

1. Record Nr.	UNINA9910349323803321
Titolo	Trends in Control Theory and Partial Differential Equations / / edited by Fatiha Alabau-Bousouira, Fabio Ancona, Alessio Porretta, Carlo Sinestrari
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-030-17949-4
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (276 pages)
Collana	Springer INdAM Series, , 2281-5198 ; ; 32
Disciplina	515.353
Soggetti	Differential equations Mathematical optimization Calculus of variations Game theory Differential Equations Calculus of Variations and Optimization Game Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
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Sommario/riassunto

This book presents cutting-edge contributions in the areas of control theory and partial differential equations. Over the decades, control theory has had deep and fruitful interactions with the theory of partial differential equations (PDEs). Well-known examples are the study of the generalized solutions of Hamilton-Jacobi-Bellman equations arising in deterministic and stochastic optimal control and the development of modern analytical tools to study the controllability of infinite dimensional systems governed by PDEs. In the present volume, leading experts provide an up-to-date overview of the connections between these two vast fields of mathematics. Topics addressed include regularity of the value function associated to finite dimensional control systems, controllability and observability for PDEs, and asymptotic analysis of multiagent systems. The book will be of interest for both researchers and graduate students working in these areas.
