DESCRIPTION

This book concentrates on modeling and numerical simulations of combustion in liquid rocket engines, covering liquid propellant atomization, evaporation of liquid droplets, turbulent flows, turbulent combustion, heat transfer, and combustion instability. It presents some state of the art models and numerical methodologies in this area. The book can be categorized into two parts. Part 1 describes the modeling for each subtopic of the combustion process in the liquid rocket engines. Part 2 presents detailed numerical methodology and several representative applications in simulations of rocket engine combustion.

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Professor Wang has worked in the area of aeronautical and astronautical science and technology since the 1980s. This book is based on the teaching and supervision work of undergraduate and postgraduate students over the past 30 years. He is a Member of the Science and Technology Committee of the Ministry of Education, China, and Editor of Proceedings of the Institute of Mechanical Engineers, Part G: Journal of Aerospace Engineering. He has published two books (in Chinese) and over 100 peer-reviewed journal papers.
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