Record Nr.	UNINA9910437901203321
Titolo	Dynamic localization phenomena in elasticity, acoustics, and electromagnetism / / Richard V. Craster, Julius Kaplunov, editors
Pubbl/distr/stampa	Wien [Vienna] : , : Springer, , 2013
ISBN	3-7091-1619-8
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (256 pages) : illustrations (some color)
Collana	CISM International Centre for Mechanical Sciences, Courses and Lectures, , 0254-1971 ; ; 547
Disciplina	530.124
Soggetti	Wave mechanics
	Elasticity
	Nonlinear acoustics
	Electromagnetism Smart materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	
Note generali	"ISSN: 0254-1971."
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Modeling microstructured media: periodic systems and effective media Multiscale models of electromagnetic and plasmonic metamaterials Explicit models for surface, interfacial and edge elastic wave Elastodynamic end effects in structural mechanics Trapped modes and edge resonances in acoustics and elasticity Surface waves in elastic half spaces coated with crystalline films.
Sommario/riassunto	Properties of wave localization play a decisive role both in applications of engineered microstructures and in the detection of cracks and flaws. The papers in this volume give an introduction into a variety of interrelated dynamic localization phenomena occurring in elasticity, acoustics and electromagnetism. In particular, these involve surface and edge waves and also trapped modes localized near defects, shape changes and the edges of elongated waveguides. The effects of layering, prestress, anisotropy, periodic microstructures as well as various multi-field phenomena are addressed with reference to underlying industrial problems. The essential and up-to-date numerical, asymptotic, and analytical techniques are covered as well as relevant continuum theories that are required to make progress in, and

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understand wave localization and allied effects. A major focus is on a qualitative physical insight into the mechanisms of dynamic localization.
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