



Application Information

The 24th Beihang University “Feng Ru Cup” Competition is designed with works of Creation and two specifically themed projects in which contestants may participate ---- “Energy Saving and Emission Cutting” and “Future Aircraft.” Contestants can go to the website of “Feng Ru Cup” Competition to register and upload submissions, and the number of submissions is not limited.

Specifications for Special Competition:

1. “Energy Saving and Emission Cutting”

(1) Background

At present, environmental problems and energy shortages are becoming more and more severe due to global warming and destructive natural disasters. Therefore, energy saving and emission cutting play an important role in the entire world’s development. It is necessary to attract excellent students to become involved in this area. Accordingly, it is very important to have training courses on “Energy Saving and Emission Cutting” at the university educational level. The aim is to improve awareness of global warming and understand the spirit of the Copenhagen Summit. For this reason, the “Energy

Saving and Emission Cutting” project, characterized with aeronautics and astronautics in Beihang University, is included in the 24th Beihang “Feng Ru Cup” competition.

(2) Suggested Topics

Technology for saving energy and cutting emissions in the iron and steel industry; architecture and transportation; turbine flow alteration; optimizing the circulating water system in the cooling tower; cycling of condensed water; energy saving in the motor system of the variable frequency speed control; permanent magnet speed control; reactive power compensation; public information on logistics; automatic highway toll collection; service system of public travel; energy conservation of the motor system; energy consumption monitoring platform and energy-saving detection technology; energy-saving technology in housing; temperature control in public air-conditioning; optimizing the network design of steam, hot water and other mediums; energy saving in electricity including power transmission and distribution; in the coal industry; energy saving and emission cutting technology in non-ferrous metal production and recovery; in oil production; in the chemical industry; in the production and processing of building





Direction and Innovation of Entries (for reference only)

① Innovation of Entries

a. Unique principles: flight principle, propulsion principle, control principle and special principles of parts.

b. Innovative layouts: aerodynamic layout, structure layout and functional layout.

c. Novel patterns: flight mode, takeoff and landing mode, application and processing technology.

d. Integrated elements: culture, environmental protection and cost.

② Reference Direction: Solar-powered aircraft, Vertical takeoff and landing aircraft, Aero-car, Long-endurance and high-lift body aircraft, Hypersonic aircraft and bionic aircraft.

Requirements and Categories of Works

The requirements for each work are as follows:

Works of creation and the two specifically themed projects include four categories -- machinery manufacture, machinery and electronic control, material technology, and information technology. Samples of machinery manufacture and machinery and electronic control must be able to be displayed on-site. Samples of material technology

should be molded, and samples of information technology must include completed human-computer interaction software/hardware. Participants have to submit related papers and the paper must contain no less than 3,000 words. The score of the paper will be counted into the contestant's total score. Participants also have to make posters of project and make sure that the size of poster should be 90cm wide and 120cm long.

How to apply

Beginning mid-January 2014, participants may apply through the website of "Feng Ru Cup" Competition. Contestants must register a user name, a login password, and fill out and submit required information about authors and works **by March 20th, 2014**. The organizing committee will send feedback to confirm whether applications are successful or not. For detailed information about the opening time, please pay attention to the website's notices.

For application details, please visit: <http://en.fengrubei.net>.

Schedule

1. The 24th "Feng Ru Cup" is scheduled to open in April 26th, 2014 and will last a week. Participants





should bring their work, register in Beihang University, and do related preparation for the exhibition.

2. During the exhibition the evaluation committee will ask questions and evaluate works in different groups.

3. During the competition, the organizing committee will organize a series of student activities based on the “Feng Ru Cup” Competition, which include practical scientific activities as well as diversified communicative events in order to exchange experiences in innovation practices.

Evaluation and Awards

The evaluation committee will evaluate all works based on their technology, advancement, and practicality. This competition will award a first prize, second prize, and third prize, which account for 3%, 12%, and 20% of all works respectively. The results will be announced at the closing ceremony and on the website, and winners will receive certificates.

Financial Arrangement

Beihang University will bear the relevant costs of overseas participants (accommodation, food,

local transportation and sightseeing) during the competition. Participants need to bear the cost of return tickets for air or train.

About “Feng Ru Cup” Competition

Founded in 1990, the “Feng Ru Cup” - named after Feng Ru, the first Chinese aircraft designer and aviator - has become a high-level academic and science and technology gala for students held annually at Beihang University. The event takes the form of a competition in which participating students present their own innovations and inventions. However, a series of other activities will also be held during the “Feng Ru Cup” competition including special lectures, science and technology salons, workshops and a student innovation expo. Over the past two decades some 13,420 innovations and invention projects from 34,208 participants have appeared at the “Feng Ru Cup” competition. Many of these went on to be granted patents and produced commercially. Since 2011, Feng Ru Cup has attracted many students from partner universities of Beihang to share their achievements of research and innovation.

“Feng Ru Cup” Organizing Committee

