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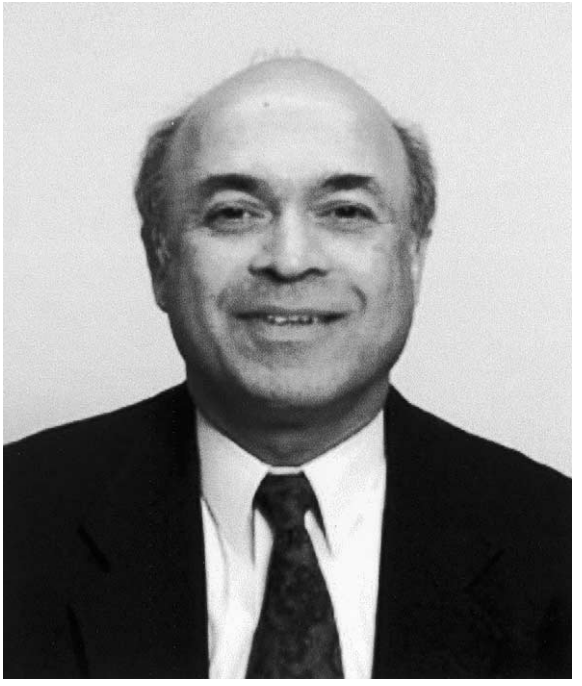
Professor Suhas V. Patankar on his 60th birthday



Professor Suhas V. Patankar celebrated his 60th birthday on February 22, 2001. It is with great pleasure that we mark this happy occasion, by tracing some of the important events in his professional life and highlighting a few of his numerous contributions to engineering education and practice, particularly in the areas of computational fluid dynamics and heat transfer.

Professor Patankar was born in India. He obtained the B.E. and M.Tech. degrees in Mechanical Engineering from the University of Poona and the Indian Institute of Technology, Bombay, respectively. In 1967, he was awarded the Ph.D. degree in Mechanical Engineering by Imperial College, London. His professional career spans three continents. He was an assistant professor at the Indian Institute of Technology, Kanpur, from 1967 to 1970. He then worked at Imperial College, London, UK before moving to Canada, where he taught at the University of Waterloo from 1973 to 1974. In 1974, he joined the Department of Mechanical Engineering at the University of Minnesota, Minneapolis, where he taught for 25 years. He became Professor Emeritus in 2000. He now focuses his creative talents and energy mainly on the development and applications of computational fluid dynamics (CFD), as the President of Innovative Research, Inc., a CFD company he founded in 1987.

Professor Patankar has authored or co-authored four books and published over 100 journal articles. He has worked on mathematical models for turbulence, combustion, chemical vapor deposition, radiation, and metallurgical processes. Many of his papers are regarded as seminal works in the subject of computational fluid dynamics and heat transfer. One of his 1972 papers, co-authored with Professor D.B. Spalding, won the *first* Classic Paper Award given by the Heat Transfer Division of the American Society of Mechanical Engineers (ASME) in 1997. In recognition of his research contributions to computational heat transfer, he was awarded the 1991 ASME Heat Transfer Memorial Award. He is on the editorial board of the Numerical Heat Transfer Journal.

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The impact of Professor Patankar's research contributions and teaching is enormous. His Ph.D. dissertation on a method for calculation of fluid flow and heat transfer in boundary layers was a significant breakthrough, and is the basis of his first book on numerical methods. The resulting Patankar–Spalding method and the associated computer program became a very widely used technique for the analysis of boundary layers. His subsequent work in the 1970s led to a general computational procedure, called SIMPLE, for the prediction of multidimensional recirculating flows. SIMPLE and its variants form the basis of nearly all finite-volume methods for the prediction of fluid flow. His 1980 book Numerical Heat Transfer and Fluid Flow is extremely popular and remains, to this day, one of the most respected works on this subject. This book has been translated into Chinese, Japanese, Korean, Persian, and Russian. His 1991 book Computation of Conduction and Duct Flow Heat Transfer is used for introducing undergraduate students to computational heat transfer. It has been translated into Japanese and Korean.

The numerous journal papers that cite Professor Patankar's publications are another testimony of the exemplary quality of his research work and its impact. In part A of the Numerical Heat Transfer journal, his publications have been cited in 15 and 15 issues (out of 16 issues per year) in 1999 and 2000 respectively. His works were cited in 24, 21, and 18 issues (out of 24 issues per year) of the International Journal of Heat and Mass Transfer in years 1998, 1999, and 2000, respectively, and in *all* issues of the ASME Journal of Heat Transfer in 1999 and 2000. According to the Science Citation Index (SCI-Expanded, Web of Science) of the Institute for Scientific Information, since 1994, Professor Patankar's publications have been cited in over 4000 journal papers.

Professor Patankar's contributions to engineering education are equally impressive. His eagerness to share his knowledge with his students is evident in his lectures and discussions. He conducts his lectures with enthusiasm, exuberance, and unusual clarity, often using commonly encountered scenarios to explain complex phenomena and abstract concepts, at both the undergraduate and graduate levels. He has supervised 35 completed Ph.D. theses at the University of Minnesota. He has also given a large number of short courses and delivered many invited lectures on CFD and its applications, at universities, professional organizations, industries, and international conferences around the world. In recognition of his outstanding teaching at the University of Minnesota, he received the 1983 George Taylor Distinguished Teaching Award and the 1989–1990 Morse Alumni Award for Outstanding Contributions to Undergraduate Education.

On the occasion of his 60th birthday, his students and colleagues join with the editors of this journal to honor Professor Suhas V. Patankar and wish him many more productive years, continued good health, and happiness with his family and friends.

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