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In Celebration

Prof. Sadik Kakaç on his 80th birthday



Professor Kakaç is one of the well known names in the field of heat transfer and two-phase flows, and well respected among his colleagues in the heat transfer community all over the world. He was born on October 1st, 1932 in Çorum, Turkey. He received his degree of Dipl.-Ing (1955) from the Department of Mechanical Engineering at the Technical University of Istanbul (ITU).

He joined the chair of Heat Technique as a research/teaching assistant (1955–1958) in the Department of Mechanical Engineering at ITU, and then he went to MIT under a scholarship to study Nuclear Engineering; he received his SM in Mechanical Engineering in 1959 and his SM in Nuclear Engineering in 1960, both from MIT. Receiving a scholarship from the British government in 1963, in 1965 he received his Ph.D. from the Victoria University of Manchester, UK.

He started his academic life in the Department of Mechanical Engineering at the Middle East Technical University (1960) as an instructor. He then became associate Prof. (1965) and Prof. (1970) then he also served different governmental and research positions; he was elected as a member of the Turkish Scientific and Technological Research Council (TUBITAK) (1972–1980) and appointed as the Secretary General of the Turkish Atomic Energy Commission (1978–1980); representing Turkey in a number of scientific endeavors abroad as a member of NATO Science Committee (1979–1980), the OECD NEA Steering Committee (1978–1980), the Cento Scientific Coordinating Board (1972–1974). He served as the Chairman of the Mechanical Engineering Dept. at ODTU (or METU – Middle East Technical University), in Ankara (1976–1978), and then he

was invited as a visiting Professor to the Department of Mechanical Engineering at the University of Miami (1980–1982), and in 1982, he was appointed as a Full Prof. of mechanical engineering at the University of Miami with tenure. He also served as the Chairman of the Department (1990–1998). He retired from the University of Miami in 2008 and since then he has been a Professor at TOBB University of Economics and Technology, in Ankara, Turkey.

He has maintained his high quality of research for the last more than 50 years. He has authored or co-authored publishing over 200 scientific papers on transient and steady-state laminar, turbulent forced convection, two-phase flow instabilities, Fuel-cells modeling, micro-scale heat transfer, and recently, he has been concentrated in research on convective heat transfer enhancement with nanofluids in single-phase and two-phase conditions. Recently, he published a review paper on convective heat transfer enhancement with nanofluids which was published in the *Int. Journal of Heat and Mass Transfer*. He performed very valuable contributions in all these areas and he has been known as one of the most recognized scientists in the field of heat transfer.

He is highly respected by his peers. He has received many international recognitions: Alexander von Humboldt Senior Distinguished US Scientist Award for his outstanding contributions on heat transfer and two-phase flow was bestowed to him in 1989; Science Award by the Association of Turkish–American Scientists in 1994; ASME Heat Transfer Memorial Award in 1997; in light of his contributions to research and education through his research work and books, he received distinguished service awards from the Turkish Scientific and Technical Research Council (TUBITAK) 2000, and from the Middle East Technical University (METU), in 1998.

He received the Doctor Honoris Causae from the University of Ovidius, Romania (1998), the University of Reims, France (1999), and Odessa State Academy of Refrigeration (2007). He is a member of the Turkish Academy of Sciences (1999), and a foreign member of the Academy of Sciences of the Republic of Bashkortostan of Russian Federation (1998). He is honorary Professor of Shanghai Institute of Electrical Power (1986), Xi'an Jiatong University (1988), both in China, the Engineering College at the Ghandi Institute of Technology and Management, India (1992); he is a Fellow member of ASME.

He served as a member of the Max Jakob award committee (1999–2005) and Chairman of the committee in 2005. He is a member of the Scientific Council, and the Executive Committee, and Fellow of the International Center of Heat and Mass Transfer (ICHMT). During a difficult period to the existence of ICHMT, he was very active in transferring the center to Turkey and in finding financial support from Tubitak for its functioning throughout these years.

He has organized and directed well known NATO Advanced Study Institutes on various topics of thermal and fluid sciences for the last 35 years bringing the eminent scientists as lecturers and the young scientists together from NATO and non-NATO countries to exchange of ideas, educating young scientists, and for dissemination of information on emerging topics providing very valuable service to the heat transfer community. Most of these workshops have resulted in archival books that present the background and current status in the areas considered. All researchers, who attended these workshops, remember the great care and thorough planning put in by Sadik to ensure a successful exchange of ideas, as well as his warm hospitality.

He has been frequently invited as lecturer and speaker by various institutions in US, Europe, China, Malaysia, Singapore, Brazil, Bulgaria and other countries; he organized short courses on Heat Exchangers thermal design in Taiwan, Singapore, Thailand, France, Brazil, and Turkey.

He has been serving as editor or in editorial board of major journals on heat & mass transfer and energy journals. He is the author or co- author of very popular text books of *Convective Heat Transfer, Heat Conduction and Thermal Design of Heat Exchangers*; he edited fourteen volumes in the field of thermal sciences and heat exchanger fundamentals and design, including the *Handbook of Single-Phase Convective Heat Transfer, and Boilers, Evaporators and Condensers* which all became permanent reference books in the field.

He is particularly admired by his friends and colleagues because of his outstanding pleasant behavior and humility. He is specially cordial and helpful to his students and junior colleagues, preferring to interact with them as a friend searching for the truth from the research work rather than as a distant mentor. It is rare to hear

Sadik refuse to take on a new assignment, challenge or an emerging research topic.

On the occasion of his 80th birthday, on behalf of his students, colleagues and friends all over the world, we wish him a very happy birthday and a continuous active life in good health and happiness with his wife Filiz, his daughter, and grandchildren.

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