

Our MCM and Our Students Forum

—Student Forum on Interdisciplinary & Mathematical Modelling in China

Li Zhongmou, Zhu Bin, Sun Llin, Yu Tianye and Shu Yixiao

Northwestern Polytechnical University, China

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1 Background of our story

Five students from Northwestern Polytechnical University held Student Forum on Interdisciplinary & Mathematical Modelling in China in June 2014. The theme was promote the communication of mathematic modelling in contests as well as in research. Finally eleven professors form six universities and more 200 students from 23 universities participated in it.

“It is obviously rewarding and positive for students to hold a student forum in relation to MCM. Therefore, this activity should be recognised as well as supported.” Jie Wang, PhD, University of Massachusetts Lowell.

2 Our college lives and our MCM

Mounting evidence has convinced that mathematic contest in modelling (MCM) has gained a great popularity in China. In some ways, MCM has transformed numerous students' college lives.

Our group is a point in this case. Our members include two undergraduates and three postgraduates in Northwestern Polytechnical University (NWPU) in China ——Zhu Bin and Yu Tianye as well as Sun Lin, Li Zhongmou and Shu Yixiao. We have participated in MCM since the first year in college, which means our experiences with MCM were approximately five years on average. We have engaged in Contemporary Undergraduate Mathematical Contest in Modelling (CUMCM), National Postgraduate Mathematic Contest in Modelling (NPMCM) in China as well as MCM & ICM in US. Particularly Shu Yixiao was an Outstanding Winner in ICM 2013. Actually we met and became friends due to similar experiences together with same enthusiasm for MCM as well.

It was three months ago that we got together to discuss our college lives and MCM. We agreed that MCM has played a significant role in our college lives definitely. When we looked back on our study in college, it did lead us to ponder what MCM bring to us?

We tend to think that MCM is of great essence to college education in China. To begin with, schooling system in China, including primary schools and secondary schools, focuses on the rote memorisation instead of encouraging students to reflect what they've learned and to put it into practice. As a result, most may lose their interest in study altogether, particularly in math. Nevertheless, MCM motivates students' enthusiasm by providing them access to applying the knowledge they have learn into practice. It promotes students' study in return as well. In addition, MCM facilitates the students' awareness of and abilities to conduct research.

Establishing a mathematical model, reading scientific paper, making group discussion as well as writing a paper give undergraduates an opportunity to do research by themselves. With such an experience, undergraduates along with graduates may be easier to make their choices in term of future career and get adjusted to scientific research respectively. What is more, math is the foundation for many other subjects. So MCM could be conducive to communication among students within divergent subjects. These can be in part justifications for the popularity of MCM in China.

However there still exist a couple of problems. First, conferences related to MCM mainly are available to teachers instead of students, though main participants in MCM are students. Second, the form of contests results in lack of continues and further research on problems of contests as students are devoid of access to communication after contests.

With a purpose to facilitate the communication of modelling and further research on problems in contests among students, we came with an idea to hold a student forum. This student forum eventually was named Student Forum on Interdisciplinary & Mathematical Modelling (SFIMM). Also we set out forming the Student Association on Interdisciplinary & Mathematical Modeling to organize this forum.

3 Our Students Forum and our MCM

Due to the limited time and lack of relatively experiences, members in our group were stressed at first. Fortunately Zhu Bin, an undergraduate students, worked as a leader and made arrangements appropriately. Thanks to Sun Lin's effort, we got financial and other supports from administrations of NWPU. Then Li Zhongmou was in charge of budget and finance of forum. Besides, Yu Tianye designed forum logo and printed propaganda. Publication of proceedings issues was conducted by Shu Yixiao.

During the preparation, we received support from many university students in China. More importantly, several professors in modelling showed recognises to our work, such as Dr. Solomon Garfunkel, executive director of COMAP, Prof. Chris Arney who founded ICM and Prof. Wang Jie. In fact, Dr. Solomon Garfunkel and Prof. Wang Jie wrote prefaces to our forum.

Finally SFIMM has been held successfully at Northwestern Polytechnical University (NWPU) in Xi'an China from 31st May to 1st June 2014.

When the forum began, the number of people from 23 universities in China engaging in our forum was approximately 210. Particularly, eleven respected professors in the area of mathematic modelling attended, such as Prof. Ye Qixiao from Beijing Institute of Technology, Prof. Tan Yongji from Fudan University, Prof. Zhu Daoyuan from Southeast University, Prof. Cai Zhijie from Fudan University etc. At the same time, distinguished student delegates participated in this activity as well, including four outstanding winners in 2014 MCM & ICM, eight students awarded first prize in CUMCM and NPMCM in China respectively.

SFIMM 2014 focused on the mathematic contest in modeling and the modelling in interdisciplinary subjects. In this light, our forum included two differing parts: Modelling Contest and Interdisciplinary Mathematical Modelling.

In the Modelling Contest, top winners in MCM & ICM, CUMCM and NPMCM made presentations. In fact they introduced their ideas and methods in solving problems in contests. This was followed by presentations of professors. Professors first analyzed the contest problems and then evaluated presentations made by students before. The proportion of presentations of students to professors was two to one especially. Zhu Bin, the leader of SAIMM, presented his experiences of participation in problem design in MCM of NWPU for three years. Finally we were glad to find students taking same problems in contests got together and discussed about their methods during breaks.

In terms of Interdisciplinary Mathematical Modelling, its aim was to explore innovative modelling ideas coupled with modelling methods in scientific research. A couple of eminent professors and four excellent graduates in different fields in NWPU were invited to make presentations. Such presentations emphasizing on mathematic modelling in various fields were possibly a new approach to facilitating the progress of communication among different areas. By this arrangement, we hoped that the audience would become aware that mathematic modelling is indeed a crucial component of research and is more than merely a contest. Additionally, we were extraordinarily delighted when interaction and communication occurred among researchers and the audience.

When this forum ended and we were asked the time in which next forum would be held, we felt our two months' work were worthy and we really did contribute to MCM which we loved for such a long time. In fact this forum will be held annually and we hope this would be a platform for students loving MCM.

The next Student Forum on Interdisciplinary & Mathematical Modelling will be in Xi'an, China 2015. Researchers and students who are interested in MCM will be welcomed. If you would like to know more about this forum, please contact the secretary with secretary.sfimm@gmail.com.

Attachments

Pictures of SFIMM 2014



A picture of professors and student delegates
(Record of 2014 Student Forum on Interdisciplinary & Mathematical Modelling)





A series of pictures of the forum

Relative news (in Chinese):

News from Northwestern Polytechnical University: NWPU students hold SFIMM 2014

[西北工业大学新闻网：西工大举办 2014 交叉学科数学建模学生论坛](#)

News from Northwestern Polytechnical University: five features of SFIMM

[西北工业大学新闻网：【专稿】西工大首届“交叉学科数学建模学生论坛”凸现五大亮点](#)

News from Northwestern Polytechnical University: NWPU students hold SFIMM 2014

[《西北工业报》电子版（with a whole layout）：西工大举办 2014 交叉学科数学建模学生论坛（第 813 期\(总第 813 期\) 2014 年 6 月 13 日）](#)

News from CUMCM: NWPU students hold SFIMM 2014

[全国大学生数学建模竞赛组委会网站（CUMCM）](#)

News from NGMCM: NWPU students hold SFIMM 2014

[全国研究生数学建模竞赛网站（NGMCM）](#)

News from an official website with mathematic modelling: NWPU students hold SFIMM 2014

[中国数学建模网—SHUMO.COM](#)

News from an official mathematic modelling website of NWPU: NWPU students hold SFIMM 2014

[西北工业大学数学建模基地网站：2014 交叉学科数学建模学生论坛开幕](#)

News from an official mathematic modelling website of NWPU: NWPU students holding SFIMM are invited to mathematic modelling conference in Shannxi

[西北工业大学数学建模基地网站：西工大学生受邀参加陕西省第十五届数学建模教育研讨会](#)

News from The Ministry of Industry And Information Technology of China: NWPU students hold SFIMM 2014

[工业和信息化部网站：西工大举办 2014 交叉学科数学建模学生论坛](#)

News from The Education Department of Shann xi Province: Two important academic event will be held in NWPU

[陕西省教育厅：国际、国内两项重要学术活动近期在西北工业大学举办](#)

News from Feng Huang: NWPU students hold SFIMM 2014

[凤凰财经：西工大举办 2014 交叉学科数学建模学生论坛](#)

News from So Hu: NWPU students hold SFIMM 2014

[搜狐滚动：西工大举办 2014 交叉学科数学建模学生论坛](#)

News from a website associated with Chinese education: NWPU students hold SFIMM 2014

[中国教育新闻网：2014 交叉学科数学建模学生论坛在西工大举办](#)

News from a website relating to aerospace: NWPU students hold SFIMM 2014

[中国航空新闻网：西工大举办 2014 交叉学科数学建模学生论坛](#)

News from a website in relation to university students: five features of SFIMM

[中国大学生在线-校园头条：西工大首届交叉学科数学建模学生论坛凸现五大亮点](#)