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In Celebration

Professor Bengt Sundén on his 70th Birthday



Professor Bengt Sundén, who was born in Göteborg in Sweden on September 5th, 1949, is celebrating his 70th birthday this year. He obtained his Master degree in Mechanical Engineering in 1973, and his Ph.D. in Applied Thermodynamics and Fluid Mechanics in 1979, both from Chalmers University of Technology in Göteborg, Sweden. He was appointed as Docent (the highest academic degree in Sweden) in Chalmers University in 1980 and held positions there as research associate and senior lecturer. Professor Sundén has worked as full professor since 1992 in the Department of Energy Sciences at Lund University in Sweden. He served as the Department Head for 21 years from 1995 to 2016, and significantly contributed to its development in both education and research.

Professor Sundén is highly regarded and prolific in research excellence. His main research activities cover both fundamental and applied areas of heat transfer and fluid phenomena such as compact heat exchangers, distributed energy systems such as fuel cell and microturbine, gas turbine heat transfer, combustion-related heat transfer including thermal radiation, computational heat transfer and fluid dynamics, liquid crystal thermography, condensation and evaporation on micro/nano-structured surfaces, nanofluids, impinging jets, aerospace heat transfer, computational modeling and analysis of multiphysics and multiscale phenomena for fuel cells. In addition to his involvement in various research activities, he served as the associate dean of research for six years and also was responsible for Mechanical Engineering at Lund University. He was elected as a member of the Swedish National Committee of Mechanics in 1991–1993 and also in 2005–2009.

His research findings and those of his students have contributed in various sectors of heat transfer and related fields for more than four decades. He has authored and co-authored more than 800 papers in well-recognized journals and international conferences. He authored or co-authored several successful books including “Plate Heat Exchangers: Design, Applications and Performance”, “Introduction to Heat Transfer”, and “Heat Transfer in Aerospace Applications.” One of his pioneering book contributions is entitled “Hydrogen, Batteries and Fuel Cells”, which will be published by Academic Press – Elsevier in late 2019. Professor Sundén has also authored and co-authored 32 book chapters, has edited 32 books published by international publishing houses, and 10 special issues of archival journals.

As an enthusiastic lecturer and supervisor, Professor Sundén has put every effort into teaching both undergraduate and graduate courses, emphasizing engineering education that has had significant impact on the engineering and wider communities. He has taught various topics including thermodynamics, fluid mechanics, numerical heat transfer, thermal radiation, boiling and evaporation, heat and mass transfer, and developed new courses on emerging technologies such as hydrogen-batteries-and-fuel cells. He has also taught a number of in-house courses for various companies, and delivered several short/summer international courses for universities abroad. As the department head at Lund University he had, among many other duties, the overall responsibility for all courses offered by the department. In 2001 and 2008, his department won the award for the best department in education. He has supervised 50 Ph.D., 180 Master theses with many of them in cooperation with industry, and mentored more than 60 post-doc and visiting researchers. He is currently supervising several graduate students and post-docs. Most of his past graduate students are actively contributing at various universities, companies and institutions. He has been passionate in presenting a large number of plenary invited talks, panels, keynotes, and papers in various international conferences and has participated in numerous panel discussions.

Professor Sundén has also devoted himself to various academic societies. He has been involved in referee tasks for more than fifty peer-review international journals and has been active in several international and organizing committees. He was the founding and first editor-in-chief of the International Journal of Heat Exchangers. He served as an associate editor for ASME (American Society of Mechanical Engineers) Journal of Heat Transfer from 2005 to 2008, Journal of Heat Transfer Research since 2011, ASME Journal of Thermal Science and Engineering Applications from 2010 to 2016, and ASME Journal of Electrochemical Energy Conversion and Storage since 2017, a

regional editor of Journal of Enhanced Heat Transfer since 2007, and the editor-in-chief for the book series Developments in Heat Transfer. He is a long-standing member of the Eurotherm committee, which aims to promote and foster European cooperation in Thermal Sciences and Heat Transfer. He has chaired and organized more than 10 conferences including well-established IHTC (international heat transfer conference) held in Sweden, primarily in heat and mass transfer. Professor Sundén has been instrumental in organizing post ISHMT – ASME compact heat exchanger workshops in IIT Chennai (2006) and IIT Delhi (2008). He was named ASME Fellow for his lasting contributions to fundamental and applied knowledge of heat transfer and fluid mechanics. He was also recognized as Fellow and Eminent Scientist of Wessex Institute of Technology in the United Kingdom, for his service to the community and contributions to the field.

Professor Sundén has received a number of prestigious awards including the ASME Heat Transfer Memorial Award in 2011 for his outstanding accomplishments to the field of heat transfer through teaching, research, practice and design, the ASME Heat Transfer Division 75th Anniversary Medal in 2013 for seminal contributions to the discipline of heat transfer, and the Donald Q. Kern Award from the American Society of Chemical Engineers (AIChE) in 2016, in recognition of his pioneering contributions and expertise in heat transfer, transport phenomena, and energy processes. In addition, Professor Sundén was appointed as Honorary Professor at the School of Power and Energy Engineering in Xi'an Jiaotong University in 2006, and in 2013 was appointed as Guest Professor at Northwestern Polytechnic University in Xi'an, China. Also, he was appointed as guest professor at the School of Energy Engineering at Harbin Institute of Technology in Harbin, China in 2017 and was appointed as Honorary Professor at the School of Energy and Environmental Engineering in Hebei University of Technology in Tianjin, China in 2018.

The long-lasting achievements during the past four decades is an affirmation of Professor Sundén's outstanding contributions to research and education and his determined and energetic service to the international thermal science and engineering community. He is well-respected in our community as a true gentleman, a warm-hearted and caring individual with great sincerity and foresight. His dedication to the field of thermal sciences and engineering is well known and his presence at conferences ensures the high standards of the papers. He is a role model to most students and young researchers in the field. It is a great honor to have Professor Sundén as a colleague.

On behalf of his many former students, colleagues, and friends from around the world, we wish him the very best on his 70th birthday, and we would like to recognize his scientific accomplishments, visionary leadership and outstanding academic service to our society. Professor Sundén is a great asset to our community, and we would like to wish him and his family good health, happiness and prosperity.

Conflict of interest

None.

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