



An Invitation to Secondary School Students in the Greater China Region by IM²C & IEEE

For the 3rd Annual International Mathematical Modelling Challenge (IM²C 2017)

January 8, 2017

To: Secondary Schools in the Region of Mainland China, Taiwan, Hong Kong, and Macau

We warmly invite secondary school students from Mainland China, Taiwan, Hong Kong and Macau to participate in the 3rd Annual International Mathematical Modeling Challenge-IM²C 2017. The registration for the Greater China Regional contest and the International contest will start on January 14th, 2017. Let's join our hands together and pursue a journey of creation and discovery in the New Year of 2017.

International Mathematical Modeling Challenge (IMMC or styled as IM²C), established in 2014 in Boston, is an innovative contest in mathematical modeling for secondary school students all over the world, whose co-founders and co-sponsors are the Consortium for Mathematics and Its Applications (COMAP) and NeoUnion ESC Organization (NeoUnion). The aim of IM²C is to promote mathematical modeling education and enhance students' core competences in mathematics, encouraging participants to explore the application of mathematical modeling in real life situations to solve problems of importance. IM²C in this Region is an inclusive and sharing platform for both secondary school students to practice mathematical modeling, and for schools to demonstrate and exchange their educational accomplishments in mathematics and STEM.

IM²C 2017 and its Rules

IM²C 2017 in Greater China Region is an interdisciplinary practice integrating mathematics with science, technology and engineering which reflects the essence of STEM education. NeoUnion works with the Institute of Electrical and Electronics Engineers (IEEE China) to co-organize the IM²C 2017 in Greater China. The Problem Setting Committee and the Judging Panel consist of experts and professors from IM²C Committee (Zhonghua) and IEEE whose disciplinary fields cover mathematics, science, technology, and engineering. Prof Yang WANG, a member of IM²C International Expert Panel, Dean and Chair Professor of School of Science at the Hong Kong University of Science and Technology acts as Chairman of the Problem Setting Committee and Grand Jury of the Final Presentation Competition of IM²C 2017 Greater China.

IM²C requires each team to be composed of 2-4 students from the same secondary school, and at least one teacher from the same school to serve as teacher advisor. Participating teams from all over the world will be selected by a national/regional selection process before they enter into the international round of IM²C. For both the national/regional and the international round of competition, winning teams will be recognized at different levels of awards.



All participating teams from Mainland China, Taiwan, Hong Kong and Macau will first face the challenge from the regional IM²C contest. Upon registration, participating teams can choose: 1) to work on the problem proposed by the Problem Setting Committee of IM²C Greater China. Starting from 8:00 am on February 14th, 2017, teams can choose between Problem A or B to work on. During the following consecutive period of 120 hours, teams must complete and submit a solution paper of mathematical modeling; 2) alternatively, participating teams can register for a self-challenging problem, i.e., the team can choose freely a problem set by the team members themselves. Note that such problem must be a real world problem discovered and defined by the team. To work on the freely-chosen problem, teams can decide on their own about the time schedule; however, they must complete and submit their solution paper of modeling on or before 8:00 am February 19 2017, deadline of the current contest in Greater China. Solution papers of the two categories will be judged separately. Teams whose papers are judged as among the top 20% of the two categories of papers respectively will automatically enter the International Round of IM²C.

IM²C 2017 International Round in the Greater China Region will start at 8:00 am March 31, 2017, and end at 8am, April 5, 2017. Within a consecutive period of 120 hours, teams entering the IM²C international round will work on the problem set by the International Expert Panel, complete and submit their solution paper on or before the end of the contest period. Teams from around 30 countries and regions will be selected by their country/region to enter IM²C 2017 International Round.

Languages

IM²C 2017 Greater China will continue the bilingual policy. The solution paper and presentation for both IM²C Greater China regional and the international contests can be written and conducted in either Chinese or English. But papers which are submitted to the International Expert Panel for international final judgement must be written in English or translated into English before submission.

Final Presentation Competition

The finalist teams of IM²C 2017, both for the Greater China Regional and the International rounds, will receive invitation from the IM²C Committee to come to Hong Kong on April 27, 2017, and attend the Final Presentation Competition hosted by the Hong Kong University of Science and Technology, presenting and defending their works in front of the Grand Jury.

IM²C Committee Greater China will also select the best two papers from each of the Mainland China, Taiwan, Hong Kong and Macau finalists in the International Round (totally 8 papers) for recommendation to the International Expert Panel. (Other participating countries or regions will each also select the best two papers for the International Panel's Judgement.)

Recognition and Award Ceremony

The participating teams from Greater China Region will have the chance to be recognized with different awards at both regional and international levels. In addition to the traditional



awards of Greater China and International Awards, IM²C 2017 will have one more category of recognition in Greater China Region, the IEEE Innovation Award.

Participating teams will have equal chances to win the awards. The papers will be judged as per categories of Greater-China-Committee-set problem, freely-chosen problem, and International-Expert-Panel-set problem, respectively. Each participating team, no matter whether or not they are selected into the International Round, will have the chances to compete for the awards of the Greater China Region including the IEEE Innovation Awards.

An IM²C 2017 Greater China Innovation Summit and Regional Awards Ceremony will be held in early August 2017. This will be a prestigious academic conference of the Region for secondary school students exclusively. Teams winning the Outstanding Award of the Regional and/or International contests will be invited to deliver plenary speeches at the Summit. In addition, members of the Problems Setting Committee along with renowned experts in relevant fields will also be present, so as to interact and exchange with the secondary school students and teachers in Greater China. Subsequent to the Regional Summit/Award Ceremony, winning teams of the International Outstanding Award will be invited to attend the International Award Ceremony to be held in Boston.

Timeline of IM²C 2017

The schedule for the 3rd International Mathematical Modeling Challenge (IM²C 2017) Greater China Region is as follows:

<i>Registration</i>	<i>January 14- February 14, 2017</i>
<i>Regional Competition</i>	<i>February 14- 19 2017</i>
<i>International Competition</i>	<i>March 31- April 5, 2017</i>
<i>Final Presentation</i>	<i>April 27-28, 2017 , HKUST, HK</i>
<i>Regional Summit & Awards Ceremony and International Award Ceremony</i>	<i>Early August, 2017 Hong Kong and Boston</i>

Registration

The registration fee for IM²C 2017 Greater China is US\$ 55 per team, for either Greater China Committee-set problem or freely-chosen problem. The fee covers both the Regional and the International rounds if the team is selected into the International Round.

For further information and registration for IM²C 2017, please visit www.immchallenge.org.cn (Mainland China) or www.immchallenge.org.hk (outside Mainland China) . Participating teams should read carefully the contest instructions and rules on the website.

For sample problems and solution papers, details about IM²C 2015 and 2016, and more information on IM²C, please visit www.immchallenge.org



Practice mathematical modeling, and be a pioneer for STEM!

While you look up the starry sky, our IEEE ancestors, Thomas Edison and Nikola Tesla will inspire your innovation genius.

Take this challenge, and you will definitely experience a different 2017!

We look forward very much to receiving registration from your school for the 3rd International Mathematical Modeling Challenge- IM²C 2017!

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A Brief Introduction to IEEE:

IEEE, pronounced "Eye-triple-E," stands for the Institute of Electrical and Electronics Engineers. IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity. IEEE's roots go back to 1884 when the American Institute of Electrical Engineers (AIEE) was established and to 1912 when the Institute of Radio Engineers (IRE) was founded, respectively. In 1963, AIEE and IRE announced to merge, and Institute of Electrical and Electronics Engineers (IEEE) was founded.

IEEE and its members inspire a global community to innovate for a better tomorrow through its highly cited publications, conferences, technology standards, and professional and educational activities. There are more than 420,000 IEEE members in over 160 countries. IEEE publishes a third of the world's technical literature in electrical engineering, computer science, and electronics and is a leading developer of international standards that underpin many of today's telecommunications, information technology, and power-generation products and services.

The official website for IEEE is www.ieee.org

A Brief Introduction to IM²C

International Mathematical Modeling Challenge (IMMC or styled as IM²C), established in 2014 in Boston, is an innovative mathematical contest in modeling for secondary school students all over the world, whose co-founders and co-sponsors are the Consortium for Mathematics and Its Applications (COMAP) and NeoUnion ESC Organization (NeoUnion). The aim of IM²C is to promote mathematical modeling education and enhance students' core competences in mathematics, encouraging participants to explore the application of mathematical modeling in real life situations to solve problems of importance.

The adjudication, team selection, and recognition for IM²C in the Region of Mainland China, Taiwan, Hong Kong and Macau are authorized exclusively to International Mathematical Modeling Challenge Committee (Zhonghua), a non-profit organization with charity institution code 91/14657 approved by Hong Kong SAR. IM²C in this Region is an inclusive and sharing platform for secondary schools to practice mathematical modeling in promotion of teaching and learning in STEM at both local and international level by a student-centered approach.

The official website for IM²C is www.immchallenge.org or www.immchallenge.org.cn