least 2 pages and a recommendation of the sending university.
9. **Assessment procedure for National Level Screening:**
 - a) Article submitted by the candidates will be assessed on the following criteria:
 - (i) relevance of study;
 - (ii) research paper structure (thesis statement);
 - (iii) proper methodology of research;
 - (iv) article content relevant to the stated topic;

- (v) the author's own point of view;
- (vi) scientific novelty;
- (vii) practical value of the work;
- (viii) ability to draw conclusions;
- (ix) use of updated literature;
- (x) no fundamental errors

- b) Each applicant must send the required documents (Scientific paper and recommendation letter from HOD) along with a cover letter clearly mentioning: (i) Name, (ii) Date of Birth, (iii) Department, (iv) Roll/Admission Number, (iv) Topic from paragraph 6 under which paper has been submitted.
- c) Above documents to be submitted online to Prof. Biswajit Chowdhury, Associate Dean (International Relations) at adean_ir@iitism.ac.in latest by March 25.
- d) The National Committee will shortlist candidates for the International Stage by March 31, 2020
- e) Articles will be judged by a national committee consisting of experts in the area, including Dean(R&D) or his nominee from each of the three participating IIT. Director, IIT (ISM) Dhanbad will chair the committee. Associate Dean (International Relations), IIT (ISM) Dhanbad will be the Secretary of the committee.

10. International stage– the applications of the national stage winners will be transmitted to the UNESCO Centre for consideration and award of grants. Applications shall be examined by the Expert Council of the UNESCO Centre.

11. For any queries, please contact Prof. Biswajit Chowdhury at adean_ir@iitism.ac.in.

12. We look forward to receiving your applications at the earliest to ensure a good representation of Indian students and researchers in the BRICS Youth Forum.

Prof. Biswajit Chowdhury

Associate Dean (International Relations), IIT (ISM) Dhanbad
Coordinator, BRICS Youth Forum (India)



CONCEPT NOTE

BRICS International Youth Forum-Contest “Topical Issues of Rational Use of Natural Resources” Saint-Petersburg, 21-31 July 2020

Substantiation and topicality

Raw materials have played a crucial role in the development of civilization throughout human history. At present, with the depletion of easily accessible minerals and a sharp change in their demand and consumption patterns, the sustainable development of the world economy as a whole is impossible without the sustainable development of the mineral and raw materials complex. In this regard, the following problems come to the forefront:

1. the processes of globalization and the rapid pace of technological development are placing ever-increasing demands on the quality of the workforce and its continuous skills development;
2. rapid population growth (by the United Nations estimation it will reach 9 billion by 2050) and economic growth in developing countries will lead to final spatial and structural shifts in the world markets for minerals and their products;
3. shortage of qualified managers and specialists of the mineral complex enterprises is not only a constraint on the development of national economies, but also one of the main reasons for the loss of lives and large-scale environmental pollution as a result of industrial accidents;
4. innovative developments in the energy, oil and gas sector and resource and raw material base become critical for the economic development of countries.

Analysis of the dynamics growth of consumption of all types of resources and primary energy convincingly proves that for all BRICS countries effective use of their national raw material base and supporting it with qualified human resources potential is a guarantee of their stable and sustainable development.

In order to promote at the national and international level the principles of sustainable development as applied to the mineral sector of the economy, to improve the image and attractiveness of mining-engineering education, the oldest technical university of Russia - Saint-Petersburg Mining University together with the

International Competence Centre for Mining-Engineering Education under the auspices of UNESCO (hereinafter - the UNESCO Centre) **organizes the BRICS International Youth Forum-Contest "Topical Issues of Rational Use of Natural Resources"** (hereinafter - **the Forum**) **with the total number of participants not less than 500, 100 representatives from each BRICS country.**

Goals and objectives

The goal of the Forum is in line with the global priorities of UNESCO and promotes sustainable development and intercultural dialogue through education, science, culture, communication and information, and the ideas of the BRICS countries as active members of UNESCO.

The Forum will be a unique international event bringing together young scientists from BRICS countries in the field of mineral resources. The key goal of the event will be the involvement of enterprising young people into the industry, as well as the training of highly qualified personnel and the creation of conditions for the self-realization of the new generation of specialists as the most important condition for the development of competitiveness of the mineral resource complex in present-day developments.

The Forum will be held under the auspices of the UNESCO Centre, whose mission is to achieve inclusive and equitable quality life-long education for all, to foster international scientific cooperation on key sustainable development challenges, and to strengthen science, technology and innovation systems and policies at national, regional and global levels.

The idea of holding the BRICS Youth Forum can be implemented within the framework of the UNESCO Centre's programme "Leaders of Science and Education of Mineral Resources Complex", the winners of which will receive a grant covering all costs of participation in the event, including transportation and accommodation costs.

As experts, one of the tasks of whose will be to assess the knowledge and practical skills of talented young people, will be the heads of ministries and departments supervising mineral resources and fuel and energy complexes, as well as the leading specialists of the largest oil and gas and mining companies of BRICS countries.

Programme content

The programme of the Forum includes the following

- Section reports with presentation of projects in following areas:
 1. Oil, gas and hydrocarbons;
 2. Advanced energy technologies;
 3. Mining, geology, geophysics and geodynamics;
 4. Ecology, sustainable nature management and environment protection;

5. Minerals processing;
 6. Economics;
 7. Cooperation and young professionals training.
- participants' TED presentations- bright, impressive, emotional not longer than 6 minutes;
 - foresight sessions - team development of visual images of the future, including key trends, events, technologies, strategic developments and decision points; work in teams of 5-10 people;
 - poster session– presentation by participants of posters with research results and scientific infographics, answers to questions;
 - technological exhibition of innovative projects - organization of exhibition stands by mining enterprises, specialized companies, representatives of the academic environment;
 - master-classes by the leading experts- courses and master-classes of experts in priority research areas and topics of core sectors;
 - technical visits – industry tours to the leading enterprises of St. Petersburg and Leningrad region;
 - panel sessions and working group meetings - business discussion of topical issues with the participation of a moderator, leading specialists and managers of enterprises and organizations;
 - international summer schools:
 - specialized short-term internships in the format of "Summer Schools" of 5-7 days on various topics (division by directions is done according to the received applications);
 - internship programs include lectures, practical and laboratory classes, seminars and trainings, field master classes and production excursions (visits to training grounds and industrial facilities in St. Petersburg and the Leningrad Region).

Sectional presentations by the participants, TED presentations, works presented during the poster session and team decisions at the foresight sessions will be evaluated by a professional international jury, which will include invited experts from BRICS countries.

In addition, at the end of each Forum part (sectional sessions, TED presentations, foresight sessions and poster sessions), participants will be awarded certificates. A separate certificate will be awarded to participants in the International Summer Schools programmes.

Grants competition and selection criteria

The concept of the Forum provides for the procedure of selecting participants at the national and international levels to identify potentially gifted and capable students, young researchers - future leaders of the mineral complex, which will allow

to focus efforts on working with talented young people, effectively spend financial resources and achieve a qualitatively sustainable result. The UNESCO Centre's grant will cover the applicant's expenses for participation in the Forum, scientific and cultural programme, accommodation, meals and transfers

Stages of the grants competition:

1. the national stage – The applicants shall submit the approved model applications to the partner university of the UNESCO Centre in BRICS Member State. The stage will be conducted according to the regulations approved in each of the BRICS countries;
2. international stage– the applications of the national stage winners will be transmitted to the UNESCO Centre for consideration and award of grants. Applications shall be examined by the Expert Council of the UNESCO Centre.

Individuals - resident of BRICS countries - students, masters, post-graduate students, researchers under 35 years of age of both national and foreign universities - are eligible to participate in the Grant Competition.

The Centre provides Grants for participation in the Forum at an agreed quota of 100 grants to each of the BRICS member states.

An obligatory condition, when submitting an application, is the submission of an abstract of a scientific article of at least 2 pages and a recommendation of the sending university.

The evaluation of applications for the UNESCO Centre grants is carried out according to the following criteria:

- formal assessment:
 - on-time submission;
 - satisfactory form meeting the requirements;
- content assessment:
 - relevance of study;
 - research paper structure (thesis statement);
 - proper methodology of research;
 - article content relevant to the stated topic;
 - the author's own point of view;
 - scientific novelty;
 - practical value of the work;
 - ability to draw conclusions;
 - use of update literature;
 - no fundamental errors;
 - recommendation of the competition committee.

Organizational and financial support

The Mining University has extensive experience in holding large public events, has all the necessary infrastructure and professional staff and guarantee the holding of

the event at the highest quality level. The Forum is planned to be held in the Multifunctional Complex “Gorny” (28/16 Nalichnaya St., St. Petersburg, Russia) including a congress hall for 1500 people, and 15 different multimedia rooms with up to 150 seats.

For the participants of the Forum and the International Summer Schools, the following will be organized:

- pick-ups and transfers at the airport and railway station, with 50 seats in buses, 19 seats in minibuses and cars.;
- accommodation at the Multifunctional Complex “Gorny” Hotel and comfortable hostels of Saint-Petersburg Mining University, with the right to use common infrastructure (including computer classes and a gym);
- meals according to the programmes of the Forum and International Summer Schools with the possibility of choosing the type of meals and dishes of the national cuisine;
- daily transport services according to the programmes of the Forum and the International Summer Schools;
- possibility to use the University infrastructure:
 - Computer classes with dedicated software;
 - Library of the University;
 - comfortable recreation areas with furniture and wireless internet access.

All participants of the Forum will have an opportunity to get acquainted with all educational and scientific base of the University, to visit the world-famous Mining Museum.