

Contents

Preface	vii
List of Contributors	x
Turbulence Modeling for Hypersonic Flows	
<i>J. G. Marvin and T. J. Coakley</i>	1
Advanced Topics in Turbulence Theory	
<i>Marcel Lesieur</i>	44
Different Levels of Air Dissociation Chemistry and Its Coupling with Flow Models	
<i>J. Warnatz, U. Riedel, and R. Schmidt</i>	67
Modeling of Hypersonic Reacting Flows	
<i>Chul Park</i>	104
Modeling of Hypersonic Non Equilibrium Flows	
<i>F. Grasso and V. Bellucci</i>	128
Wall Catalytic Recombination and Boundary Conditions in Nonequilibrium Hypersonic Flows—With Applications	
<i>Carl D. Scott</i>	176
Physical Aspects of Hypersonic Flow:	
Fluid Dynamics and Non-Equilibrium Phenomena	
<i>Maurizio Pandolfi</i>	251
Permissions	269