

## **BICTAM Annual Report 2015**

(Beijing International Center for Theoretical and Applied Mechanics)

The Year of 2015 has seen a rapid growth of BICTAM's brand programs. We have successfully held 2 short courses, 2 symposiums and 3 workshops. In these programs, 6 distinguished scholars are invited for short visits. The Programs in 2015 mainly focused on soft material, nanomaterial, multiphase flows modeling and superlubricity, etc. There are over 500 researchers and graduate students participated in these programs.

### ***Summer School: Insights from Nanomaterials***

BICTAM Short Course on Insights from Nanomaterials was successfully held during August 11-13, 2015 in Institute of Mechanics, Chinese Academy of Sciences. The well-prepared course was delivered by Christopher L. Muhlstein, who is an associate professor from Georgia Institute of Technology, USA. The three-day course includes the experimental results and various modeling strategies to better understand how structure and length scale controls deformation and damage accumulation in materials. Nearly 40 participants including research specialist, graduate students all over the country attended the short course.

### ***Short Course on Modeling and Large-Eddy Simulation of Turbulent Multiphase Flows***

Professor Rodney Fox from Iowa State University gave a series of talks on "Modeling and Large-Eddy Simulation of Turbulent Multiphase Flows" in three half-day in October of 2015. The three lectures titled "Quadrature-based moment method for kinetic models", "Cluster-induced multiphase turbulence" and "Turbulent gas-particle flow in vertical channels" respectively.

### ***The 2nd Symposium for Asia-Pacific Young Scholars***

The 2nd Symposium for Asia-Pacific Young Scholars was successfully held in Sydney during June 6-8, 2015. Eight invited lectures covering computational mechanics, biomechanics, materials, solid mechanics, etc. were delivered during the symposium. A total of more than 40 participants from domestic and abroad exchanged their latest research views in various fields of mechanics.

### ***International Workshop on Pattern Formation in Soft Materials***

This workshop on Pattern Formation in Soft Materials was successfully held in Tianjin during June 1 – 4, 2015. There were 85 scholars in total from around the world participated this workshop, including Professor Zhigang Suo (Harvard University, USA) and Professor Yibin Fu (Keele University, UK) as the co-chairmen, invited guests such as Professor John W. Hutchinson (Harvard University, USA), Professor Martine Ben Amar (Ecole Normale Supérieure, France), Professor Davide Bigoni (Università di Trento, Italy) and Professor Ryan Hayward (University of Massachusetts Amherst,

USA).

***Workshop: Wave Mechanics in Heterogeneous materials***

Workshop on Wave Mechanics in Heterogeneous Materials was successfully held in Beijing during June 20-21, 2015. More than 50 scientists from China, USA, and France attended the workshop and took part in the discussions. The success of the workshop carries out a beneficial attempt for further promoting academic exchanges and rapid developments in wave mechanics to move forward.

***International Workshop on Superlubricity: Fundamental and Applications***

International Workshop on “Superlubricity: Fundamental and Applications” was successfully held during October 18-20, 2015 at Tsinghua University, Beijing. The workshop brought international top researchers, leading industrial applicants, and a big audience of more than 200 together, and having 20 keynote lectures, posters session, and intensive discussions and interactions.

Detailed information on BICTAM can be accessed under the BICTAM homepage:  
<http://www.bictam.org.cn/>