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## Professor D. Brian Spalding on his eightieth birthday



This year, Professor D. Brian Spalding had his 80th birthday on January 9, 2003. On this happy occasion, we reflect upon his professional achievements and his invaluable contributions to heat and mass transfer. At the outset, it is important to note that he was one of the founders and a past editor of this journal. Through his superb creativity and vision, he has made a long-lasting impact on the scientific state of this subject and on the international cooperation surrounding it.

His research contributions are characterized by the variety of their topics and by their ability to create a breakthrough. He has contributed to major advances in heat and mass transfer, combustion, turbulent flow, computational methods, and multiphase phenomena. His creative ideas have produced quantum leaps in our understanding and predictive capability and thus opened the door to many new scientific opportunities.

The strength of his research emanates from his desire and ability to generalize a given concept, formula or procedure. His early work on convective mass transfer created a novel framework for a number of disparate phenomena. Later, he embarked on a “unified theory” for boundary layers, which allowed him to predict wall boundary layers, jets and wakes, wall jets, and duct flows by the same general technique. The numerical

method for boundary layers was subsequently extended to multidimensional non-boundary-layer flows. His work on turbulence models, turbulent combustion, and multiphase flow exhibits the same type of urge and capability to reach extraordinary heights through bold generalization.

Professor Brian Spalding was born in England on January 9, 1923. He got the BA and MA degrees from the University of Oxford and PhD and ScD from Cambridge. For a major part of his professional career, he worked as a Professor of Heat Transfer at Imperial College, London. Since 1970 onwards, he headed the company CHAM, where the outcome of his academic research could be applied to industrial problems. He has had a large number of students, colleagues, and associates, who benefited from his approach to scientific problems and his vision for the future developments.

The many honors and awards bestowed upon him are a fitting tribute to his valuable professional contributions. They include the highest recognitions in the field of heat transfer and combustion. He has received the Max Jakob Award, the Bernard Lewis Medal, and the Luikov Medal. He is a Fellow of the Royal Society of London, a Fellow of the Royal Academy of Engineering, a

Member of the Russian Academy of Sciences, a Member of the Ukrainian Academy of Sciences, and a Member of the Royal Norwegian Society of Sciences. He has worked on the editorial boards of a number of scientific journals and has played a major role in establishing and running the International Center for Heat and Mass Transfer.

At the age of 80, Professor Spalding continues to be active in research, technical writing, and professional presentations. He is currently working on a new generation of turbulence models based on the concepts of two-phase flow. Just as a transient two-phase flow contains the intermittent presence of the two fluids, a

turbulent flow can be imagined to be an interplay of laminar and turbulent phases. This concept has far-reaching implications for turbulence models for buoyant flows and combustion.

On the occasion of his 80th birthday, his students, colleagues, and friends throughout the world would like to thank him for his tremendous professional contributions and wish him good health, happiness, and more scientific breakthroughs.

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