Record Nr.	UNINA9910300407103321
Autore	Pelton Joseph N
Titolo	New Solutions for the Space Debris Problem [[electronic resource] /] / by Joseph N. Pelton
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-17151-8
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (102 p.)
Collana	SpringerBriefs in Space Development, , 2191-8171
Disciplina	363.7280919
Soggetti	Aerospace engineering
	Astronautics
	Space sciences
	Law of the sea
	International law
	Aerospace Technology and Astronautics
	Space Sciences (including Extraterrestrial Physics, Space Exploration and Astronautics) Law of the Sea, Air and Outer Space
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	Introduction Current Initiatives and Their Status Definition of Space Debris for Active Remediation Commercial Feasibility of Space Debris Remediation Technological Advancement Enabling Active Remediation Legal Challenges Surrounding Active Debris Remediation Proposed Way Ahead Conclusion.
Sommario/riassunto	Addressing a pressing issue in space policy, Pelton explores the new forms of technology that are being developed to actively remove the defunct space objects from orbit and analyzes their implications in the existing regime of international space law and public international law. This authoritative review covers the due diligence guidelines that nations are using to minimize the generation of new debris, mandates to de-orbit satellites at end of life, and innovative endeavours to remove non-functional satellites, upper stage rockets and other large debris from orbit under new institutional, financial and regulatory

guidelines. Commercial space services currently exceed 100 billion USD business per annum, but the alarming proliferation in the population of orbital debris in low, medium and geosynchronous satellite orbits poses a serious threat to all kinds of space assets and applications. There is a graver concern that the existing space debris will begin to collide in a cascading manner, generating further debris, which is known as the Kessler Syndrome. Scientific analysis has indicated an urgent need to perform space debris remediation through active removal of debris and on-orbit satellite servicing.