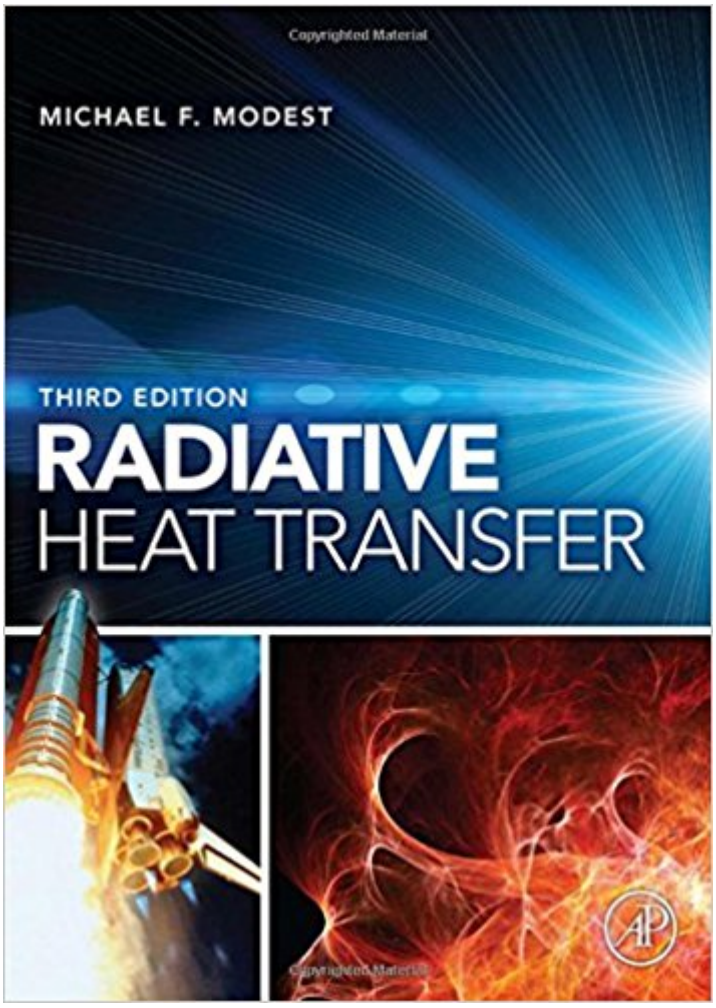
Radiative Heat Transfer, Third Edition



Synopsis

The third edition of Radiative Heat Transfer describes the basic physics of radiation heat transfer. The book provides models, methodologies, and calculations essential in solving research problems in a variety of industries, including solar and nuclear energy, nanotechnology, biomedical, and environmental. Every chapter of Radiative Heat Transfer offers uncluttered nomenclature, numerous worked examples, and a large number of problemsâ •many based on real world situationsâ •making it ideal for classroom use as well as for self-study. The book's 24 chapters cover the four major areas in the field: surface properties; surface transport; properties of participating media; and transfer through participating media. Within each chapter, all analytical methods are developed in substantial detail, and a number of examples show how the developed relations may be applied to practical problems. Extensive solution manual for adopting instructors Most complete text in the field of radiative heat transfer Many worked examples and end-of-chapter problems Large number of computer codes (in Fortran and C++), ranging from basic problem solving aids to sophisticated research tools Covers experimental methods

Book Information

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Customer Reviews

Jennifer X. Wen, Kingston University, UK:"This book can simply be summed up as the 'bible' for thermal radiation and its calculation methods.""I expect to see it on the bookshelf of every university and major research laboratory.""Because of the level of details the book has gone into in each specific topic, this book will be especially suitable for occasions where students are expected to read extensively outside the classroom as part of the syllabus."Andrei Fedorov, Georgia Tech:"The

book is up-to-date and provides excellent coverage.""Excellent writing style with nice historical highlights. The most important asset of the book is its clear and consistent notation used throughout the manuscript. It is probably the most comprehensive treatment of the topic that is currently in existence. It has up-to-date bibliography and very sound treatment of electromagnetism foundation of thermal radiation." Peter Wong, Tufts University:"Modest has compiled together a comprehensive and detailed understanding in thermal radiative heat transfer for graduate students and practicing engineers."Yildiz Bayazitoglu, Rice University:"Very much up to date and has a good selection of topics.""Comprehensive, detailed, but simplified.""The author presented the radiative heat transfer and its interactions with other modes of heat transfer in a coherent and integrated manner emphasizing the fundamentals...The book is directed towards the graduate level students as well as towards the scientists and engineers already engaged in subject matter."

Shaffer and George Professor of Engineering School of EngineeringUniversity of California, Merced

For anyone really interested in radiative heat transfer, especially at high temperatures, this book covers it all and the third edition has been brought fully up to date on advances in the field. I've found everything I wanted to know about gas and solids heat transfer in this text, including integrated conduction and convection heat transfer. I've found that the simple equation development from first principals on upward to advanced modeling concepts fits my study style exactly, neither too much nor too little is covered, and all in a logical progression. The topic development is so clear and comprehensive that this is the only resource that I'll use.

I got this book last year and before buying it, I checked out the older version from my graduate school's library. It is very advanced textbook, covering a lot of topics and theories. The author of this book, Dr. Modest was my undergrad Heat and Mass Transfer professor at UC Merced. I really enjoyed his class. Also, last two chapters of Fundamentals of Heat and Mass Transfer undergrad text book talks about the radiative heat transfer and this book talks deeply about this concept.

I come from a Computer Graphics background and I wish I had this book years ago. I highly recommend it for the level of discussion and the mathematics presented. I particularly enjoyed the fact that it explained the Fresnel equations for non-absorbing materials (AKA metals). I was able to make a pretty decent simulation of Gold with the information in this book. As a whole, it has a ton of material in it.

This is very informative. The book is quite advanced, yet it describes radiation in a simplistic manner which builds on itself. I bought this book to study radiation in participating media (chapters 10, 21, and 22 specifically) and I am very happy with the purchase. I would highly recommend the book to anyone looking for an advanced book on radiative heat transfer.

Perfect condition as far as I can tell

The book seems well written and covers many topics. Unfortunately, there isn't a single solution to any of the end chapter problems (no odds or evens as is typical). This is a graduate level book, what on earth is the purpose of omitting these solutions? Most instructors probably won't use the questions in the book anyway, but who cares if they do? So unfortunate, the book is made with the cheater in mind rather than the student who truly wants to learn. I like to do as many problems as I can and would like to know if I've done something wrong, not an option here.

It arrived pretty banged up, but it was the correct book

Good product. Thanks.

Convective Heat & Mass Transfer Introduction to Thermal Systems Engineering: Thermodynamics, Fluid Mechanics, and Heat Transfer Introduction to Thermal Sciences: Thermodynamics, Fluid Dynamics, Heat Transfer Fundamentals of Heat and Mass Transfer Fundamentals of Momentum, Heat, and Mass Transfer Introduction to Heat Transfer