

The 15th International Heat Transfer Conference

IH C-15



Awards Banquet

August 14, 2014, 19:00 - 21:00 Kyoto International Conference Center, Kyoto, JAPAN

WELCOME

Nobuhide Kasagi
Chair of Organizing Committee, IHTC-15

PRESENTATION OF THE WILLIAM BEGELL MEDAL

by Vivian Wang

PRESENTATION OF DONALD Q. KERN AWARD

by Masahiro Kawaji and Shinya Watanabe

PRESENTATION OF THE LUIKOV MEDAL

by Graham de Vahl Davis

PRESENTATION OF NUKIYAMA MEMORIAL AWARD

by Ken Okazaki

INTRODUCTION OF IHTC-16 LEADERSHIP

by Ping Cheng, Chair of Organizing Committee, IHTC-16

Recipient of the 2014 William Begell Medal



Jing Liu

Professor, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences Professor, Department of Biomedical Engineering, Tsinghua University

Dr. Jing Liu 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. 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.

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.

The William Begell Medal, For Excellence in Thermal Science and Engineering is being established in 2010 by **Begell House Inc.** The medal will be awarded to an individual, from among those selected to deliver Keynote lectures at the current IHTC Conference, who is held in high regard by the heat transfer community for his/her contributions an excellence in thermal science and technology and whose IHTC Keynote paper is judged to make a profound contribution to the thermal science and engineering literature.

Recipient of the 2014 Donald Q. Kern Award



Sumanta Acharya

L. R. Daniel Professor and Fritz & Francis Blumer Professor, Department of Mechanical Engineering, Louisiana State University Program Director, National Science Foundation

Sumanta Acharya holds the L. R. Daniel professorship and the Fritz & Francis Blumer professorship in the department of Mechanical Engineering at Louisiana State University (LSU). He is the founding director of the Center for Turbine Innovation and Energy Research which focuses on energy generation and propulsion research. Since September 2010 he is on assignment (2010-2014) from LSU at the National Science Foundation as the Program Director of the Thermal Transport Program in the Engineering Directorate.

Professor Acharya received his undergraduate degree from the Indian Institute of Technology in Kharagpur, and his PhD from the University of Minnesota. Following his PhD, he joined the faculty of mechanical engineering at LSU. Prof. Acharya has developed a multifaceted research program in heat transfer with a foci on gas turbine heat transfer and computational heat transfer. His scholarly contributions include mentoring nearly 85 post-doctoral researchers and graduate students, and publishing nearly 190 refereed journal articles and book chapters and over 230 refereed conference /proceedings papers. Prof. Acharya's research has been continuously supported by federal funding agencies and industries with nearly 25 million dollars of funded research during his LSU career, and includes major efforts in the area of gas turbine aerodynamics and heat transfer, combustion, computational fluid dynamics and fundamental heat transfer.

The Donald Q. Kern Award is bestowed in recognition of the expertise in a given field of heat transfer, transport phenomena, and energy processes. Special emphasis is given to contributions that have significant practical applications. Established in 1973 by the Heat Transfer and Energy Conversion Div., now known as the Transport and Energy Processes Div. of AIChE, the award honors Donald Q. Kern, a pioneer in the field of process heat transfer, and commemorates his outstanding contributions as a researcher, educator, author, and practicing engineer. The Award is sponsored by **Dana Corporation**.

Recipient of the 2012 Luikov Medal



Nobuhide Kasagi

Professor Emeritus, The University of Tokyo Principal Fellow, Japan Science and Technology Agency

Dr. Kasagi has been a faculty member at the University of Tokyo since he received PhD in mechanical engineering in 1976. He has made fundamental and applied research on fluid mechanics and heat transfer with his unique synergetic experimental and computational methodology. In his early work on turbulent heat transfer, he visualized for the first time the thermal streaky pattern, and later developed a 3-D particle tracking technique and a direct numerical simulation method. These new tools enabled him to discover coherent turbulence motions and establish the data bases of various turbulent transport phenomena, which have been used as a standard benchmark by himself and many other workers in the world. He pioneering work was further extended to smart control of turbulent transport, two-phase flows with particles/bubbles/cells, micro-scale thermal and fluid systems. He has also conducted national projects on gas turbines, solid oxide fuel cells, micro heat exchangers, and small-scale distributed energy systems.

He has actively devoted himself to various professional services such as an organizer of many international conferences and an editorial member for several international journals, e.g., Editor-in-Chief of the Int. J. Heat & Fluid Flow from 1993-2012. He has been recognized by many awards and honors such as the William Begell Medal, the Aurel Stodola Medal, and Fellow of the Royal Swedish Academy of Sciences, the Royal Academy of Engineering, the Engineering Academy of Japan, the ASME, and the JSME.

The Luikov Medal is awarded by the International Centre for Heat and Mass Transfer (ICHMT) to one individual every two years for outstanding contributions to the science and art of heat and mass transfer and for activities in international scientific cooperation in conjunction with ICHMT programs. The award is dedicated to Aleksey Vasilievich Luikov, a renowned Russian pioneer in the field of heat transfer.

Recipient of the Nukiyama Memorial Award 2014



Gang Chen

Carl Richard Soderberg Professor of Power Engineering Head of the Department of Mechanical Engineering Massachusetts Institute of Technology

Dr. Gang Chen is the Carl Richard Soderberg Professor of Power Engineering and Head of the Department of Mechanical Engineering at Massachusetts Institute of Technology (MIT). He received his B.S. and M.S. degrees from Huazhong University of Science and Technology (HUST), China, in 1984 and 1987, respectively. He obtained his Ph.D. degree from Mechanical Engineering Department, UC Berkeley, in 1993 under the supervision of the Chancellor Chang-Lin Tien. He was the first holder of the Warren and Towneley Rohsenow Professorship at MIT (2006-2009).

Dr. Chen's research interests center on nanoscale transport and energy conversion phenomena, and their applications in energy storage and conversion, and thermal management. He has made seminal contributions to the understanding of reduced thermal conductivity in nanostructures structures such as quantum wells and superlattices via both modelling and experimental studies. He and his collaborators exploited the unique nanoscale heat conduction physics to advance the field of thermoelectric materials and their applications in solar thermal and waste heat recovery. His group also developed strategies to engineer nanostructures to achieve high thermal conductivities, including the development and demonstration that polymer nanofibers can be more thermally conductive than most metals, and additives to liquids which significantly improve their thermal conductivity.

The Nukiyama Memorial Award has been established by **the Heat Transfer Society of Japan** in 2012 to commemorate the land-mark contributions by Shiro Nukiyama as an outstanding heat transfer scientist. Nukiyama addressed the challenges of the boiling phenomena and published an epoch-making paper, well known as the Nukiyama curve (boiling curve). The Nukiyama Memorial Award shall be bestowed to a scientist, preferably under 50 years of age, every two years in the field of Thermal Science and Engineering.

Koto — Japanese Traditional Music —

Music, as a universal language of the human spirit, has nourished the inner life of people around the world since prehistoric times. Tonight, we are proud to present traditional Japanese koto music. The koto, said to have been invented in China and introduced to Japan about 1200 years ago, has 13 strings, each supported by a moveable



bridge. The strings are plucked with the right hand, using three finger-mounted picks, while the left hand subtly adjusts the position of the bridges for tuning, and alters pitch by applying pressure to certain strings. Tonight's Ikuta School performers are **Master KAWAMOTO Yoshiko**, and **Associate Masters HAYASHI Rikako** and **KAWAMOTO Noriko**. We hope you will enjoy the soothing yet dramatic sounds of classical koto music played by these outstanding performers.

Program

1. Rokudan-no-Shirabe

Yatsuhashi Kengyo (1614–1685)

Rokudan-no-Shirabe, "Melody in Six Sections," may be the most famous Japanese classical composition for koto. The score is written in six sections, each with 52 bars in 2/2 time (except for the first column that has 54 bars). The tempo in each section starts slowly, increases to a climax, then returns to the original tempo at the end. This deceptively simple music has great depth when played masterfully.

2. Hana-to-Shoujo

Nomura Seiho (1927–2011)

Hana-to-Shoujo, "Flowers and a Girl," by Seiho Nomura, was originally scored for koto and shakuhachi (Japanese end-blown flute). Mr. Nomura's compositions express traditional Japanese music styles and lyricism. This piece has a poignant wistfulness, supported by a reservoir of inner strength.

3. Hokkai Minyo-cho

Miyagi Michiyo (1894–1956)

Hokkai Minyo-cho, "Melodies from Hokkaido Folksongs," was inspired by two well-loved folksongs of Northern Japan, Soran Bushi and Esashi Oiwake. The melodies are rhythmical and the mood is optimistic.

4. Godan-Kinuta

Mitsuzaki Kengyo (unk. c.1853)

Godan-Kinuta, "Melody of Kinuta in Five Sections," expresses the rhythmical sounds of *kinuta*, the fulling blocks upon which new cloth is beaten when produced by hand. The interplay of the high and low pitched sounds of the kotos and the complex rhythms give parts of this piece unusual energy and drive.

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Musical score sample from Rokudan-no-Shirabe.

Hira-jyoushi — Japanese Pentatonic Scale —

The 13-string koto is usually tuned in the hira-jyoushi pentatonic scale, five notes per octave, as if C and F were removed from the western key of G minor, as shown at the right. Koto music scores are a type of solfège notation; notes are represented by Chinese characters that indicate which string the player should sound.





Genkoan, Takaga-mine, Kyoto

IHTC-16 will be held in August 10-15, 2018 in Beijing, China.

Organizing Committee Chair: Ping Cheng Executive Committee Chair: Xing Zhang Int. Scientific Committee Chair: Z Y Guo

http://www.ihtc16.org/

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