

1. Record Nr.	UNINA9910564691303321
Titolo	Advances in Distributed Parameter Systems // edited by Jean Auriol, Joachim Deutscher, Guilherme Mazanti, Giorgio Valmorbida
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	3-030-94766-1
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (xiv, 295 pages) : illustrations (some color)
Collana	Advances in Delays and Dynamics, , 2197-1161 ; ; 14
Disciplina	003.78
Soggetti	Automatic control Engineering mathematics Dynamics Nonlinear theories Control and Systems Theory Engineering Mathematics Applied Dynamical Systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Energy shaping control of 1D Distributed Parameter Systems -- Prediction control for nonlinear systems with stochastic input delay -- Output feedback stabilization of a reaction-diffusion PDE in the presence of saturations of the input and its time derivatives.
Sommario/riassunto	The proposed book presents recent breakthroughs for the control of distributed parameter systems and follows on from a workshop devoted to this topic. It introduces new and unified visions of the challenging control problems raised by distributed parameter systems. The book collects contributions written by prominent international experts in the control community, addressing a wide variety of topics. It spans the full range from theoretical research to practical implementation and follows three traverse axes: emerging ideas in terms of control strategies (energy shaping, prediction-based control, numerical control, input saturation), theoretical concepts for interconnected systems (with potential non-linear actuation dynamics), advanced applications (cable-operated elevators, traffic networks), and

numerical aspects. Cutting-edge experts in the field contributed in this volume, making it a valuable reference source for control practitioners, graduate students, and scientists researching practical and theoretical solutions to the challenging problems raised by distributed parameter systems.
