

## **BICTAM Annual Report 2016**

(Beijing International Center for Theoretical and Applied Mechanics)

The year 2016 has seen a rapid growth of BICTAM's brand programs. We have organized and sponsored 5 symposiums and 3 conferences and one workshop. Besides, 2 distinguished scholars including Professor Yang-Tse Cheng (University of Kentucky, USA) and Professor Fuqian Yang (University of Kentucky, USA) are invited for short visits.

The Programs in 2016 mainly focused on stretchable electronics, energy storage, microfluidics, storm surge etc. There are over 1,000 researchers and graduate students participated in these programs.

This year, we started "BICTAM Master Lecture Series on Mechanics" in order to provide young scholars opportunities to the ideas from world leading researchers. Until now, BICTAM has started a series of brand program such as "Asia-Pacific Youth Symposium", "BICTAM Summer School", and "BICTAM Master Lecture Series on Mechanics". These brand activities serve as great platform for young scholars in Asia-Pacific region.

### **BICTAM Master Lecture Series on Mechanics**

BICTAM Master Lecture Series on Mechanics which started in 2016 aims to bring world renowned researchers to China to share the latest developments and to discuss their researches with postgraduates and young scholars. This year in April, Professor Detlef Lohse (University of Twente, The Netherlands) was invited to deliver a lecture for BICTAM Master Lecture Series. Professor Lohse was a recipient of the 2012 Batchelor Prize, which was regarded as the highest honor in fluid mechanics. In May, Professor Wing Kam Liu (Northwestern University, USA) was invited to deliver lectures. Professor Wing Kam Liu is now the chair of the International Association for Computational Mechanics (IACM) and chair of U.S. National Committee on Theoretical and Applied Mechanics (USNC/TAM). He was the recipient of Gauss-Newton Medal, the highest award given by IACM. The series of lectures from world prominent scholars provided a great platform for young scholars in mechanics.

### **Symposia**

#### **Mini-Symposium on Mechanics of Energy Storage and Conversion—Batteries, Thermoelectrics and Fuel Cells (MRS Spring Meeting & Exhibit)**

**March 28-April 1st, 2016, Phoenix, USA**

Mini-Symposium on Mechanics of Energy Storage and Conversion—Batteries, Thermoelectrics and Fuel Cells (MRS Spring Meeting & Exhibit) was held from March 28-April 1st, 2016, Phoenix, USA. Over 100 participants from China, USA, Germany, Canada, Japan etc. attended this symposium. This symposium is part of the 2016 MRS Spring Meeting. 14 sessions are organized focused on mechanical properties of lithium battery, energy storage etc. Distinguished scholars such as Professor Martin Z.

Bazant (Massachusetts Institute of Technology, USA), Professor Reiner Moenig (Karlsruhe Institute of Technology, Germany) etc. delivered the invited lectures during this symposium. This symposium provided a great opportunity for international exchanges in energy storage and conversion.

### **Mini-Symposium on Computational Mechanics Based Engineering and Science July 27, 2016, Seoul, South Korea**

Mini-Symposium on Computational Mechanics Based Engineering and Science which was also regarded as part of WCCM XII&APCOM VI was held on July 27, in Seoul, South Korea. There are more than 50 researchers and scholars from China, Japan, France, Germany etc. participated in this symposium. 17 lectures focused on numerical methods, structure and multidisciplinary optimization, biomechanics, micro/nano-mechanics are delivered during this symposium. This symposium not only provided academic exchange opportunities for researchers in Asia-Pacific region, but also improved the advancement of mechanics in this region.

### **BICTAM also co-sponsored three IUTAM symposia:**

IUTAM Symposium on Mechanics of Stretchable Electronics, March 17-18, 2016, Hangzhou, China;

IUTAM Symposium on Nanoscale Physical Mechanics, May 23-27, 2016, Nanjing, China;

IUTAM Symposium on Storm Surge Modelling and Forecasting, October 17-19, 2016, Shanghai, China.

## **Workshop**

### **International Workshop on High-Reynolds Number Turbulence October 5-9, 2016, Lanzhou, China**

International Workshop on High-Reynolds Number Turbulence was held on October 5-9, 2016, Lanzhou, China. Academician Xiaojing Zheng (President of Xi'dian University) and Professor Ivan Marusic (University of Melbourne, Australia) co-chaired the symposium. More than 50 researchers attended this event including leading scholars such as Professor Charles Meneveau (Johns Hopkins University, USA), Professor Javier Jimenez (Madrid Polytechnic University, Spain), Professor Robert Moser (The University of Texas at Austin, USA), Professor Hyung Jin Sung (Korea Advanced Institute of Science and Technology, South Korea), Professor Paolo Orlandi (University of Rome, Italy), Professor Zhensu She (Peking University, China), Professor Jianjun Tao (Peking University, China), Professor Jinjun Wang (Beihang University, China) and Professor Chunxiao Xu (Tsinghua University, China). The success of this workshop was regarded as a brand new start for the series of international exchange workshops in this field.

## **Conferences**

### **13th Asia-Pacific Conference on Plasma Science and Technology May 19-22, 2016, Shanghai, China**

The 13th Asia-Pacific Conference on Plasma Science and Technology (APCPST) was held in Shanghai on 19-22 May, 2016. The conference addressed the current issues in non-equilibrium low temperature plasma physics, chemistry and the industrial applications. The conference brought the plasma community together and created a forum for discussing the latest developments and identifying challenges ahead in the field of plasma research and applications among scientists in Asia and Pacific Rim as well as those in rest of the world.

### **2016 International Conference of Microfluidics, Nanofluidics and Lab-on-a-Chip June 10 – 12, 2016, Dalian, China**

2016 International Conference of Microfluidics, Nanofluidics and Lab-on-a-Chip was successfully held in Dalian, Liaoning Province, China from June 10 – 12, 2016. It is the first international conference especially focused on Microfluidics, Nanofluidics and Lab-on-a-Chip etc. There are 350 participants from 15 countries and regions attended this conference. More than 290 abstracts are submitted.

This meeting brought together the leading researchers in the field, such as Professor Jonathan Cooper (University of Glasgow, UK), Professor Roland Zengerle (Department of Microsystems Engineering – IMTEK, Germany), Professor David Sinton (University of Toronto, Canada), Professor Tkehiko Kitamori (University of Tokyo, Japan), etc. In total, there are 8 plenary lectures, 9 invited lectures and 235 oral lectures presented during the three-day conference. This conference brought together leading professors, scientists and researchers to exchange ideas and knowledge in this field and thus to contribute to the advance of this field.

### **Joint US-China Session on micromechanics, biomechanics and mechanics of functional materials**

**November 14, 2016, Phoenix, USA**

Joint US-China Session on micromechanics, biomechanics and mechanics of functional materials was successfully held in Phoenix, US, on November 14, 2016. This session is part of 2016 International Mechanical Engineering Congress & Exhibition (IMECE2016) which is held in Phoenix, US, from November 11-17, 2016. IMECE is the highest conference in the field of mechanical engineering. Over 2,200 participants attended this big event.

This joint session attracted large number of researchers both home and abroad. 15 lectures were delivered into three topics “Biomechanics and Soft Materials” “Functional Materials and Multiscale Modeling” “Biomaterials and Functional Materials”. Prominent scholars such as Professor Huajian Gao (Brown University, USA), Professor Huiling Duan (Peking University, China) etc. attended this session.

**Report composed by Xiaoyan Wang**