

1.	Record Nr.	UNISA996393599003316
	Titolo	His Majesties message to the Lords and Commons in Parliament, Sept. 5 [[electronic resource]] : together with a declaration of the Lords and Commons in Parliament in answver to the said message
	Pubbl/distr/stampa	.. London, : Printed by L. N.and J. F. for E. Husbands and J. Franck ..., September 7, 1642
	Descrizione fisica	8 p
	Altri autori (Persone)	Charles, King of England, <1600-1649.>
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Reproduction of original in Thomason Collection, British Library.
	Sommario/riassunto	eebo-0158
2.	Record Nr.	UNINA9910963611303321
	Titolo	Gossamer spacecraft : membrane and inflatable structures technology for space applications / / edited by Christopher H.M. Jenkins
	Pubbl/distr/stampa	Reston, Va., : American Institute of Aeronautics and Astronautics, c2001
	ISBN	1-60086-661-1 1-60086-442-2
	Edizione	[1st ed.]
	Descrizione fisica	1 online resource (604 p.)
	Collana	Progress in astronautics and aeronautics ; ; v. 191
	Altri autori (Persone)	JenkinsC. H
	Disciplina	629.1 s 629.47
	Soggetti	Expandable space structures Space vehicles - Materials Membranes (Technology)
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Nota di bibliografia

Includes bibliographical references.

Nota di contenuto

""Cover""; ""Title""; ""Copyright""; ""Table of Contents""; ""Preface""; ""Chapter 1. Overview of Gossamer Structures""; ""I. Background""; ""II. Applications""; ""A. Solar Arrays""; ""B. Communication Systems""; ""C. Human Habitats""; ""D. Planetary Surface Exploration""; ""E. Radar and Reflect Arrays""; ""F. Solar Concentrators""; ""G. Solar Shades""; ""III. Membranes for Gossamer Structures""; ""IV. Rigidization Technology""; ""V. Analysis and Modeling of Gossamer Structures""; ""VI. Adaptive, Smart, and Multifunctional Gossamer Systems""
""A. Adaptive Compensation of Membrane Reflectors""""B. Multifunctional Membranes""; ""C. Smart Structures""; ""VII. Summary""; ""Acknowledgments""; ""Chapter 2. History of Relevant Inflatable High-Precision Space Structures Technology Developments""; ""I. Introduction""; ""II. Goodyear's Inflatable Structures""; ""A. Inflatable Search Radar Antenna""; ""B. Radar Calibration Sphere""; ""C. Lenticular Inflatable Parabolic Reflector""; ""D. Echo Balloons""; ""E. Contraves Inflatable Structures""
""F. Reflector Antenna Concepts for Very Large Baseline Interferometry and Land Mobile Communications""""G. Telescope Sunshade Support Structure""; ""III. L' Garde Inc.'s Inflatable Space Structures""; ""A. L' Garde Inc.'s Simulated Decoys""; ""B. Large Offset Reflector Structure""; ""C. Inflatable Antenna Experiment""; ""IV. ILC Dover's Inflatable Space Structures""; ""A. Large Solar-Array Structure""; ""V. Other Organizations with Inflatable Space Structures Technology Capability""; ""References""; ""Chapter 3. Mechanics of Membrane Structures""; ""Nomenclature""; ""I. Introduction""
""A. Definition and Unique Behavior of Membranes""""B. Tensor Analysis""; ""C. Coordinate Systems and Configurations""; ""II. Kinematics of Deformation""; ""A. Motion and Deformation""; ""B. Deformation Gradient, Stretch, and Polar Decomposition""; ""C. Strain Definitions""; ""D. Deformation and Strain Rate""; ""III. Stress and Balance Laws""; ""A. Concept of Stress""; ""B. Stress Definitions""; ""C. Mass Balance""; ""D. Momentum Balance""; ""E. Energy Balance""; ""F. Conjugate Stress and Strain""; ""IV. Constitutive Equations""; ""A. Introduction""; ""B. Thermomechanics""
""C. Thermomechanic Field Theory""""D. Constitutive Relations for Elastic Solids and Sheets""; ""E. Constitutive Laws for Viscoelastic Materials""; ""F. Bodner's Partom's Rubin Model""; ""G. Fabrics""; ""V. Approximations""; ""A. Approximations in the Era of Computational Mechanics""; ""B. Nonlinear Nature of Membrane Problems""; ""C. Approximations in the Context of the Governing Equations""; ""D. Example""; ""E. On Accuracy and Modeling""; ""VI. Analysis of Wrinkled Membranes""; ""A. Introduction""; ""B. Tension-Field Modeling via a Penalty Parameter Modified Constitutive Law""
""VII. Experimental Analysis""

Sommario/riassunto

Written by many experts in the field, this book brings together, in one place, the state of the art of membrane and inflatable structure technology for space applications. With increased pressure to reduce costs associated with design, fabrication and launch of space structures, there has been a resurgence of interest in membrane structures for extraterrestrial use. Applications for membrane and inflatable structures in space include lunar and planetary habitats, RF reflectors and waveguides, optical and IR imaging, solar concentrators for solar power and propulsion, sun shades, solar sails and many others.
