

1. Record Nr.	UNINA9910782092703321
Titolo	Transport equations and multi-D hyperbolic conservation laws [[electronic resource] /] Luigi Ambrosio ... [et al.] ; editors, Fabio Ancona ... [et al.]
Pubbl/distr/stampa	Berlin ; ; New York, : Springer, c2008
ISBN	1-281-23169-X 9786611231699 3-540-76781-9
Edizione	[1st ed. 2008.]
Descrizione fisica	1 online resource (142 p.)
Collana	Lecture notes of the Unione Matematica Italiana, , 1862-9113 ; ; 5
Altri autori (Persone)	AmbrosioLuigi AnconaFabio <1964->
Disciplina	515/.782
Soggetti	Conservation laws (Mathematics) Differential equations, Hyperbolic
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	I -- Existence, Uniqueness, Stability and Differentiability Properties of the Flow Associated to Weakly Differentiable Vector Fields -- II -- A Note on Alberti's Rank-One Theorem -- III -- Regularizing Effect of Nonlinearity in Multidimensional Scalar Conservation Laws.
Sommario/riassunto	The theory of nonlinear hyperbolic equations in several space dimensions has recently obtained remarkable achievements thanks to ideas and techniques related to the structure and fine properties of functions of bounded variation. This volume provides an up-to-date overview of the status and perspectives of two areas of research in PDEs, related to hyperbolic conservation laws. Geometric and measure theoretic tools play a key role to obtain some fundamental advances: the well-posedness theory of linear transport equations with irregular coefficients, and the study of the BV-like structure of bounded entropy solutions to multi-dimensional scalar conservation laws. The volume contains surveys of recent deep results, provides an overview of further developments and related open problems, and will capture the interest of members both of the hyperbolic and the elliptic community willing to explore the intriguing interplays that link their worlds. Readers should

have basic knowledge of PDE and measure theory.

---