

Professor James P. Hartnett on his 65th birthday



IT IS A pleasure to celebrate in this issue of the *International Journal of Heat and Mass Transfer* the sixty-fifth birthday of one of its founders, Professor James P. Hartnett, who was born on 19 March 1924. The breadth of Professor Hartnett's accomplishments and the importance of his contributions to the heat transfer community add significance to this occasion. He has consistently excelled in all that he has undertaken, and by doing so he has dignified and significantly enhanced his profession.

The record which has evolved from Professor Hartnett's life's work is unique and evokes well-deserved admiration. Not only has he amassed impressive research credentials, but he has also made unparalleled contributions to the development of an international heat transfer community and to the fostering of publication vehicles for heat transfer information. Furthermore, he has provided pioneering leadership in the applied fields of energy management and energy policy, thereby serving as a model of how fundamentals and applications are effectively interrelated.

There have been three main themes in Professor Hartnett's 35-year research record. In the 1950s and

1960s, in response to the special needs of nuclear reactor cooling, he undertook fundamental experimental studies of liquid metal heat transfer which yielded major contributions to the permanent literature. Another important application, space flight and the re-entry problem, motivated the second major theme—mass transfer cooling. Here, his contributions, which encompassed both experiment and analysis, have become standard reference. In more recent years, he has turned his attention to one of the most difficult unsolved problems of heat transfer—heat transfer in non-Newtonian fluids. There is no doubt that his work in this subject is at the very frontier of knowledge.

Beside these main themes, Professor Hartnett has worked broadly in areas of heat transfer as diverse as thermal radiation, conduction, duct flows, and impingement flows. His ability to deal effectively with such a diversity of subject matter is further testimony to his prowess as a researcher. All told, the fruits of his research have yielded a harvest of about 150 papers. He also has served as adviser for 20 doctoral theses.

Apart from his research, Professor Hartnett is broadly acknowledged as being one of the key architects and builders of the international heat transfer community as it exists today. It was he who secured breakthroughs which opened up channels of communication between countries which, in the past, had carried on heat transfer research in their separate ways.

He played a key role in the formation of the International Center for Heat and Mass Transfer and its continuing activities. He has served on advisory committees and as a consultant on research and educational activities in the Soviet Union, Eastern Europe, Southeast Asia, Korea, Thailand, and Romania. In addition, he has been a visiting professor at the University of Tokyo, the University of Alexandria, and the Israel Institute of Technology. In 1980, he was invited by the Chinese Academy of Sciences to visit the People's Republic of China and to present lectures at the Institute of Engineering Thermophysics of the Academy and at several universities. He has lectured in the Soviet Union, Brazil, Israel, Yugoslavia, China, India, and Japan. Most recently he was awarded a 1987 Research Fellowship by the Japan Society for the Promotion of Science.

His contributions to the dissemination of information to the heat transfer community are of enormous scope. He was a prime mover in the founding, and later in the development, of the *International Journal of Heat and Mass Transfer*, *Heat Transfer—Soviet Research*, *Heat Transfer—Japanese Research*, *Energy Developments in Japan*, *International Communications in Heat and Mass Transfer*, and *Previews of Heat and Mass Transfer*.

In addition to his many journal editorships, he has

been co-editor of the *Advances in Heat Transfer* series, where definitive state-of-the-art review articles are published. The *Handbook of Heat Transfer* is another of his editing achievements. He has also been an editor of the Hemisphere/McGraw-Hill series in *Thermal and Fluids Engineering*.

While continuing to maintain his active commitment to fundamental research, Professor Hartnett has broadened the scope of his interests to include energy technology and energy policy. He has written widely on these subjects and, as Director of the Energy Resources Center at the University of Illinois at Chicago, he has operated in the real world of policy implementation and legislation.

Many honors have been bestowed on Professor Hartnett in recognition of his significant achievements. He was the recipient of the A. V. Luikov Medal, the Memorial Award of the ASME Heat Transfer Division, a Fulbright Award, a Guggenheim Fellowship, the Professional Achievement Award from his Alma Mater, the Illinois Institute of Technology, and the ASME Heat Transfer Division 50th Anniversary Award. He is a Fellow of both the ASME and AIChE.

Professor Hartnett has dignified the heat transfer community by the breadth and excellence of his contributions. We wish both Jim and his wife Edith good health and continued professional success in the years to come.

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