

1. Record Nr.	UNINA9910300427103321
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Titolo	Solar Sails : A Novel Approach to Interplanetary Travel // by Giovanni Vulpetti, Les Johnson, Gregory L. Matloff
Pubbl/distr/stampa	New York, NY : , : Springer New York : , : Imprint : Springer, , 2015
ISBN	1-4939-0941-X
Edizione	[2nd ed. 2015.]
Descrizione fisica	1 online resource (286 p.)
Collana	Space Exploration
Disciplina	629.41
Soggetti	Aerospace engineering Astronautics Optics Electrodynamics Energy systems Aerospace Technology and Astronautics Classical Electrodynamics Energy Systems
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 and index.
Nota di contenuto	Part I: Space Engines: Past and Present -- A Historical Introduction to Space Propulsion -- The Rocket: How It Works in Space -- Rocket Problems and Limitations- Non-Rocket-In-Space Propulsion -- The Solar-Sail Option: From the Oceans to Space -- Part II: Space Mission by Sail -- Principles of Space Sailing -- What Is a Space Sailcraft?- Sails vs. Rockets -- Exploring and Developing Space by Sailcraft -- Riding a Beam of Light -- Part III: Construction of Sailcraft -- Designing a Solar Sail -- Building a Sailcraft -- Progress to Date -- Future Plans -- Part IV: Breakthroughs in Space -- The IKAROS/JAXA Mission -- The NanoSail-D2/NASA Mission -- New Projects in Progress -- Part V: Space Sailing: Some Technical Aspects -- Space Sources of Light -- Modeling Thrust via Electromagnetic Radiation Pressure and Diffraction- Sailcraft Trajectories -- Sails in Space Environment -- Glossary -- Index.
Sommario/riassunto	The reality of sunlight-based sailing in space began in May 2010, and solar sail technology and science have continued to evolve rapidly

through new space missions. Using the power of the Sun's light for regular travel propulsion will be the next major leap forward in our journey to other worlds. This book is the second edition of the fascinating explanation of solar sails, how they work and how they will be used in the exploration of space. Updated with 35% new material, this second edition includes three new chapters on missions operated by Japan and the US, as well as projects that are in progress. The remainder of the book describes the heritage of exploration in water-borne sailing ships and the evolution to space-vehicle propulsion; as well as nuclear, solar-electric, nuclear-electric and antimatter rocket devices. It also discusses various sail systems that may use either sunlight or solar wind, and the design, fabrication and steering challenges associated with solar sails. The first edition was met with overwhelmingly positive reviews, and deemed "a title that needs to be on your shelf if you're seriously interested in the next step as we move beyond rocketry" (Centauri Dreams, September 2008). Written with a mixed approach, this book appeals to both the general public as well as those with a more scientifically technical background.
