Record Nr.	UNINA9910254322303321
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Titolo	Dynamics and Design of Space Nets for Orbital Capture / / by Leping Yang, Qingbin Zhang, Ming Zhen, Haitao Liu
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2017
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XV, 174 p. 148 illus.)
Disciplina	629.1
Soggetti	Aerospace engineering
	Astronautics
	Vibration
	Dynamical systems
	Dynamics
	System safety
	Aerospace Technology and Astronautics
	Vibration, Dynamical Systems, Control
	Security Science and Technology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction Cable dynamics elements Dynamics of space nets Simulation of space net capture process Deployment dynamics of rotating space net Dynamics of tethered combination system Ground and airdrop test
Sommario/riassunto	This book covers the topics of theoretical principles, dynamics model and algorithm, mission analysis, system design and experimental studies of space nets system, aiming to provide an initial framework in this field and serve as a ready reference for those interested. Space nets system represents a forefront field in future development of aerospace technologies. However, it involves new challenges and problems such as nonlinear and distorted nets structure, complex rigid flexible coupling dynamics, orbital transfer of space flexible composite and dynamics control. Currently, no comprehensive books on space nets dynamics and design are available, so potential readers can get to

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know the working mechanism, dynamics elements, and mission design of the space nets system from a Chinese perspective.