



Wuhan University of Technology
Material Advantage Student Chapter

Chapter of Excellence Nomination and Annual Report

Yu Liu

Submitted June 1st, 2019

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Chapter Overview

Overview

The Material Advantage Wuhan University of Technology Chapter (MA WUT Chapter) is a student organization under International School of Materials Science and Engineering of Wuhan University of Technology (WUT-ISMSE), which is a pioneering student-autonomous organization first founded in mainland China. Relying on the superiority of Wuhan University of Materials Science and Engineering discipline, focusing on the goal of building a world-class material major and cultivating top-notch innovative talents, the chapter has always been dedicated to achieving goals as follows:

Broadening & consolidating students' basic knowledge, inspiring students' interest and creativity in materials science and engineering

The chapter extensively invites students to participate in various kinds of material knowledge contests and manufacture competitions to develop a competitive academic atmosphere for students. Meanwhile, the chapter also provides students with communication & presentation channels with preeminent scholars all over the world by organizing different kinds of activities.

Broadening students' international horizons

The chapter provides students with lectures & reports given by the most preeminent figures from all over the world, including Nobel Prize laureates, the most distinguished professors and outstanding business elites around the globe. etc.

Creating an atmosphere of independent innovation and cultivating students' comprehensive capabilities

The chapter offers a great many opportunities to students to transform their ideas into reality: laboratories are invited to free-open to students for visits and are willing to

provide experiment conditions to students(undergraduates) to their utmost extent. The chapter also highly encourages students to engage in different kinds of trainings and social practices provided by colleges and institutes worldwide. Moreover, the chapter helps as much as it is able to students grasp their opportunities to take part in MS&T and other capability-developing events.

Developing international cooperation & communications and improving the international reputation of the chapter

The chapter has been dedicated to build intimate communication & cooperation partnerships with excellent MA chapters all over the world. Up to now, we have developed good communications with UIUC chapter and WPI chapters. It is also well worth mentioning that chapter members achieved outstanding results last year when the chapter participated in MS&T for the first time.

In short, MA WUT Chapter is such a harmonious and progressive organization where students receive happiness from diverse activities, develop capabilities and friendships from cooperation and communications, harvest future with infinite possibilities!

Chapter Advisors



Faculty Advisor
Prof. Fei Chen



Industrial Advisor
Dr. Chen Dai



Faculty Advisor
Dr. Yuanlu Xiong

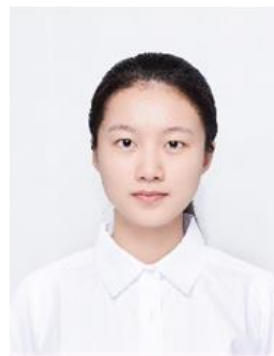
Chapter Management Committee



Chair
Yajuan Lyu



Vice Chair
Wenying Wei



Secretary
Yu Liu



Social Chair
Yang Hu



Professional Chair
Ruohan Yu



Outreach Chair
Zhangmancang Xu



Personnel Chair
Yueqi Wu



Treasurer
Ruhan He



Service Chair
Youlin Zhu

Programming

M-Vision International Lecture

This activity is held in the lecture hall of the west-campus library, at least once a month in average during each semester. Except for Material-Vision Lecture, there's no such place where you can meet and talk with different kinds of people who are related to the material field face to face before. Sponsored by International School of Materials Science and Engineering, our chapter started this program in 2016.

In each lecture, we will invite distinguished professors, outstanding students with international study or work experiences and experienced language teachers to share their visions about technical knowledge, college education, career development and even their interesting life stories. After the lecture, there's time left for students to talk with them more deeply. Some of the students even show those lecturers around Wuhan, the city where our university is located, as tour guides.

The M-Vision provides a platform for students to acquire the cutting-edge information of material field, and to network with potential tutors or employers before they step into career stages. The chart below shows the lectures which have been held since it started.

Activity Spot



Time	Main Speaker	Topic
May. 29th 2018	Khalil Amine (Argonne National Laboratory)	Advanced High Energy and High Power Battery Systems for Automotive Applications
Jun. 15th 2018	Dr. Atsushi UNEMOTO (Tohoku University)	Advanced study on complex hydrides for all- solid-state batteries
Aug. 28th 2018	Prof. Lincoln J. Lauhon (Northwest University)	Non-Planar and Mixed-Dimensional Heterostructures for Conventional and Unconventional Computing
Sept. 4th 2018	Hong Li (Institute of Physics, Chinese Academy of Sciences)	Lithium battery nanotechnology from the foundation to the application
Sept. 25th 2018	Brett Biddington (Biddington Research Company)	Recent Developments in the Australian Space Sector
Oct. 26th 2018	Yingying Lu (Zhejiang University)	High energy density metal lithium battery and its negative electrode protection mechanism
Nov. 2nd 2018	Sukyoung Kim (International society for biological ceramics)	Characterization of Calcium Phosphate Ceramics Synthesized by Heterogeneous Nucleation for Artificial Bone Substitutes
Nov. 2nd 2018	Ik Jin Kim (Hanseu University)	Porous Ceramics by Direct Foaming and it's Applications
Nov. 16th 2018	William G. Fahrenholtz (Editor-in-chief of journal of American ceramic society)	Recent Research on Ultra-High Temperature Ceramics
Nov. 26th 2018	Martin Pumera (University of Chemistry and Technology)	Chemical Self-Propelled Autonomous Micro/Nano Machines
May. 19th 2019	Fei Chen (Wuhan University of Technology)	Improve the thinking pattern broaden the international vision

Propaganda Posters



INTERNATIONAL VISION 国际视野讲堂
材料科学与工程国际化示范学院
INTERNATIONAL SCHOOL OF MATERIALS SCIENCE AND TECHNOLOGY

时间: 2018年9月4日 (星期二) 15:00
地点: 逸夫楼十楼报告厅
主办: 材料科学与工程国际化示范学院
承办: Material Advantage WUT Chapter
(全球材料精英计划武汉理工大学分会)

讲座主题: 锂电池纳米技术从基础到应用
主讲人: 李泓

主讲人简介
李泓, 中国科学院物理研究所研究员、博士生导师。1992年兰州大学化学系物理化学专业本科毕业, 1995年中国科学院长春应用化学研究所电化学专业硕士毕业, 1999年中国科学院物理研究所凝聚态物理专业博士毕业。主要研究方向为高能量密度锂离子电池、固态锂电池、电池失效分析和固态离子学。合作发表SCI论文300篇, 引用超过17000次。科技部先进能源领域储能子领域主题专家, 工信部智能电网技术与装备重点专项总体组专家, 科技部先进能源领域主题专家, 科学院纳米先导专项“长续航动力电池”项目, 科技部重点研发计划新能源汽车试点专项长续航动力电池项目负责人。

欢迎广大师生参加



INTERNATIONAL VISION 国际视野讲堂
材料科学与工程国际化示范学院
INTERNATIONAL SCHOOL OF MATERIALS SCIENCE AND TECHNOLOGY

时间: 2018年5月29日 (星期二) 15:00
地点: 会议中心201报告厅
主办: 材料科学与工程国际化示范学院
承办: Material Advantage WUT Chapter
(全球材料精英计划武汉理工大学分会)

讲座主题: Advanced High Energy and High Power Battery Systems for Automotive Applications
主讲人: Khalil Amine

主讲人简介
Khalil Amine博士是美国阿贡国家实验室杰出研究员、先进电池技术项目负责人, 负责指导用于电动汽车、混合动力汽车、卫星、军事和医疗等领域的先进材料和电池系统研发。Amine博士目前是美国国家研究委员会电池相关领域的委员, 曾获2003年科学美国人世界顶尖50名科学家研究奖、2009年美国联邦实验室技术转让优秀奖, 五次获得被誉为科技创新界“奥斯卡奖”的R&D 100奖, 并最近获得了美国电化学学会电池技术奖和国际电池组织奖。Amine博士已申请及获批130多项专利, 发表论文280余篇, 是1998年至2008年间世界电池技术领域被引次数最多的科学家。

Abstract
To meet the high-energy requirement that can enable the 40-miles electric drive Plug-in Hybrid Electric Vehicle (PHEVs), long range electric vehicle (EV) and smart grid, it is necessary to develop very high energy and high power cathodes and anodes that when combined in a battery system must offer 5,000 charge-depleting cycles, 15 years calendar life as well as excellent safety characteristics. These challenging requirements make it difficult for conventional cathode materials to be adopted in PHEVs and EVs. In this talk, we report several high energy systems that offer the potential of enabling next generation PHEVs and EVs. After a brief description of lithium ion battery concept, we will disclose several strategies to increase significantly the energy density of lithium battery through the development of novel functional materials. We will also describe some new approaches to improve the cycle life and safety of lithium batteries using advanced nanostructuring at the particle level and functional electrolyte additives that play a significant role in stabilizing the interfaces during battery operation and abuse. Finally, we will also present some recent results on the beyond Li-ion systems.

欢迎广大师生参加

Chapter Cooperation

Members who attended the MS&T18 in Columbus, Ohio, USA learned the experience from other chapters and had a further discussion on the topic of recruiting strategies, chapter management methods and activity varieties with Virginia Tech on the workshop. Because of the differences of the situation and policies between the universities of America and China, the activities we hold differed a lot.

Not only have we learned some specific experience about the MA chapters, but also we have done some cultural communication. Besides, we have also made an communication and supported cooperation with PSU MA Chapter.



WUT-WPI PBL

WUT-WPI (Wuhan University of Technology-Worcester Polytechnic Institute) Project-Based Learning Team 2018 is based on WPI's Project-Based Learning Approach, which includes Interactive Qualifying Project (IQP) in the third year and Major Qualifying Project (MQP) in the fourth year. The course date was from 9 July to 9 August 2018. Eligible Students were those who are entering their 2nd year of an undergraduate degree mainly from WUT. Thirteen of our students were involved in this summer project and separated evenly into the four different groups with WPI students doing four different projects. The topics of the projects were as follows:

1. Benchmarking the current fire truck technology in China against the US prevailing technologies
2. Developing ideas for next generation smart fire trucks for the US and China market given the new technologies in autonomous cars, drones and sensors
3. Understanding the purple clay compositions and effects on green tea
4. Smart fire prevention device in home cooking Cultural communication such as visiting the local places of interest and trying some traditional activities was also included in this PBL project.



Solar Decathlon

Solar Decathlon (SD) is a solar building technology competition sponsored by the US Department of Energy. With the world's top R&D and design team's technology and creativity, solar energy, energy conservation and architectural design are combined in a new way to design, build and operate a fully functional, comfortable, livable and sustainable solar home.

Solar Decathlon China (SDC) was established in China as the “China-US Seventh Strategic and Economic Dialogue”. The first SDC was successfully held in Datong City, Shanxi Province in 2013.



The second SDC was jointly sponsored by the National Energy Administration of China and the US Department of Energy. The China Industrial Overseas Development Association hosted the Central Youth School of the Communist Youth League as a support unit, and invited 19 teams from 34 universities in 8 countries and regions around the world to participate. Held in Dezhou, Shandong Province. The competition is dedicated to promoting the development of green buildings, enhancing people's awareness of environmental protection, and promoting the innovative development and commercialization of related technologies. Adhering to the construction as a carrier, smart home as the core, and the spirit of world citizenship as the idea, the Olympic Games in the solar industry will be built.

Team “CNBM-WIN” consists of students from Wuhan University of Technology and New Jersey Institute of Technology, which is exclusively sponsored by China National Building Materials International Engineering Group Co., Ltd. (CNBM). Majors of team members include Architecture, Structural Engineering, Water Supply & Drainage Science & Engineering, Materials Science & Engineering, HVAC Engineering, Electrical Engineering and Automation, Computer Science & Technology, Civil Engineering Construction & Management, Engineering Management to Environment Art Design etc.

The name of the team's work is “New Energy Smart House”. The main design

concept is inspired by the traditional architectural style of traditional Chinese “Sanheyuan” (a central building with two wings attached perpendicular to either side). It combines modern “energy-saving, healthy and comfortable” design concepts with advanced building materials and architectural design, which provides a high-quality solution for housing for “Sandaitongtang” (three generations living under one roof) families in China. The building uses a unique low-light-generation

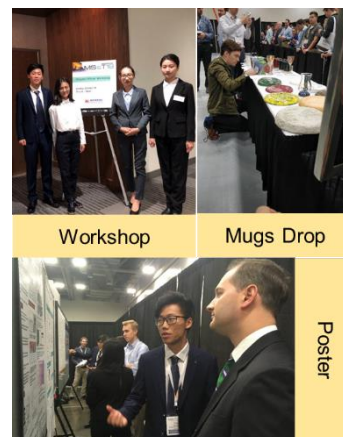


Cadmium Telluride thin film solar cell, so that all facades can be used as a venue for solar photovoltaic conversion, so as to ensure maximum energy supply to the building. Meanwhile, the building uses a large number of energy-saving glass: on the one hand, the use of natural daylight is maximized; on the other hand, a large amount of solar energy provides a free energy source for winter heating. In order to solve the problems of heating in winter and cooling in summer, an intelligent sunshade control system is engaged to modify the sunlight entering the building's interior. Combining intelligent lighting control system, environmental health system and other sets of intelligent means, a complete energy-saving, intelligent building system is formed. The team's work is mainly applicable to the sunny northeast and northwest regions of China, and can also be used in other sunny regions like North China and island areas etc.

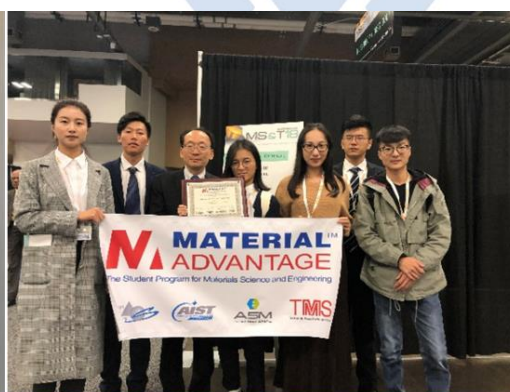
Career Development

Attending MS&T 2018

Six students from our WUT MA Chapter went to Columbus, Ohio to attend the MS&T 2018 on 14th October 2018. The social chair, Yang Hu took part in the Undergraduates Speaking contest. The other five participated in the Undergraduate Students Poster contest and Mugs Drop contest. Two distinguished professors, Zhengyi Fu from Wuhan University of Technology and Diran Apelian from Worcester Polytechnic Institute thought highly of their performance. Apart from the student contest, they also took part in the leadership workshop and exchanged ideas about the management of the Material Advantage Students Chapter.



Prof. Diran Apelian



Prof. Zhengyi Fu

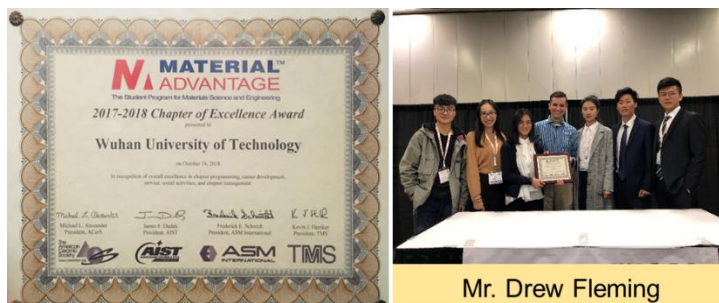
It's so impressive to see you here. You are the representatives of Wuhan University of Technology, even representatives of China to some degree. Congratulations on your excellent chapter award and hope you make more progress in the near future!

- Prof. Diran Apelian (Department head, MPI, WPI)

Being awarded Chapter of Excellence

At the annual awards ceremony of MS&T 2018, the Wuhan University of Technology Material Advantage student Chapter won the "Chapter of Excellence" for

their extensive and comprehensive activities held over the year and the substantial contents of our annual report. As the first chapter established in mainland China, this honor is a great encouragement for all members to do better in the following year.



2018 Short Study Program at Monash University

The Monash Short Study Program was held on 16 July to 27 July 2018. 17 students from WUT participated in this program with the participants from Central South University and Tianjin University. The program offers unique access to cutting-edge engineering technology and world-class facilities, and will develop students' global competencies and English language communication skills for engineers through academic activities, English classes and global professional module.



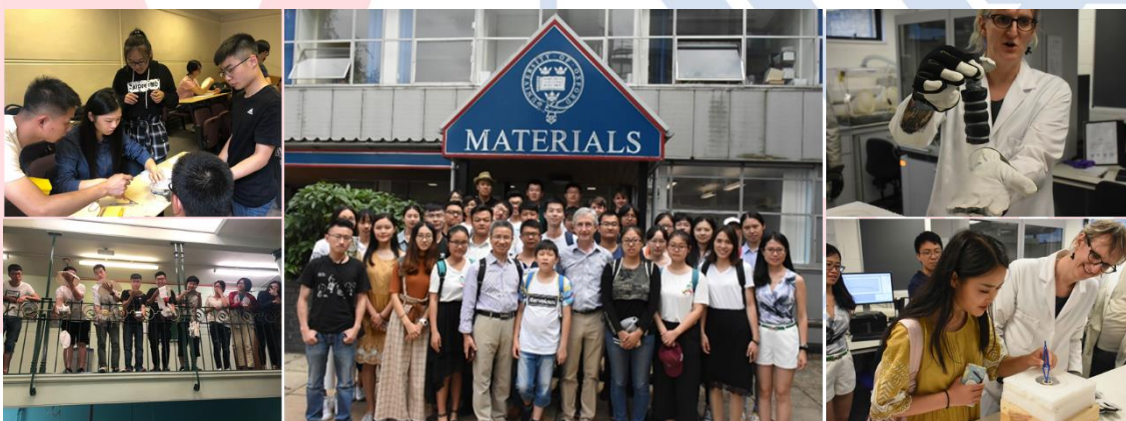
2018 Short Study Program at University of Wales Trinity Saint David and University of Oxford

31 undergraduates including several chapter members went to UK in summer, 2018, participating the short study program at University of Wales Trinity Saint David in Swansea and University of Oxford. During the first two weeks of our journey, we took classes relating to academic study, business running and English culture in Swansea, these practical classes, together with varieties of innovation activities such as Egg-drop protection promote our further study in Oxford.

The secretary of the 2nd Material Advantage, Yu Liu, also took part in the short study and she gave speech about her group's creative thoughts. She was awarded Good in the study.



At the University of Oxford, we visited the Department of Materials, students personally take a hand in experiment, from which we learned about the frontier research in material science.



2019 Short Study Program at Université de Lorraine

During January 20th to February 2nd, 11 students including chapter members participated in the 2019 Short-Study Program held in the University of Lorraine, Metz, France. We had academic lectures, industrial and laboratory visits, and cultural experiences. We were divided into four groups for two-week projects on Battery Recycling, Lightweight Materials, Zero Waste Approach and Micro-recycling: a

bibliographical study. We visited the Cattenom Nuclear Power Plant, HAGANIS Group of Metz (Waste Recycling and Wastewater Treatment Systems), the Institut Jean Lamour, Université de Lorraine and the Laboratory of Optical and Communication Systems, Central Institute of Technology, Higher School of Power (Laboratoire Matériaux Optiques, Photonique et Systèmes, Centrale Supélec). We learned about the research environment of French institutions of higher learning and scientific research institutions and the unique cultural atmosphere of France, and have a deeper understanding of applied materials science to solve today's social problems and environmental problems.



M-Maestro Forum

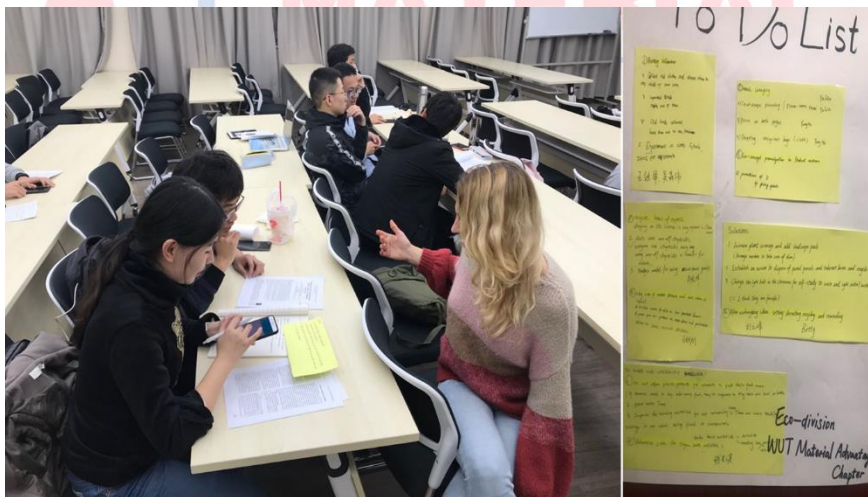
Relying on the high-end academic exchange platform of the International School of Materials Science and Engineering, we invite educators, scientists and engineering experts with high academic attainments and international influence to conduct lectures in Wuhan University of Technology. Our purpose is to open up students' international perspectives, to grasp the forefront of international scientific research, to encourage and cultivate students' strong interest in science and engineering, to enhance students' sense of innovation, and to deepen students' understanding of professional connotation. So as to cultivate students' enthusiasm for science and technology and persevere in areas they love. From 2017 to now, our MA WUT Chapter have undertaken 17 times lectures and we named it M-Maestro. The followings listed are parts of them.



No.	Time	Invited speaker	Title, affiliation
1	Nov. 28 th 2018	Gang Tian Member of Chinese Academy of Sciences	Math Is Useful
2	Mar. 21 st 2019	Dongyuan Zhao Member of Chinese Academy of Sciences	How to Cultivate Innovative Talents
3	May. 7 th 2019	Frank Caruso Member of Australian Academy of Sciences Professor of the University of Melbourne	Innovations in Thin Film Assembly—From Polymers to Macromolecules and Metal Ions
4	May. 10 th 2019	Theo Rasing Member of the royal Dutch academy of arts and sciences Professor of Radboud University Nijmegen	Controlling Magnetism at the Speed of Light

Eco-division of Material Advantage WUT Chapter

Leading by one of our active international students, Monika, the Eco-division of Material Advantage WUT Chapter was established in December 2018 by 13 members of MA WUT Chapter. The Eco-division is planning to serve the chapter as an important part to promote the idea of being environment friendly. It appeals those who in our chapter to classify their daily trashes and experiment wastes into recyclable categories, as well as prevent unnecessary waste of materials and energy.



Liberality & Cultivation Lecture

In order to better promote the communication between teachers and students in life, emotion and other aspects, the party branch of the ISMSE, together with MA chapter, launches a Liberality & Cultivation Lecture once a month. The lecture hall will invite teachers of the university or other universities in Wuhan to give guidance and explanation in literature, history, art, psychology, philosophy and other aspects to promote the healthy and comprehensive development of students.

Time	Main Speaker	Topic
Apr. 14 th 2019	Zhe Zhu (Wuhan University of Technology)	Knowledge in and beyond Science
May. 23 th 2019	Dr. Xiaowen Zhang (Wuhan University of Technology)	Mr. Right & Mr. OK

Presentation under Outstanding Scholars' Guidance

We organized special activities that provide opportunities to students from different grades to give presentations on their study, life and scientific research. Outstanding scholars have been invited to offer their guidance and give comments to the lecturers based on their presentation.



Service

Open Laboratories

In November and December, MA WUT Chapter together with SMSE organized visiting trips to 6 different laboratories. These trips are especially oriented to the freshmen who have little understanding of materials science research. By observing some experiments and facilities and listening to our introduction of testing methods, students gain more knowledge about practical experiments in laboratory. And it's good for them to join the tutorial system and choose the research fields they are really interested in.



Pottery Manufacture Skill Contest

The 16th annual Pottery Manufacture Skill Contest was held by ISMSE and SMSE. Members of MA WUT Chapter either participated in it or volunteered to help organize it. There were more than 600 students from many different majors taking part in the competition. Each group cooperated with each other, using their own imagination to create their own pottery works.



Electron Microscope Knowledge Competition

The Electron Microscope Knowledge Competition was jointly held by MA WUT chapter and SMSE student union on June 4th. Before competition, we held several seminars and trainings on the SEM, TEM, AFM, etc. This competition included the English Abbreviation of various electron microscopes, knowledge of basic principles, operating skills and



precautions, and so on.

Steel Bridge Design Contest

In May to November every year, more than one hundred students participated in the Steel Bridge Design Competition, which is co-sponsored by the Material Advantage WUT Chapter. The team members design the bridge structure with the help of the instructors and use the materials provided to conduct physical production. Finally, the performance tests of the bridge structure are conducted. And the prize-winning works are displayed in a concentrated manner.



Volunteer in World Health Expo

With the acceleration of population aging and people's pursuit of a better life, it's of great importance to help people establish the awareness of health. Five members of MA WUT Chapter volunteered in the World Health Expo held in Wuhan China, from April 7 to April 10, 2019, to further promote the implementation of the strategy of healthy China, build a platform for global health exhibition and interaction, and promote the healthy and sustainable development of big health undertakings in terms of the nation. Volunteers also help people the healthy lifestyles to prolong life, and meet the growing healthy living needs of the people.



Volunteer Training for Military World Games

As the 7th CISM Military World Games coming soon on October 2019, held by Wuhan China, volunteers are in great need. Members from MA WUT Chapter are actively participated in the volunteer trainings including Military Games and

Volunteerism, Military Training and Team Awareness Development, Effective Media Communication, Stress and Emotion Management, Safety Precautions and Emergency Response, Civilized Behavior of Match Volunteers, etc. in order to provide quality and efficient volunteer services. We volunteers are nicknamed as Smart Shuishan, a rare tree species in China. The volunteer training is held in West Campus in Wuhan University of Technology. In addition, the slogan of the Military World Games is Be Heroes Behind the Glory.



Volunteer in Wuhan Marathon

Five members of MA WUT Chapter got up at 4:00 pm on April 14th to be volunteer in Wuhan Marathon. They prepared drinks for runners and kept order and discipline at the scene. More importantly, the runners were greatly impressed by their encouragement.



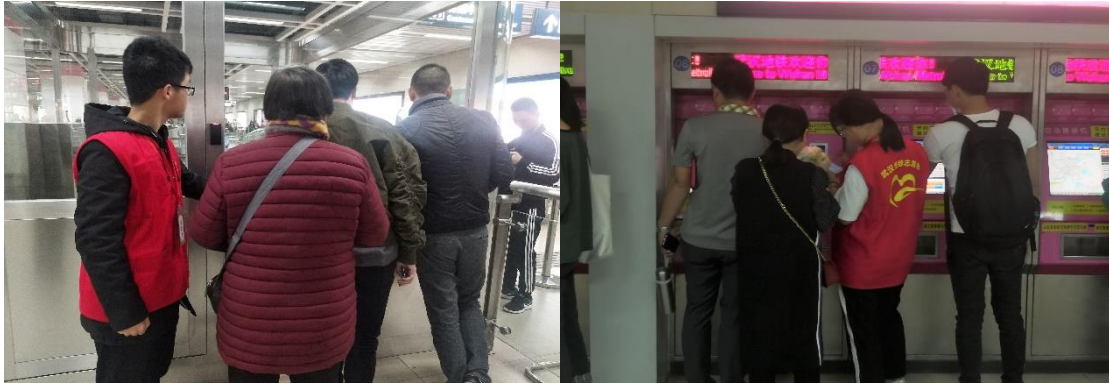
Popularization of Unpaid Blood Donation

Students from chapter joined the “Source of Life” volunteer service project which carried out service about popularizing blood donation. This project was set based on the status that the imbalance between the supply and demand of blood resources in China, the backward concept of unpaid blood donation, and the lack of AIDS prevention and treatment education in colleges and universities. By providing unpaid blood donation services, we help disseminate the concept of unpaid blood donation, and carry out AIDS prevention and treatment education.



Guidance in Subway Station

Every weekend from October to November 2017, four members of MA WUT Chapter went to the local subway station to provide community service. They helped people find their way especially for the elderly and children who got lost. They also picked up trashes and did clean-up in the subway station.



Social Activities

M-DAY

On May 26th, MA WUT Chapter members organized the 2th M-Day, a cultural activity integrating comprehensive displays, student competitions and interactive activities, which aims to create an international atmosphere for the school and can be interpreted into Materials Day, May Day and My Day. A total of more than a thousand people from school-wide students and teacher representatives, parents of students and people from all walks of life participated in the M-DAY series of international cultural events.



Comprehensive Displays

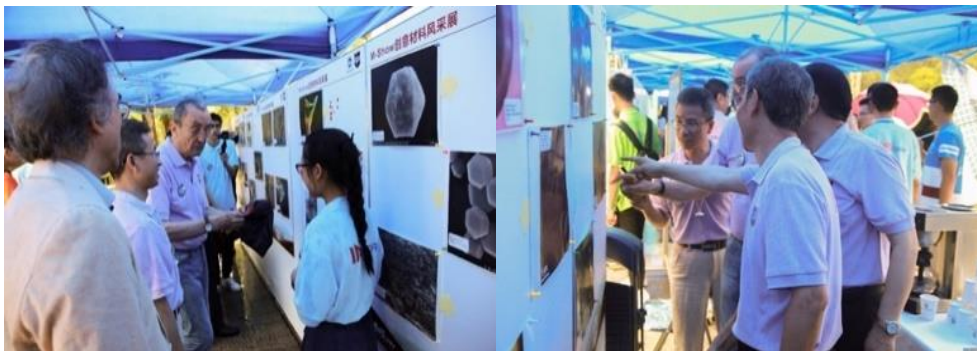
We set up 5 exhibition areas on site, divided them into 32 booths, which include the development of our international student organization Material Advantage WUT Chapter, progress of the construction of International School of Materials Science and Engineering (ISMSE), 17 mentor teams of ISMSE, etc.



Student Competitions

M-Show

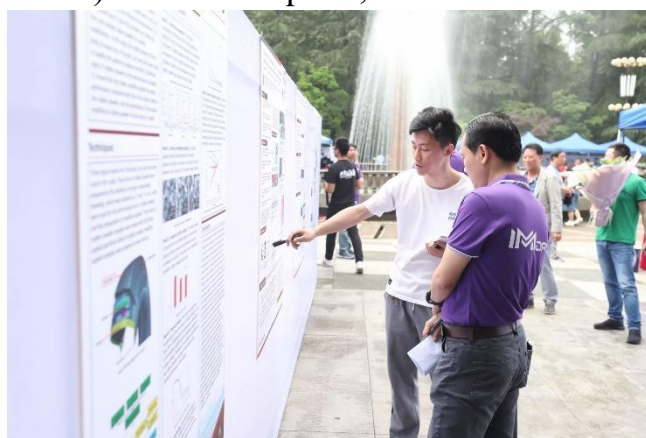
On May 26th, MA WUT Chapter sponsored the M-Day Creative Materials Exhibition called “M-Show”, aiming to arouse students' interest in



materials science and engineering and their spirit of exploration. There are a total of 30 pictures mostly coming from undergraduate students participating, which include polished colorful or black and white microscopic pictures of their own-made materials, photographs of the real samples, materials' models made by software, etc. The audience including undergraduate, graduate students and professors majoring in materials science and engineering finally voted for two First Prize, four Second Prize and seven Third Prize.

M-Poster

On May 26th, Material Advantage WUT Chapter sponsored an Undergraduate Student Poster Contest (which we called M-Poster) in Feima Square, which allowed all the undergraduate students in ISMSE to attend. The poster entered must be the work of an undergraduate and completed during the undergraduate education of the student. The work presented in the poster does not have to be the scientific research achievement of yourselves. There are 13 students entered the contest and ten of them won the First Prize, Second Prize and Third Prize.



M-Speech



On May 20th, MA WUT Chapter sponsored an Undergraduate Student English Speaking Contest (M-Speech 1st round). According to the speaking topic, we divided all the contestants into two groups, academic group and interest group. On May 25th, 13 selected contestants gave their speaking performances in front of four distinguished judges. On May 26th, we choose four excellent speakers from the final to have their presentation in front of students and teachers from the whole school in Feima Square.

M-Mugs

On May 20th, Material Advantage WUT Chapter sponsored an Undergraduate Student Mugs Dropping Competition in Feima Square. The purpose of this contest was to encourage undergraduate students to find ways manufacturing mugs with high strength and of excellent aesthetic value. Entries were publicly dropped on the stage and the entry having the highest broken-height won the “Most Powerful Mug” award. Meanwhile, the entry gathering the most thumb-ups for its aesthetic value was awarded with “the Most Beautiful Mug” prize. Getting involved in M-Mugs gives all contestants irreplaceably valuable experience of struggling for solutions of material problems, which is expected to provide students opportunities improving their comprehensive capability.



M-Club

The English Corner, with the name of M-Club, aims to improve students' oral English and communication skills, enhance our interest in materials science and equip us with international horizon.

For the English corner, we always meet every Saturday evening in a cafe where we can have a tea, coffee or milk and chat in English. Participants will mostly be undergraduate students, usually around 8-15 people. The topic is based on our life, study, scientific research. Foreign students and professors are sometimes invited as guests.

We have a chatting group which amounts up to 189 people, including students from all kinds of school (mostly from ISMES and SMES), there are even a few students from other universities nearby who have heard the name of our English corner and travel a long distance to join in. So, we can see new faces almost every time then we would introduce MA to him/her. So, it not only promotes the popularity of MA but also provides reserve talents for MA's future development. The English corner has been held every Friday night 7-9 PM and has been held for 55 times so far till June.



Chapter Management

Organization and Procedures

General Meetings

Meetings were held every Saturday on a bimonthly basis. These meetings were used to inform members of upcoming events. Meeting attendance ranged between 20 and 40 members with attendance being required for meetings regarding upcoming professional conferences. Agendas and minutes were emailed out and saved to our QQ group (similar to Google Drive community) for reference and archiving.

Officer Meetings

Officer meetings were held every Thursday on a bimonthly basis to allow officers, committee chairs, and the chapter advisor to stay up to date on planning events and

organizing chapter. Chapter business included finances, social events, outreach. These meetings were essential for organizing upcoming activities and to ensure the executive members were well informed.

Elections

Officer elections were held during a general meeting on March 3, 2018. The entire officer board was elected in a trickle-down style using Roberts Rules of Order. Nominated students were asked to give a short speech outlining their credentials for the position and reason for running. Any students not in attendance were asked to create a short video speech to be played during elections.

Communication

Communication amongst the Material Advantage chapter members is primarily through QQ (similar to WeChat) and e-mail, department wide e-mails and through bi-weekly meeting updates.

MS&T Leadership Workshop

Several MA officers attended the MA leadership workshop at the MS&T 2018 conference. This meeting was an opportunity for every MA Chapter to meet each other, discuss best practices, and explore new ideas. Student involvement was a major topic in this year's workshop. Topics were discussed over breakfast with the chapters, separated by position.

Officer Duties

Chair

1. Convene and host a management committee meeting to be responsible for the overall work of the MA branch.
2. Contact the Steering Committee and the MA General Assembly to communicate the spirit of the work in a timely manner.
3. Speak and report on the work of the MA branch at the member assembly and other appropriate meetings.
4. Sign all documents on behalf of the MA branch.

5. Organize and supervise the implementation and financial status of each work of the MA branch.

Vice Chairs

1. Assist the chairman in handling the daily affairs and work of the MA branch.
2. Responsible for the full-year work plan of the MA branch and urge it to advance on time.
3. Responsible for the collection and sorting of data on various activities of the MA branch, and writing annual work reports.
4. When the chairman is absent, he will handle the matters in place of the chairman.

Secretary

1. Responsible for recruitment of members of the MA branch, establish and manage member electronic files.
2. Responsible for the records and post-processing and publicity of the MA branch meeting.
3. Assist in the completion of the phased summary and planning of the MA branch.
4. Responsible for submitting annual reports to the United States and organizing for participation in the best Chapter of Excellence (MA) competition.

Professional Chair

1. Responsible for creating innovative cultural atmosphere and broadening horizons.
2. Responsible for the docking of MA branch members and college tutor team.
3. Responsible for planning and organizing various academic conferences, seminars, academic salons, etc.
4. Responsible for the selection and training of MA branch candidates for the international conference.

Social Chair

1. Promote and maintain the image of the MA branch at home and abroad, both at home and abroad.

2. Responsible for MA branch and all kinds of student organizations inside and outside school and all departments within the school.

3. Responsible for organizing various cultural quality activities to improve the quality of MA branch members and the social influence of the MA branch.

4. Responsible for contacting major universities at home and abroad and looking for opportunities for MA branch members to participate in related contests or academic conferences.

Personnel Chair

1. Responsible for the organization of assessment, evaluation and recommendation of new members of the MA branch.

2. Manage member file work, responsible for the change of the MA branch, member additions and deletions.

3. Responsible for the data collation, collection, and updating of members of the MA branch and members of the management committee, as well as advocacy work.

4. Matching the annual work of the best recruiting new branch competition at the MA annual meeting.

Outreach Chair

1. Responsible for MA branch's domestic and international publicity work, through presentations, road shows, pictures, etc., to demonstrate the results and style of the MA branch.

2. Responsible for pushing and propagating new media and websites of the MA branch.

3. Responsible for the design and production of promotional posters for various activities of the MA branch.

4. Responsible for informing the members of the MA branch about the latest news from the four university associations, the MA branch headquarters and other branches.

Service Chair

1. Responsible for the preparation and implementation of materials and materials organized by various activities of the MA branch.

2. Responsible for the camera, recording and finishing work organized by various

events.

3. Recruitment of volunteers and voluntary services for various activities of the MA branch.

4. Assist the Secretary-General and the Minister of Propaganda in the preparation of information on events.

Treasurer

1. Responsible for the financing and management of the MA branch funds.

2. Responsible for planning, recording and summarizing the financial expenditures of the MA branch, regularly publishing details of expenditures and expenditures.

3. Responsible for collection and docking of contributions of all members of the MA branch.

4. Assist logistical support for funding and material coordination of various activities of the MA branch.

Documentation Storage

To ensure that all documents are accessible to future officers, all important chapter documents, pictures, and forms are stored on a QQ group (similar to Google Drive community) . This enables officers to create and share documents with ease among other officers and members.

Officer Transitions

A meeting was held between the outgoing and incoming officers to discuss roles and responsibilities of each of the positions. Outgoing officers were asked to outline the basic tasks that their position requires, and incoming officers were given the opportunity to ask any questions regarding the position. New ideas or suggestions were also exchanged among officers to help further grow the chapter. Additionally, incoming officers were asked to attend the last month of executive meetings to understand how meetings are run.

Recruitment Activities

The MA WUT Chapter always has an active recruitment process and encourages undergraduates and graduates to join Material Advantage. Officers are sent every

semester to talk to students in the introduction materials science classes.

Treasury

MA WUT Chapter Fund

Most of the events students get involved in are funded and sponsored by MA WUT Chapter Fund, which is administrated by the current treasurer. The International School of Materials Science and Engineering grants funds to Chapter on an irregular basis.



Advisor Letter

Letter 1

May 31, 2019

To whom it may concern:

Supported by International School of Materials Science and Engineering (ISMSE) in Wuhan University of Technology (WUT), which has been authorized by “Network of International Centers for Education (NICE) Programme” in China, Material Advantage WUT Chapter, one of the chapters of MATERIAL ADVANTAGE, pursuing cultivating top-notch innovative talents, through cooperation and competition with students in Materials Science and Engineering from all over the world. Moreover, we would like to stimulate the students’ interest in Materials Science and Engineering, strengthen their sense of innovation, elevate their international vision, create scientific and technological innovation cultural atmosphere, and increase the global reputation for Wuhan University of Technology.

Under this vision, since the establishment of Material Advantage WUT Chapter in 2016, we are making great efforts to keep our chapter active with fast and continuous development that more and more undergraduates as well as postgraduates from both International School of Materials Science and Engineering (ISMSE) and traditional School of Materials Science and Engineering participate to serve our community. In the past year 2018-2019, we have got the Chapter of Excellence award, which encouraged our faculties and students significantly. We continued our success and leadership in uniting the domestic and international materials science and engineering community. We have strengthened the international collaborations with more countries out of China. More featured activities have been created under the spirit of teamwork and leadership of our faculty advisors, industrial advisor and students’ administrative team.

We will keep going and look forward to continuous exciting creativities that Material Advantage WUT Chapter will bring about for the next year.

MA WUT Chapter Advisors:

Fei Chen

Fei Chen

Yuanlu Xiong

Yuanlu Xiong

Chen Dai

Chen Dai



Letter 2

To whom it may concern,

I am writing this letter in support of the Wuhan University of Technology's (WUT's) Material Advantage Chapter for the Chapter of Excellence Nomination, for the second year in a row.

It was exciting and encouraging news to all that WUT MA Chapter was awarded the Chapter of Excellence last year. It was the best way to recognize everybody's hard work and to gain broader recognition of our chapter around the campus. More students joined the chapter this year than ever, and it was evident by the marked increase of activities designed to benefit members. In order to build on the success from the previous year, the chapter looked for growth in new areas. Two new popular programs include the "Eco-division" and "BoYa Seminar Series". Eco-division was initiated by our international student member Monica from Poland, and quickly developed into an active working group of 13 members. Besides the environmental awareness it raised around campus, the international working group invited a diverse set of guests to participate in discussions on how to make the campus more ecofriendly. This enabled the implementation of creative solutions. The "BoYa" seminar series promoting a shift from examination-oriented to essential-quality-oriented education; professors and professionals were invited to talk about cultivation of moral integrity and the development of the mind and hands-on abilities. This is overlooked in a lot of university curriculums but it is critical an individual's development.

This year, students have more confidence in communicating to professionals, organizing activities, and allocating resources. The students as a whole are more focused on the activities and taking the most out of them. For example, when the M- Mug drop contest was held for the first-time last year, the best mug could not survive 1-meter height from the ground. After a year of experimenting and practicing, with more than double the number of participants, the quality of the competing mugs was significantly improved. The best mug survived a drop from a height of 2.3 meters. The difference this year was that students were able to practically apply the knowledge from class, and really think from the ceramic materials perspective to optimize all the fabrication

parameters.

The Chapter activities received firm support from university. Many more students had the opportunity to travel abroad for technical symposiums, conferences, and exchange programs in US, Australia, UK, and France. Details can be found in the submitted report. Students had the chance to present a paper in front of colleagues and peers of the same field of study to receive positive feedback and constructive criticism about their research. The exchange of ideas on fields of interests seeded the potential for future collaborations around the world. It is an opportunity to expand the knowledge that one has and upgrade performance in accomplishing shared objectives. The travel, by itself, allows the students to practice on their time management skills, which has added benefit to the student's future careers.

Overall, I was impressed by the growth that WUT's MA chapter has undergone over the past year. Their desire to better serve the overall WUT community has had a positive effect, and should be recognized. Therefore, I recommend their nomination for the Chapter of Excellence award.



Chen Dai, Ph.D.

VJ Technologies Inc.

WUT MA Chapter Industrial advisor