1. Record Nr. UNINA9910702417203321

Titolo	Astrobiology : search for biosignatures in our solar system and beyond : hearing before the Committee on Science, Space, and Technology, House of Representatives, One Hundred Thirteenth Congress, first session, December 4, 2013
Pubbl/distr/stampa	Washington : , : U.S. Government Printing Office, , 2013
Descrizione fisica	1 online resource (iii, 78 pages)
Soggetti	Exobiology - Research - United States Life on other planets - Research - United States Legislative hearings.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from title screen (viewed on July 10, 2014). Paper version available for sale by the Superintendent of Documents, U. S. Government Printing Office. "Serial No. 113-78."
Nota di bibliografia	Includes bibliographical references.

2. Record Nr. UNINA9910842489903321

Autore	Li Shuang
Titolo	Trajectory Optimization and Guidance Methods for Mars Entry / / by Shuang Li, Xu Liu, Xiu-qiang Jiang, Yu-ming Peng
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2024
ISBN	9789819962822 981996282X
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (297 pages)
Altri autori (Persone)	LiuXu JiangXiu-qiang PengYu-ming
Disciplina	629.411
Soggetti	Aerospace engineering Astronautics Mathematical statistics - Data processing Aerospace Technology and Astronautics Statistics and Computing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Fundamental Knowledge -- Introduction -- Preliminaries -- Deterministic Optimization -- Improved Gauss pseudospectral method for Mars entry trajectory planning -- Improved sequential convex optimization for Mars entry trajectory planning -- Pseudospectral model predictive convex programming for Mars entry trajectory planning -- Indirect sequential convex programming for Mars entry trajectory planning -- Mars entry and powered descent using collaborative optimization -- Uncertainty optimization -- Mars entry trajectory optimization with desensitized optimal control -- Uncertainty quantification for Mars entry -- Robust trajectory optimization for Mars entry -- Robust optimal guidance method -- Direct model reference adaptive tracking guidance for Mars entry -- Computational guidance method for Mars entry.
Sommario/riassunto	This book systematically investigates the Mars entry problem from the perspectives of deterministic optimization, uncertainty optimization, and guidance. Began with a detailed review of the robotic missions and

human-scaled exploration plans to Mars, theories or concepts of optimal control, uncertainty quantification, robust optimization, model predictive control, sequential convex programming, and computational guidance are subsequently introduced. Correspondingly, this book presents a series of trajectory planning and guidance algorithms to improve the robustness, reliability, and safety of the Mars missions. Because the Mars entry problem is studied using advanced mathematics, including probability theory, optimization theory, and cybernetics, thus the book is primarily designed as a textbook for graduate students in aerospace engineering, aeronautics, and astronautics departments. Engineers and researchers may also use this book as a reference or tutorial to help with the modeling and simulation of the Mars entry problem due to its thorough simulations and analyses.