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Titolo	New Trends in Shape Optimization / / edited by Aldo Pratelli, Günter Leugering
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Descrizione fisica	1 online resource (312 p.)
Collana	International Series of Numerical Mathematics, , 0373-3149 ; ; 166
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Soggetti	Partial differential equations System theory Partial Differential Equations Systems Theory, Control Conference papers and proceedings.
Lingua di pubblicazione	Inglese
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Davide Buoso: “A few spectral optimization problems for elliptic equations and systems” -- Giuseppe Buttazzo: “Optimization problems involving the first Dirichlet eigenvalue and the torsional rigidity”. - Michel Delfour: “Metrics spaces of shapes and geometries from set parametrized functions” -- Gianpaolo Leonardi -- Dario Mazzoleni -- Al-hassem Nayam: “Asymptotics of higher codimensional shapes and related problems” -- Alberto Paganini: “Approximate Shape Gradients for Interface Problems” -- Volker Schulz: “Towards a Lagrange-Newton Approach for PDE Constrained Shape Optimization” -- Jan Sokolowski: “Shape optimization for nonlinear PDEs” -- Kevin Sturm: “On the existence and identification of the shape derivative for PDE constrained problems” -- Michiel Van den Berg -- Bozhidar Velichkov -- Alessandro Zilio: “Optimal regularity results for a partition problem involving".
Sommario/riassunto	This volume reflects “New Trends in Shape Optimization” and is based on a workshop of the same name organized at the Friedrich-Alexander University Erlangen-Nürnberg in September 2013. During the workshop senior mathematicians and young scientists alike presented their latest

findings. The format of the meeting allowed fruitful discussions on challenging open problems, and triggered a number of new and spontaneous collaborations. As such, the idea was born to produce this book, each chapter of which was written by a workshop participant, often with a collaborator. The content of the individual chapters ranges from survey papers to original articles; some focus on the topics discussed at the Workshop, while others involve arguments outside its scope but which are no less relevant for the field today. As such, the book offers readers a balanced introduction to the emerging field of shape optimization.