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3.10 Experimental Methods; References; Problems; Chapter 4. View Factors; 4.1 Introduction; 4.2 Definition of View Factors; 4.3 Methods for the Evaluation of View Factors; 4.4 Area Integration; 4.5 Contour Integration; 4.6 View Factor Algebra; 4.7 The Crossed-Strings Method; 4.8 The Inside-Sphere Method; 4.9 The Unit Sphere Method; References; Problems

Chapter 5. Radiative Exchange Between Gray, Diffuse Surfaces 5.1 Introduction; 5.2 Radiative Exchange Between Black Surfaces; 5.3 Radiative Exchange Between Gray, Diffuse Surfaces; 5.4 Electrical Network Analogy; 5.5 Solution Methods for the Governing Integral Equations; References; Problems; Chapter 6. Radiative Exchange Between Partially-Specular Gray Surfaces; 6.1 Introduction; 6.2 Specular View Factors; 6.3 Enclosures with Partially-Specular Surfaces; 6.4 Electrical Network Analogy; 6.5 Radiation Shields; 6.6 Semitransparent Sheets (Windows); 6.7 Solution of the Governing Integral Equation 6.8 Concluding Remarks References; Problems; Chapter 7. Radiative Exchange Between Nonideal Surfaces; 7.1 Introduction; 7.2 Radiative Exchange Between Nongray Surfaces; 7.3 Directionally Nonideal Surfaces; 7.4 Analysis for Arbitrary Surface Characteristics; References; Problems; Chapter 8. Surface Radiative Exchange in the Presence of Conduction and Convection; 8.1 Introduction; 8.2 Conduction and Surface Radiation-Fins; 8.3 Convection and Surface Radiation; References; Problems; Chapter 9. The Equation of Radiative Transfer in Participating Media; 9.1 Introduction 9.2 Radiative Intensity in Vacuum

Sommario/riassunto

The most comprehensive and detailed treatment of thermal radiation heat transfer available for graduate students, as well as senior undergraduate students, practicing engineers and physicists is enhanced by an excellent writing style with nice historical highlights and a clear and consistent notation throughout. Modest presents radiative heat transfer and its interactions with other modes of heat transfer in a coherent and integrated manner emphasizing the fundamentals. Numerous worked examples, a large number of problems, many based on real world situations, and an up-to-date bibliography
