

BICTAM Annual Report 2019 (Beijing International Center for Theoretical and

Applied Mechanics)

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BICTAM promotes the development and application of mechanics and related interdisciplinary branches in the Asia-Pacific region and around the world via symposia, conferences, workshops, summer schools and publications in 2019. These programs mainly focused on advanced materials technology, violent flows with a free surface, biomechanics, computational methods in engineering, etc. Over 1000 researchers and graduate students participated in these programs.

Since July 2019, BICTAM has started “Sino-Italian Workshop” with the University of Rome Tor Vergata, Italy. Together with “Asia-Pacific Youth Symposium”, “BICTAM Summer School”, “BICTAM Master Lecture Series on Mechanics” and “Sino-Thai Bilateral Workshop”, BICTAM stepped forward to provide chances for collaborations among scholars from different fields.

Summer School

IUTAM-BICTAM Summer School on Violent Flows with a Free Surface

The Summer School took place in Shanghai, China on June 2 to 8, 2019. The objective of the course is to provide an introduction to theory, method and application of hydrodynamics with the free surface. Main topics included ship slamming, impact load, water entry/exit, breaking wave and wave impact. The well-prepared courses were given by 6 domestic and international experts, delivering lectures related to their expertise. Over 40 participants including PhD students, postdoctoral and young researchers from 6 countries attended the short course.

Symposium

The 3rd International Symposium of Cavitation and Multiphase Flow

The symposium was held in Shanghai, China on April 19 to 22, 2019. It consisted of 11 plenary lectures, 29 keynote lectures and 80 parallel sessions. Lectures focused on all aspects of cavitation and multiphase flows, e.g., both fundamental and applied research with a focus on physical insights, numerical modeling and applications in engineering. Nearly 200 participants from 15 countries attended the symposium.

Conferences

CAMT2019—Congress in Advanced Materials Technology

The conference was held in Shanghai, China on April 19 to 21, 2019. It was intended to promote innovation and technology transfer in advanced materials technology. 157 scientific researchers and engineers from 75 universities, institutes and enterprises from China, Australia, Germany, the United Kingdom, Canada and other countries and regions gathered here. 31 distinguished plenary speeches on the topics of composite materials, nanomaterials, biomaterials and new materials

manufacturing were presented during the conference by scientists from around the globe.

ZwickRoell Science Award & Academia Day

The 10th annual ZwickRoell Academia Day was held in Shanghai, China on June 13-14, 2019. The event provided an important platform for the intensive exchange between science and industry on the subject of intelligent materials testing. Winners of the 2018 ZwickRoell Science Award were recognized at the event. Nearly 200 participants from 56 universities, institutes and enterprises attended the conference.

The 6th Asia-Pacific International Conference on Computational Methods in Engineering

The conference was held in Dalian, China on September 27-30, 2019, combined with the 12th Chinese National Conference on Computational Methods in Engineering and the 2nd Conference on Boundary Element and Dimension Reduction Methods. Topics of ICOME2019 included the theory and application of Boundary Element Method, Meshless Method and High Performance Finite Element Method. A total of 191 scholars and students from home and abroad attended the conference. The 7th ICOME will be held in 2023 at Xiamen University.

Workshops

Sino-Italian Workshop on Biomechanics

The first Sino-Italian Workshop on Biomechanics was held in Rome, Italy on July 1-3, 2019. It organized 10 technical sessions with a total of 39 lectures entitled “X-Mechanics: An Endless Frontier”, “Some Mechanical ‘Laws’ in Cell Mechanosensing Behaviors”, “Acoustics and Vibration of a Liquid-Filled Microtube”, etc. A final round table session took place at the end of the workshop. The state-of-the-art of biomechanics, mainly but not exclusively in China and in Italy, was presented. Nearly 50 participants from 27 universities and institutes attended the workshop.

2019 Asian Workshop on Theoretical and Applied Mechanics

Proposed by BICTAM, the 2019 Asian Workshop on Theoretical and Applied Mechanics (AWTAM 2019) was held in Hangzhou, China on August 24-25, 2019. More than 80 participants from China (including Hong Kong and Macao), the United States, Japan, Singapore, Australia, South Korea, India, Vietnam, Thailand and other countries and regions conducted in-depth exchanges and discussions on the topics of solid mechanics, fluid mechanics, dynamics and control, biomechanics and mechanobiology, applied mechanics and engineering analyses, etc.

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