MATHEMATICAL MODELING INSIDE AND OUTSIDE CLASSROOMS

Alfred Cheung; Solomon Garfunkel
NeoUnion ESC Organization; COMAP

Short description of the Thematic Afternoon: organizers, aims and underlying ideas

Objectives and significance

(i) To promote teaching and learning of mathematical modelling as well as innovative approach to mathematics education through modelling activities;
(ii) To advance school teachers' pedagogy in facilitating students' learning of mathematical modeling and its application;
(iii) To promote students' learning of mathematics, an important component of STEM, through experiencing mathematical modeling and its application. This will promote participating students' values, knowledge and skills for solving real world problems;
(iv) To promote STEM education in high schools through implementing mathematical modeling and its application.

Activity description

(1) Reports and presentation: Outstanding Award and Meritorious teams will be invited to present their solution papers to the audience. They will also share their experience in IMMC and other mathematical modelling activities.
(2) Demonstrations: Other participating teachers and students will demonstrate their projects on mathematical modelling and its integration with STEM including publications and posters.
(3) Discussions: Local Chinese school teachers will be invited to present their pedagogy cases and research projects to the audience.

Planned structure:

Planned timeline	Planned activity	Working format /Responsible person
14:00- 15:15	Reports by IMMC awarded teams	Speeches/ Alfred Cheung; Sol Garfunkel
15:15- 16:00	Demonstration by teachers/students	Posters and presentations/ Alfred Cheung
16:00- 16:30	Discussions	Q & A / Alfred Cheung; Zhonghua Qiao