William Begell

Dr. William Begell has had a long and distinguished career as a chemical-nuclear engineer, researcher and publisher. Dr. Begell taught at Columbia University and was the Engineering Director of its Heat Transfer Research Facility. There, he managed the large-scale seminal work on two-phase flows, burnout studies and cooling procedures for nuclear reactors, some of which were conducted directly under the founder of the US Nuclear Navy, Admiral Hyman Rickover. He later became involved in a US Air Force intelligence project that culminated in the cofounding of Scripta Technica (1962), a publishing company specializing in the presentation of important scientific and engineering materials translated from foreign languages into English. Building upon his experience and reputation in the field, Dr. Begell founded Hemisphere Publishing Corporation (1966) where he continued to pursue his personal research and publishing activities. It was here that he developed an impressive list of 86 high-impact engineering and biomedical journals as well as hundreds of basic texts, research books and reference tools.

Dr. Begell's visionary sense of future trends in engineering and biomedicine led to the creation of interdisciplinary and cross-disciplinary publications. Throughout the years, Dr. Begell's contributions and support of scholarly societies were a factor in the development of new branches of knowledge. In some cases, these innovative titles led to the establishment of new fields of endeavor and study. Dr. Begell was one of the founding members of the Society of Scholarly Publishing and has been nominated for and granted many awards for his achievements in science, engineering and publishing and the ASME Heat Transfer Division Distinguished Service Award (2005).

2010 Recipient of the William Begell Medal

Nobuhide Kasagi

The William Begell Medal, For Excellence in Thermal Science and Engineering was established in 2010 and is made possible by the support and generosity of William Begell's friends, colleagues, and Begell House Inc. sponsorship.

The William Begell Medal for Excellence

in Thermal Science and Engineering

Presented to

Professor Liu, Jing

刘静 教授

International Heat Transfer Conference 15

August 11, 2014

Grand Prince Hotel Kyoto, Kyoto, Japan

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2014 Recipient of the William Begell Medal

Professor Liu, Jing

Jing Liu received his double bachelor's degrees (B.E. in Turbo Machinery and B.S. in Physics) in 1992, and Ph.D. in Thermal Science in 1996, all from Tsinghua University. He then served as assistant professor there, a postdoctoral research associate at Purdue University, and a visiting scholar at MIT. He has been a professor at Technical Institute of Physics and Chemistry, Chinese Academy of Sciences since July 1999 and a professor at Tsinghua University since August 2008.

Dr. Liu works intensively at the interdisciplinary areas of thermal sciences. He has made significant contributions to the bioheat transfer area through numerous conceptual innovation, methodology development and technical inventions spanning from high- to low-temperature medicines. Particularly, he proposed the concept of Nano-Cryosurgery and alkali metal hyperthermia therapy for a better targeted ablation of tumor. Through 15 years' continuous efforts, his invention on the Combined Cryosurgical/Hyperthermia System for Tumor Treatment has been translated into clinical trial. Facing the ever tougher high flux heat dissipation challenges, Dr. Liu pioneered a group of nonconventional technologies through introducing the room temperature liquid metals into rather diverse areas like: thermal management of computer, LED, mobile electronics, power and energy systems etc. He proposed the concept of water-free heat exchanger via liquid metal aiming to suggest a generalized way for revolutionizing modern heat transport processes and industry. Dr. Liu's another noteworthy contribution is initiating the Liquid Metal Printed Electronics from which electronic circuit, sensor, conductive film or 3D metal objects can be printed out in a moment. His work in applying liquid metal to electrically connect the severed nerves was attributed as "most amazing medical breakthroughs" and aroused tremendous attentions over the world. These fundamental innovations are expected to generate profound impact for future electronic science, engineering as well as medicine.

Dr. Liu is an active member of K-16 and Biotransport Committee of the ASME. As topic chair and along with K-16 members, he organized the topic 9-13 (Heat Transfer in Electronic Equipment) in ASME 2013 IMECE. Since 2012, he has been serving as an associate editor for the journal: Frontiers in Energy. As an educator, Dr. Liu tried his best to contribute to the teaching, research, design and development of several newly emerging frontiers in thermal science, energy and bioengineering through nine popular book publications. Many of them have been widely adopted as textbooks throughout China or introduced overseas. Particularly, his book "Micro/Nano Scale Heat Transfer", first appeared in 2001, has been reprinted five times over the years. Apart from that, Dr. Liu has published fifteen invited book chapters, over three hundred peer reviewed journal papers. Quite a few of his researches were featured by world renowned media like: New Scientist, MIT Technology Review, IEEE Spectrum, ASME ME Today, Physics Today, Newsweek, Daily Mail, Discovery, Chemistry World, National Geographic Daily News, and Fox News etc.

Dr. Liu is a recipient of 2010-2011 Best Paper of the Year Award from ASME Journal of Electronic Packaging, the National Science Fund for Distinguished Young Scholars of China, National Science and Technology Award for Chinese Young Scientist, Mao Yi-Sheng Science and Technology Award for Beijing Youth. He has graduated more than 50 Ph.D. or Master degree students and received five times highest teaching award from the CAS.

Professor Liu, Jing

刘静 教授

The William Begell Medal for Excellence in Thermal Science and Engineering is being awarded to an individual, from among those selected to deliver Keynote Lectures at the International Heat Transfer Conference. In 2014 The Medal bestowed to Professor Liu, Jing who is held in high regard by the heat transfer community for his contributions and excellence in thermal science and technology.

The Key-Note Lecture:

WAYS TOWARD TARGETED FREEZING OR HEATING ABLATION OF MALIGNANT TUMOR: PRECISELY MANAGING THE HEAT DELIVERY INSIDE BIOLOGICAL SYSTEMS

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