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## Professor Kwang-Tzu Yang on his 70th birthday



Professor Kwang-Tzu Yang will celebrate his 70th birthday in November 1998 and is also officially retiring from the University of Notre Dame after a long and successful association with the university and with academia. On this occasion, it is a great pleasure to honor his outstanding accomplishments and service to the community, although he will certainly continue to be active in many academic and professional pursuits.

Professor Yang was born in China on 12 November 1928 and completed his early education there before moving to the U.S.A. in 1948. He completed his engineering education at the Illinois Institute of Technology, obtaining his B.S. and M.S. degrees in mechanical engineering and a Ph.D. degree in heat transfer in 1955. He was the very last Ph.D. student of the late Professor Max Jacob.

During his doctoral research, he worked as a Research Engineer with a consulting firm in Chicago. He then joined the University of Notre Dame, where he stayed for 43 years. He served the university in many different capacities, being the Chairman of the Department of Mechanical Engineering during 1968–69 and then Chairman of the Department of Aerospace and Mechanical Engineering for the next 9 years. In 1985, he became the Viola D. Hank Professor of Engineering at the University of Notre Dame. During this long stay at the university, Professor Yang received many awards for his outstanding teaching, research and service, such as the Faculty Award, the Graduate School Award and the Special Presidential Award. He also spent a year as NAVSEA Research Chair Professor at the Naval Postgraduate School, Monterey, California and a summer as Section Head, Engineering Mechanics Section, National Science Foundation, where he wrote the NSF internal proposal to set up a grants program in Mechanical Systems and Design. In addition, he held visiting positions at the University of California, Berkeley and Tokyo Institute of

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Technology for short durations. He was in great demand as a consultant to many organizations and industries, such as Dodge Division, Rockwell International, Tyler Refrigeration Corporation and Nuclear Regulatory Commission.

The breadth and depth of Professor Yang's contributions to research and engineering practice are extremely impressive. From his early pioneering work in natural convection, he has been an active researcher in many diverse fields, ranging from oscillatory flows and fires, to materials processing, hydronics systems, artificial intelligence, thermal systems and tribology. Over the years, his work has been supported by many diverse federal funding agencies and by industries. His research has been published in over 200 technical papers, including about 70 in prestigious journals and many review papers and book chapters that have focused on the fundamental aspects of the phenomena. He also holds two U.S. patents. Many of his scholarly publications are landmark papers that have been used extensively by other researchers in their own work. He has presented keynote papers at various national and international conferences. In his presentations, Professor Yang takes the audience on a fascinating journey with his physical insight and deep understanding. The search for the basic underlying mechanisms has led him to make very significant contributions to the science, education and practice of heat transfer. In recognition of his impact on research in thermal sciences and engineering, he was awarded the ASME Heat Transfer Memorial Award for Science in 1981.

Certainly, his contributions as an educator are equally significant. He has guided more than 60 graduate students, including 28 doctoral students, many of whom are well-known researchers in their own right today. His clear and methodical lectures, simple charm, unassuming manner and dedication to work have made him extremely popular with students. Indeed, he has given many invited lectures in universities, industries and organizations around the world, and is held in very high regard as a mentor and leader by industry and research institutions. He has collaborated and interacted with many international bodies, including acting as an advisor to universities in China and Taiwan.

In terms of service to the community, his contributions are outstanding and far reaching. As Senior Technical Editor of the *Journal of Heat Transfer* (1980–85), he had a tremendous impact on the direction and quality of research in this field. He co-organized several important conferences and workshops, such as the Natural Convection Workshop in Breckenridge, Colorado in 1982,

the Workshop on Interaction of Thermal and Material Sciences in Materials Processing in Snowmass, Colorado in 1985, and the U.S./Japan Workshop on Computers and Computing in Science and Engineering at Oiso, Japan in 1991. He is a member of many professional societies, becoming a Fellow of ASME in 1975. As a member and later chairman of the Executive Committee of the Heat Transfer Division of ASME, he has had a very positive and lasting effect on the heat transfer community and on the field of mechanical engineering. The Dedicated Service Award was given by ASME in 1993 as a token of the appreciation of the community of mechanical engineers for his many important and selfless contributions. He has also served as editor of the *International Journal of Experimental Thermal and Fluid Science* and as a member of the Editorial Advisory Boards of several prestigious journals.

What most friends and colleagues find particularly endearing about Professor Yang is his humility, warmth, sense of humor and willingness to help others. These qualities have become rare in the busy and competitive world of today, and it is indeed inspiring to find such a prominent member of the community willing to help and guide younger researchers, students and engineers. This willingness to share his time, knowledge and experience has molded the careers of many young researchers and engineers.

On a personal note, Professor Yang enjoys classical music very much and has performed as a viola player with South Bend Symphony for about 22 years. He is also an avid hiker. With his five children and nine grandchildren spread around the world, including one family in Hong Kong, Professor Yang has traveled extensively with his wife.

On the occasion of his 70th birthday and official retirement from academia, it is indeed a pleasure for his friends, colleagues, former students and editors of this journal to honor his outstanding achievements and dedicated service to the community and to wish him and his wife, Heather, continued success, good health, and happiness for many years to come.

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