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).

2014 Recipient of the William Begell Medal

Professor Liu, Jing

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

Dr. Alexander A. Fedorets

and

Dr. Leonid A. Dombrovsky

International Heat Transfer Conference 16

August 14, 2018

China National Convention Center

Beijing, China

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AIHTC
Assembly for International Heat Transfer Conferences

2018 Recipients of the William Begell Medal

Dr. Alexander A. Fedorets and *Dr. Leonid A. Dombrovsky*

Professor **Alexander Fedorets** is the head of the Laboratory of Micro-Hydrodynamic Technologies at the University of Tyumen, Western Siberia, Russia. He received the PhD degree in Thermal Sciences in 2004. The second thesis he defended in 2014 and received the scientific degree of Doctor of Science (the highest academic degree in Russia). His research interests are focused on experimental study and theoretical modelling of micro-scale effects of heat-and-mass transfer in open multiphase systems with the developed interphase surfaces. He published more than 50 research articles and received 24 patents for inventions. In 2004 Alexander Fedorets discovered a new physical phenomenon, the dissipative structure known as a levitating droplet cluster. This achievement was a starting point of a long-time study with many fascinating findings. A cooperation with experienced researchers from Russia, Israel, and USA during the last years was very important to understand the behaviour of self-assembled clusters and develop a technology to generate and stabilize the clusters with well-predicted parameters. The latter makes it possible to proceed to the promising next stage of the work with the use of droplets of a levitating cluster as unique micro-reactors in chemical and bio-chemical studies.

Leonid A. Dombrovsky is a chief researcher of the Joint Institute for High Temperatures of the Russian Academy of Science. He received the Candidate (PhD) degree in 1974 from the Moscow Institute of Physics and Technology and the Doctor of Science degree in 1990 from the Research Institute of Thermal Processes, Moscow, Russia. His research interests are focused on theoretical modelling of radiative and combined heat transfer in disperse systems including analysis of wide-range spectral properties of particles and fibres and diverse applications to power engineering, geophysics, and biomedicine. He has published more than 250 research papers, mainly in refereed journals. The Fifth Radiation Symposium on Radiative Transfer (Bodrum, Turkey, 2007) was dedicated to Leonid Dombrovsky in recognition of his valuable contributions to the radiation research field. His monograph "Thermal radiation in disperse systems: An engineering approach" (Begell House, New York, 2010) is well known for many researchers over the world. A systematic cooperation of Dr. Dombrovsky with his colleagues from research groups from Australia, Germany, France, Israel, Russia, Sweden, Switzerland, United Kingdom, and the United States during the last two decades appeared to be especially important to improve the overall theoretical and computational skill and to enrich the variety of physically sound models. This was a basis of practical achievements in such different fields as heat transfer in rocket engines and solar thermo-chemical reactors, complex processes accompanying possible severe accident of nuclear reactors, microwave radiation of a foam on the ocean surface, unique heat-shielding properties of highly-porous thermal insulations, shielding of intense thermal radiation by evaporating or sublimating particle clouds, managing the self-assembled droplet clusters levitating over the locally heated water surface, and planning of infrared thermal treatment of human tumours to fight cancer.

Dr. Alexander A. Fedorets

Dr. Leonid A. Dombrovsky

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 2018, the medal is bestowed to Dr. Alexander A. Fedorets and Dr. Leonid A. Dombrovsky, who are held in high regard by the heat transfer community for their contributions and excellence in thermal science and technology.

The Keynote Lecture:

SELF-ASSEMBLED STABLE CLUSTERS OF DROPLETS OVER THE LOCALLY HEATED WATER SURFACE: MILESTONES OF THE LABORATORY STUDY

Alexander A. Fedorets
The University of Tyumen
Tyumen, Russia

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Moscow, Russia

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