

Notice on Application for 2021 Open-end Research Fund of State Key Laboratory for Geomechanics and Deep Underground Engineering

State Key Laboratory for Geomechanics and Deep Underground Engineering (hereafter referred to as the Laboratory) was established depending on two national key disciplines, i.e., *Geotechnical Engineering* and *Engineering Mechanics* in both China University of Mining and Technology (CUMT) and CUMT (Beijing), several provincial key disciplines namely *Disaster Prevention and Reduction Engineering & Protective Engineering* and *Earth Detection & Information Technology*. In 2008, the Laboratory was authorized to start construction.

Now, in order to continuously promote China's fundamental research and technological innovation of geomechanics and deep underground engineering and give full play to the Laboratory's function in international cooperation and high-level talents cultivation, the Laboratory has set up open-end research fund to attract both domestic and foreign talents to work here or conduct high-level fundamental research, and make high-level innovative achievement by fully utilizing the resources of the Laboratory.

I. Major research directions of the Laboratory and the research fields supported by the fund

- 1. Deep Rock Mechanical Properties & Surrounding Rock Control Theory**
- 2. Deep Soil Mechanical Properties & Interaction with Underground Engineering Structures**
- 3. Artificial Freezing Theory and Engineering Application Basis of Thick Topsoils**
- 4. Deep Complex Geological Environment and Disaster Prevention & Control**
- 5. Rock-soil Dynamics and Underground Engineering Dynamic Stability Control**
- 6. Deep Underground Carbon, Hydrogen, Energy Storage and Underground New Energy Development Technology**
- 7. Underground Space Exploration and Development Technology and Equipment**
- 8. Underground Disposal and Storage and Underground Space Utilization Technology of Mine**
- 9. Basic Scientific Problems of Lunar Base Construction and Exploitation of Planetary Mineral Resources**
- 10. Theory and Techniques of No Pillar Mining with Automatically Formed Roadway**
- 11. New Materials for Large Deformation Control of Deep Roadways and Their Mechanical Properties**

II. Key supported research fields of this year

Detection and perception of deep complex geological environment, intelligent monitoring and prevention and control of disasters in deep roadways/tunnels, deep soil mechanical properties and soil-structure interaction, monitoring and non-destructive testing of deep underground engineering, non-conventional energy sources with mining, lunar development and exploration and in-situ resource utilization, marine engineering

geology, theory and techniques of no pillar balanced mining with automatically formed roadway, new materials for large deformation control of deep roadways and their mechanical properties , etc.

III. Research project categories to be set of this year

1. Key projects

This year the open-end fund will set up new key research projects. In line with the aim of “Benchmarking Planning, Extensive Collection, Independent Evaluation and Strengthened Assessment”, 2~4 research projects are supported every year. The implementation period of each project is 4 years and the fund would amount to about 200,000 *yuan*. The applicants of the projects will not be limited to staff working in universities and scientific research institutions. The project acceptance must be shown in evident achievement indicators, and our Laboratory affiliated researchers engaged in this project will be assessed.

2. General projects

This year the open-end fund plans to set up about 25 general projects based on the main research directions. Each project will last for two years, and generally the funding amount cannot not exceed 80,000 *yuan*.

IV. Application for the open-end research fund

1. The Laboratory invites both domestic and overseas scholars of related fields to apply for projects focusing on the major research directions of the Laboratory and the research fields supported by the Fund and then come to the Laboratory to carry out research. The Laboratory will select the open-end fund projects in accordance with the principle of “fairness, impartiality, merit” and procedures of free application, preliminary examination by the Laboratory, and approval by the Academic Committee.

2. The Laboratory gives priority to the joint application of domestic and foreign scholars with researchers at the Laboratory, continuous funding projects for in-depth joint research with excellent completion, the projects that carried out at the Laboratory, and the projects that use the public testing platforms of the Laboratory. If there is no existing cooperation with researchers in the Laboratory at the moment of application, the applicant should declare that the project will be jointly carried out with the researchers in the Laboratory once it is approved and granted.

3. The applicant should read the application guide and *Management Method for Open-end Research Fund of State Key Laboratory for Geomechanics and Deep Underground Engineering*. After reading it, the applicant should fill in the Application Form of the Open-end Research Fund in accordance with the prescribed format and then email it to sklyt@cumt.edu.cn with the subject of Application of 2021 Open-end Research Fund. **The email deadline is January 17, 2022.** Once the application form is approved, sign and stamp it by the work unit of the applicant, the applicant should send

it to the Laboratory **in two copies (both original copy, printed on both sides in an A4 paper and stapled to the left) before January 20, 2022.**

4. Both Xuzhou and Beijing have the Laboratory. Please send your application form to only ONE place. The same research proposals that submitted to multiple departments or through multiple channels are disqualified.

5. If you have any questions, please contact the Laboratory, or refer to the homepage of the Laboratory: <http://gdue.cumt.edu.cn>; <https://gdue.cumtb.edu.cn>.

6. Contact us:

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