

1. Record Nr.	UNINA9910299817703321
Titolo	Robot Fish : Bio-inspired Fishlike Underwater Robots // edited by Ruxu Du, Zheng Li, Kamal Youcef-Toumi, Pablo Valdivia y Alvarado
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2015
ISBN	3-662-46870-0
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (380 p.)
Collana	Springer Tracts in Mechanical Engineering, , 2195-9862
Disciplina	670.4272
Soggetti	Control engineering Robotics Mechatronics Marine sciences Freshwater Biomedical engineering Fluid mechanics Engineering design Control, Robotics, Mechatronics Marine & Freshwater Sciences Biomedical Engineering and Bioengineering Engineering Fluid Dynamics Engineering Design
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 -- Fish locomotion: biology and robotics of body and fin-based movements -- Wire-driven robot fish -- Design and Control of a Multi-Joint Robot Fish -- Research on the Robotic Fish Propelled by Oscillating Pectoral Fins -- Soft-body robot fish -- iSplash: Realizing Fast Carangiform Swimming to Outperform a Real Fish -- IPMC-Actuated Robotic Fish -- Macro-fiber composite actuated piezoelectric robotic fish -- A Multifunctional Underwater Microrobot for Mother-Son Underwater Robot Systems -- Multiple Autonomous Robotic Fish Collaboration -- Fish-Robot Interactions: Robot Fish in Animal

Sommario/riassunto

This book provides a comprehensive coverage on robot fish including design, modeling and optimization, control, autonomous control and applications. It gathers contributions by the leading researchers in the area. Readers will find the book very useful for designing and building robot fish, not only in theory but also in practice. Moreover, the book discusses various important issues for future research and development, including design methodology, control methodology, and autonomous control strategy. This book is intended for researchers and graduate students in the fields of robotics, ocean engineering and related areas. .
