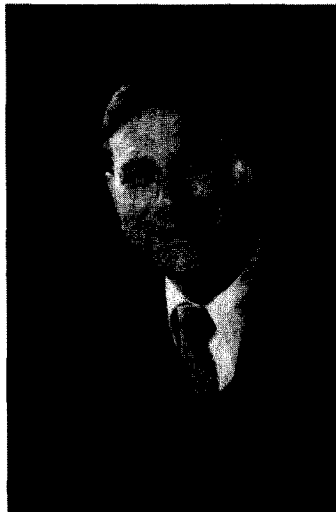


## Professor Ephraim M. Sparrow on his 60th birthday



PROFESSOR Ephraim M. Sparrow celebrates his 60th birthday this month, and it is a great pleasure on this occasion to honor his record of achievement.

Professor Sparrow was born on 27 May 1928 in Hartford, Connecticut. He attended the Massachusetts Institute of Technology where he received the B.S. degree in 1948 and the M.S. in 1949. He then entered Harvard University, where he received the M.A. in 1950 and, under the guidance of Professor Howard W. Emmons, the Ph.D. in 1952. After six years at the NASA Lewis Research Center in Cleveland, Ohio, Professor Sparrow joined the University of Minnesota as a professor of mechanical engineering in 1959.

Professor Sparrow has been the most productive heat transfer researcher in the world for more than three decades, and the fruits of his research have been conveyed to the engineering community in a body of literature encompassing a book on radiation heat transfer and close to 600 papers. The impact of these papers has been far-reaching, as witnessed by the fact that he has been consistently the most cited mechanical engineering professor in the Science Citation Index. His work is characterized by impeccable quality, and his papers have helped to set the standard of quality for an entire field. These research achievements have been recognized by the most prestigious

heat transfer awards—the Max Jakob Award and the ASME Heat Transfer Division Memorial Award.

Another hallmark of Professor Sparrow's work has been its exceptional breadth, and over the years he has worked actively in every facet of heat transfer, and always at or near the frontiers of knowledge. A highly abbreviated list of his research areas includes duct flows, boundary layers, natural convection, heat exchangers, laminar and turbulent flows, radiative heat transfer, mass transfer, phase change (evaporation, condensation, freezing, melting, and boiling), heat conduction, rotating surfaces and fluids, solar energy, chemically reacting flows, hydrodynamic and thermal instability, jet impingement, flow in porous media, and cooling of electronic equipment. In each of these areas and others, he has produced papers that have become standard reference.

Among researchers, Professor Sparrow is unusual in that he is highly effective both in experiment and in analysis/computation. He was among the first to recognize the enormous potential of the digital computer as a tool for solving highly complex problems in heat transfer and fluid flow. Although he has continued to steadily produce analytically- and computationally-based research, he is perhaps best known as an innovative, painstaking experimentalist.

Professor Sparrow has performed superlatively as

a professor of mechanical engineering at the University of Minnesota. Thus far, approximately 70 Ph.D. theses and 100 Master's theses have been completed under his direction. His students have gone on to positions of importance both in the academic and industrial worlds. As a classroom teacher, Professor Sparrow has no peer. A characteristic of his interactions with students has been his devoted care and concern for them and their futures. He has been awarded the Ralph Coates Roe Teaching Award by the American Society for Engineering Education, and two Teaching Awards from the Institute of Technology of the University of Minnesota.

Professor Sparrow has also contributed significantly to the effective transmission of technical information. He was editor of the *ASME Journal of Heat Transfer* for eight years. During that time, it became one of the most prestigious publication vehicles in the field, with quality standards second to none, and he received the Distinguished Service Award from the Heat Transfer Division of ASME in recognition of his efforts. He was also a co-founder of the journal, *Numerical Heat Transfer*, and now serves as chairman of its editorial board. He is a member of the editorial boards of the *International Journal of Heat and Mass Transfer* and of *International Communications in Heat and Mass Transfer* and, in addition, he is co-editor of a series of books on computational methods in mechanics and thermal sciences.

He has also lent his energies to international activities. He was chief-of-party of a team which established the first graduate programs in engineering in Brazil, and this work was recognized by his being awarded an honorary doctorate by the University of Brazil. He is an advisory professor at the Xi'an Jiaotong

University in Xi'an, China. In addition, he has lectured in many countries throughout the world.

Recently, Professor Sparrow assumed the position of Division Director, Chemical, Biochemical, and Thermal Engineering, at the U.S. National Science Foundation in Washington, DC. From this national position, he is contributing to the growth and strength of engineering research and education in the United States, while commuting weekends to the University of Minnesota where he continues to serve as a professor of mechanical engineering.

In each one of the various activities and endeavors with which he has been involved, Professor Sparrow has been an extraordinary performer. His impact on the field of heat transfer and on the engineering community in general is without parallel. In recognition of his contributions to mechanical engineering, Professor Sparrow has received many of the highest citations from ASME, including the Worcester Reed Warner Medal, the Charles Russ Richards Memorial Award, and the ASME Centennial Medal. In view of his contributions to engineering on a national level, he was recently elected to the U.S. National Academy of Engineering.

On this occasion, his students, colleagues and friends throughout the world join with the editors of this journal to wish Professor Eph Sparrow many years of continued professional success, good health and family happiness.

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