

# 2019 Asia-Pacific Mechanics Contest for College Students

## Introduction

The Society of Theoretical and Applied Mechanics of the Republic of China (STAM) is a nonprofit membership organization that comprises of Taiwanese experts from diverse fields in mechanics. In 2001, STAM materialized the establishment of the science popularization committee, whose main responsibility is to promote public understanding of mechanics and science communication. From 2002 to 2014, STAM, in cooperation with several educational institutions, devoted to organize national senior high school mechanics competition in Taiwan. Due to the growing demands from research institutes like universities, college students are required to equip with the necessary technological capabilities as well as hands-on experience. In order to enhance design-driven innovation capability of college students in Taiwan, STAM in conjunction with universities had proposed national mechanics contests for college students since 2015. In 2017, this contest has been upgraded to an international one. Students from countries of the Asia-Pacific region are welcome to participate in this competition. Through this contest, college students can have a chance to mutually collaborate and compete. Further, students can engage their imagination, passion and creativity to technology innovations and to advance knowledge in mechanics.

Although mechanics has been widely used in engineering applications, the general public has not well acquainted with the concepts of mechanics. In fact, there are a lot of simple and interesting phenomena related to mechanics in our daily life, e.g. the frequency change in siren sound of ambulance/police car, construction of arch bridge, high frequency wide band ultrasonic devices, the development of atomic force microscopes, etc. In an era of knowledge-based economy, the undergraduate education must focus on not only the in-class lectures/activities but also out-of-class homework/projects. By actively promoting public science education, students can have an opportunity to get to know engineering-related subjects and develop a strong interest in mechanics research.

STAM is honored to host 2019 Asia-Pacific Mechanics Contest for College Students, in which the Department of Civil Engineering at National Chiao Tung University is the local organization. The mission of the contest is to arouse the passion of mechanics among college students. We cordially invite students from related academic departments to join this event. Further, we hope that all participants will learn collaboration, think creatively, apply what they have learned practically, and enjoy the process.

### **Important dates and location**

Registration deadline: from now on to June 15, 2019

Date: July 16, 2019

Location: 1001 University Road, Hsinchu, Taiwan 30010

Department of Civil Engineering (Engineering Building II), National Chiao Tung University

### **Participants and prizes**

The participants should be the college students recommended by the advisor and form a team with 5 people. Please fill in the recommendation letter and send it to Associate Professor Judy Yang via email: [jpyang@nctu.edu.tw](mailto:jpyang@nctu.edu.tw)

The prizes for the first, second, and third winning teams are NTD 50000, NTD 30000, and NTD 10000, respectively. All participants will receive a certificate in the closing ceremony.

### **Contest**

The main spirits of the contest are hands-on learning and mechanics-based thinking. The organizer will give the topic before the contest. The contestants should design and make their finished products in advance.

Contestants of a team will be judged based on on-site experimental testing and their presentation content (Q&A), with the winners receiving the prizes. Each team should provide one PowerPoint file and email to the organizer prior to arrival. (email: [jpyang@nctu.edu.tw](mailto:jpyang@nctu.edu.tw))

### **Contact Information**

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NCTU Civil Engineering webpage:

<http://www.cv.nctu.edu.tw/APMC2019/contents.html>

Facebook :

[https://www.facebook.com/apmc2019/?modal=admin\\_todo\\_tour](https://www.facebook.com/apmc2019/?modal=admin_todo_tour)

Contact: Associate Professor Judy Yang at National Chiao Tung University

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