

## Foreword to the Special Issue on Radiative Heat Transfer

It is with great pleasure that we present this special issue of the *Journal of Heat Transfer*. Dating back to its inception, the *Journal of Heat Transfer* has been one of the premier journals in heat transfer to publish ground-breaking work on radiative heat transfer and related applications. Therefore, the journal is an appropriate home for a special issue on radiative heat transfer. We thank the Editor, Professor Yogesh Jaluria, for recognizing this opportunity, and graciously agreeing to publish this issue.

Through the publication of this special issue, we also celebrate the 65th birthday of Professor Michael F. Modest, an internationally recognized scholar and educator in the area of radiative heat transfer. Professor Modest's seminal contributions, spanning more than three decades, have laid the foundation for several aspects of radiative heat transfer and its applications, ranging from radiation in molecular gases and plasmas to laser processing of materials. The *Journal of Heat Transfer* has been home to a large fraction of his more than 200 publications. His textbook, *Radiative Heat Transfer*, now in its second edition, is widely recognized as a model of clarity and knowledge to students, teachers, and professional alike. Professor Modest has also served both as an Associate Technical Editor and as a Senior Associate Technical Editor of the *Journal of Heat Transfer*. The publication of this special issue closely follows the Symposium on Radiative Heat Transfer in Honor of Professor Michael Modest, held at the 2009 Summer Heat Transfer Conference in July in San Francisco, California. While a large majority of the contributors to this issue were in attendance at the Symposium, the publication of this issue provides another opportunity for those authors who were unable to attend to present their work and pay tribute to Professor Modest.

This special issue brings to light the state of the art in the area of radiative heat transfer through compilation of a collection of papers contributed by experts across the world—researchers who are working on various aspects of radiative heat transfer and its

applications. Many of these researchers have worked directly under Professor Modest's supervision, others have worked with him in a collaborative capacity, and some simply share interest and work in technical areas of common interest. The 21 full-length Research Papers and 2 Technical Briefs contained in this special issue were contributed by authors from 9 different countries. They were all peer-reviewed in compliance with the rigorous review standards of the *Journal of Heat Transfer*. The papers represent a broad spectrum of research in the field, covering topics such as radiation in plasma systems, radiation in fires, radiation in porous media, radiation transport at small scales, novel finite-element and finite-volume method based approaches for solution of the radiative transfer equation, and Monte Carlo methods. As such, the papers have been classified into three broad sub-categories: (1) radiative properties, (2) solution methods, and (3) applications.

We sincerely thank all contributors for their overwhelming response to the call for papers for this special issue, and all reviewers for devoting their precious time to review the papers. Finally, we deeply appreciate the strong and responsive editorial assistance of Shefali Patel.

We are pleased to celebrate the career and contributions of Professor Michael F. Modest, and we hope that this special compilation of papers will be beneficial to researchers in the area of radiative heat transfer for years to come.

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