

1. Record Nr.	UNINA9910457546903321
Titolo	Scramjet propulsion [[electronic resource] /] / edited by E.T. Curran, S. N.B. Murthy
Pubbl/distr/stampa	Reston, Va., : American Institute of Aeronautics and Astronautics, c2000
ISBN	1-60086-660-3 1-60086-441-4
Descrizione fisica	1 online resource (1324 p.)
Collana	Progress in astronautics and aeronautics ; ; v. 189
Altri autori (Persone)	CurranE. T MurthyS. N. B
Disciplina	629.1 s 629.134/3535
Soggetti	Airplanes - Scramjet engines Jet propulsion Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	""Cover""; ""Title""; ""Copyright""; ""Contents""; ""Preface""; ""Introduction""; ""I. International Efforts""; ""II. Inlets, Combustors, and Fuels""; ""III. Overall Systems""; ""IV. Future Developments""; ""V. Closing Comments""; ""References""; ""Chapter 1 Scramjet Testing in the T3 and T4 Hypersonic Impulse Facilities""; ""Nomenclature""; ""I. History, Aims, and Developments""; ""II. Facility and Instrumentation""; ""III. Fuel-Injection Systems""; ""A. Wall-Injection Combustion Results""; ""B. Wall-Injection Film-Cooling Results""; ""C. Port-Injection Results""; ""D. Central Injection"" ""IV. Combustion/Mixing Processes""""A. Mixing Controlled Combustion""; ""B. Kinetically Controlled Combustion""; ""C. Shock-Induced Ignition""; ""D. Shock-Induced Mixing""; ""V. Simple Theoretical Combustor and Thrust Model""; ""VI. Experimental Results of Specific Impulse""; ""VII. Effects of Atomic Oxygen and Nitric Oxide in the Freestream""; ""VIII. Different Fuels""; ""A. Hydrocarbon Fuels""; ""B. Silane-Enriched Fuels""; ""IX. Integrated Scramjet Measurements""; ""X. Skin-Friction Measurements""; ""XI. Discussion and Review"";

""Acknowledgments""; ""Bibliography""

""Chapter 2 Scramjet Developments in France""""I. Historical Overview""; ""II. Basic Research on Diffusion Flame Combustion (1962a€?1967)""; ""A. Combustion in a Cylindrical Duct""; ""B. Freejet Test""; ""C. Combustion in a Divergent Duct""; ""D. Synthesis""; ""III. ESOPE Program (1966a€?1973)""; ""A. Origin and Principal Aims""; ""B. Studies Results""; ""C. Synthesis""; ""IV. Studies on Shock-Induced Combustion""; ""A. Principle""; ""B. ENSMA and LATECAM Studies""; ""V. Prepha Program (1992a€?1997)""; ""A. Origin and Principal Aims""; ""B. System Studies"" ""C. Development of New Test Facilities""""D. Numerical Means""; ""E. Development of Scramjet Components""; ""Color Plates""; ""F. Materials and Cooled Structures""; ""G. Flight Testing""; ""VI. Perspectives""; ""A. Space Application""; ""B. Missile Application""; ""References""; ""Chapter 3 Scramjet Investigations Within the German Hypersonics Technology Program (1993a€?1996)""; ""I. German Hypersonics Technology Program and Scramjet-Related Activities""; ""A. German Hypersonics Technology Program""; ""B. Scramjet Related Activities Within the HTP"" ""II. Theoretical Investigations for Scramjet Intake Designs""""A. Activities at Dasa-MT633""; ""B. Activities at RWTH Aachen""; ""III. Theoretical and Experimental Investigations of Scramjet Combustion at TsAGI and DLR Lampoldshausen""; ""A. Combustor Model Design""; ""B. Fuel-Injection Modules""; ""C. Test Results""; ""IV. Freejet Wind-tunnel Testing of Scramjet Propulsion Systems at TsAGI""; ""A. Scramjet Propulsion System Model Concept""; ""B. Testing Focus""; ""C. Test Results""; ""V. Considerations for Flight Testing Small-Scale Scramjet Modules Using the RADUGA-D2 Flying Testbed"" ""A. Objectives for Flight Testing""
