1. Record Nr. UNINA9910132277403321 Autore Ammari Kaïs Titolo Stabilization of Elastic Systems by Collocated Feedback / / by Kaïs Ammari, Serge Nicaise Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2015 **ISBN** 3-319-10900-6 Edizione [1st ed. 2015.] Descrizione fisica 1 online resource (XI, 178 p. 3 illus., 2 illus. in color.) Lecture Notes in Mathematics, , 0075-8434;; 2124 Collana Disciplina 515.392 Soggetti Partial differential equations System theory Partial Differential Equations Systems Theory, Control Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Bibliographic Level Mode of Issuance: Monograph Note generali Nota di bibliografia Includes bibliographical references. Some backgrounds -- Stabilization of second order evolution equations Nota di contenuto by a class of unbounded feedbacks -- Stabilization of second order evolution equations with unbounded feedback with delay -- Asymptotic behaviour of concrete dissipative systems -- Systems with delay --Bibliography. Sommario/riassunto By introducing a new stabilization methodology, this book characterizes the stability of a certain class of systems. The stability (exponential, polynomial, or weaker) for the closed loop problem is reduced to an observability estimate for the corresponding uncontrolled system combined with a boundedness property of the transfer function of the associated open loop system. A similar strategy is applied to systems where a delay term is added. The book concludes with many concrete examples. This book is addressed to graduate students in mathematics or engineering and also to researchers with an interest in stabilization and control systems governed by partial

differential equations.