1.

Record Nr.	UNINA9910983385303321
Autore	Shen Junwei
Titolo	High-Speed Photography in Fluid Mechanics / / by Junwei Shen, Shaowu Ma, Yuning Zhang, Jian Chang
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2025
ISBN	9783031827549 3031827546
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (78 pages)
Collana	SpringerBriefs in Energy, , 2191-5539
Altri autori (Persone)	MaShaowu ZhangYuning ChangJian
Disciplina	621.3126
Soggetti	Energy storage Thermodynamics Heat engineering Heat - Transmission Mass transfer Fluid mechanics Mechanical and Thermal Energy Storage Engineering Thermodynamics, Heat and Mass Transfer Engineering Fluid Dynamics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- High-Speed Photography Technology -- Visualization Research on Bubble Dynamics -- Visualization Research on Drop Dynamics -- Visualization Research on Blunt Body Wake Dynamics -- Conclusion.
Sommario/riassunto	This brief overviews the application and significance of high-speed photography in experimental fluid mechanics, specifically focusing on the detailed observation and analysis of bubble dynamics, drop dynamics, and wake dynamics. It explores the development and various application scenarios of high-speed imaging technology, using it to investigate microscopic phenomena within these areas. The book covers key topics such as bubble collapse and deformation, particle

acceleration mechanisms, and cavitating flow patterns in bubble dynamics; droplet impact, coalescence, and fragmentation in drop dynamics; and the wake phenomena of bluff bodies during translation, rotation, and interactions with flat surfaces in wake dynamics. Through experimental observations and mechanism research, the book provides insights into the underlying processes and behaviors in fluid systems, making it a valuable resource for researchers and students in fluid mechanics and energy related fields.

2.	Record Nr.	UNINA9911006639703321
	Autore	Fehse Wigbert
	Titolo	Automated rendezvous and docking of spacecraft / / Wigbert Fehse
	Pubbl/distr/stampa	Cambridge ; ; New York, : Cambridge University Press, 2003
	ISBN	1-107-13753-5
		1-280-43677-8
		9786610436774
		0-511-16944-2
		0-511-20535-X
		0-511-06240-0
		0-511-30822-1
		1-60119-732-2
		0-511-54338-7
		0-511-07086-1
	Descrizione fisica	1 online resource (xix, 495 pages) : digital, PDF file(s)
	Collana	Cambridge aerospace series ; ; 16
	Disciplina	629.45/83
	Soggetti	Orbital rendezvous (Space flight)
		Space vehicles - Automatic control
		Space vehicles - Docking
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
	Nota di bibliografia	Includes bibliographical references (p. [477]-485) and index.
	Nota di contenuto	Cover; Half-title; Series-title; Title; Copyright; Dedication; Contents; Preface; Symbols; 1 Introduction; 2 The phases of a rendezvous

mission; 3 Orbit dynamics and trajectory elements; 4 Approach safety and collision avoidance; 5 The drivers for the approach strategy; 6 The onboard rendezvous control system; 7 Sensors for rendezvous navigation; 8 Mating systems; 9 Space and ground system setup; 10 Verification and validation; Appendix A Motion dynamics; Appendix B Rendezvous strategies of existing vehicles; Appendix C Rendezvous vehicles of the ISS scenario; Glossary; References; Index

Sommario/riassunto	The definitive reference for space engineers on rendezvous and docking/berthing (RVD/B) related issues, this book answers key questions such as: How does the docking vehicle accurately approach the target spacecraft? What technology is needed aboard the spacecraft to perform automatic rendezvous and docking, and what systems are required by ground control to supervise this process? How can the proper functioning of all rendezvous-related equipment, systems and operations be verified before launch? The book provides an overview of the major issues governing approach and mating strategies, and system concepts for rendezvous and docking/berthing. These issues are described and explained such that aerospace engineers, students and even newcomers to the field can acquire a basic understanding of RVD/B. The author would like to extend his thanks to Dr Shufan Wu, GNC specialist and translator of the book's Chinese edition, for his help in the compilation of these important errata.