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Autore	Krishnan Subramaniam
Titolo	Chemical Rockets [[electronic resource]] : Performance Prediction and Internal Ballistics Design / / by Subramaniam Krishnan, Jeenu Raghavan
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-26965-5
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (XI, 538 p. 23 illus., 2 illus. in color.)
Collana	Springer Aerospace Technology, , 1869-1730
Disciplina	629.1
Soggetti	Aerospace engineering Astronautics Engineering design Thermodynamics Heat engineering Heat transfer Mass transfer Fluid mechanics Applied mathematics Engineering mathematics Aerospace Technology and Astronautics Engineering Design Engineering Thermodynamics, Heat and Mass Transfer Engineering Fluid Dynamics Mathematical and Computational Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	PartI: Performance Calculation of Chemical Propellants by Energy Minimization -- Chapter1: Introduction -- Chapter2: Chemical Potential -- Chapter3: Mass Balance -- Chapter4: Iteration Equations -- Chapter5: Thermodynamic Derivatives -- Chapter6: Thermodynamic Data -- Chapter7: Theoretical Rocket Performance -- PartII: Performance Prediction and Internal Ballistics Design of Solid Propellant Rocket Motors -- Chapter8: Introduction -- Chapter9: Equilibrium–

	Pressure Analysis -- Chapter10: Incremental Analysis -- Chapter11: Computer Program.
Sommario/riassunto	The purpose of this book is to discuss, at the graduate level, the methods of performance prediction for chemical rocket propulsion. A pedagogical presentation of such methods has been unavailable thus far and this text, based upon lectures, fills this gap. The first part contains the energy-minimization to calculate the propellant-combustion composition and the subsequent computation of rocket performance. While incremental analysis is for high performance solid motors, equilibrium-pressure analysis is for low performance ones. Both are detailed in the book's second part for the prediction of ignition and tail-off transients, and equilibrium operation. Computer codes, adopting the incremental analysis along with erosive burning effect, are included. The material is encouraged to be used and presented at lectures. Senior undergraduate and graduate students in universities, as well as practicing engineers and scientists in rocket industries, form the readership.

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Record Nr.	UNINA9910143753503321
Titolo	African economic history review
Pubbl/distr/stampa	Madison, Wis., : University of Wisconsin, 1974-1975
ISSN	2326-2958
Disciplina	330.9/6/03
Soggetti	Periodiques electroniques Economic history periodicals. Periodicals. Periodiques. Africa Economic conditions Periodicals Afrique Conditions economiques Periodiques Africa
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Periodico