

1. Record Nr.	UNINA9910823990103321
Titolo	Non-diffractive waves // edited by Hugo E. Hernandez-Figueroa, Erasmo Recami, and Michel Zamboni-Rached
Pubbl/distr/stampa	Weinheim : , : Wiley-VCH, , [2014] ©2014
ISBN	3-527-67153-6 3-527-67151-X 3-527-67154-4
Descrizione fisica	1 online resource (509 p.)
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Disciplina	532.0593
Soggetti	Localized waves - Research Waves - Research
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	Non-Diffracting Waves; Title Page; Copyright; Contents; Preface; List of Contributors; Chapter 1 Non-Diffracting Waves: An Introduction; 1.1 A General Introduction; 1.1.1 A Prologue; 1.1.2 Preliminary, and Historical, Remarks; 1.1.3 Definition of Non-Diffracting Wave (NDW); 1.1.4 First Examples; 1.1.5 Further Examples: The Non-Diffracting Solutions; 1.2 Eliminating Any Backward Components: Totally Forward NDW Pulses; 1.2.1 Totally Forward Ideal Superluminal NDW Pulses; 1.3 Totally Forward, Finite-Energy NDW Pulses; 1.3.1 A General Functional Expression for Whatever Totally-Forward NDW Pulses 1.4 Method for the Analytic Description of Truncated Beams1.4.1 The Method; 1.4.2 Application of the Method to a TB Beam; 1.5 Subluminal NDWs (or Bullets); 1.5.1 A First Method for Constructing Physically Acceptable, Subluminal Non-Diffracting Pulses; 1.5.2 Examples; 1.5.3 A Second Method for Constructing Subluminal Non-Diffracting Pulses; 1.6 ``Stationary" Solutions with Zero-Speed Envelopes: Frozen Waves; 1.6.1 A New Approach to the Frozen Waves; 1.6.2 Frozen Waves in Absorbing Media; 1.6.3 Experimental Production of the Frozen Waves

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Sommario/riassunto

This continuation and extension of the successful book "Localized Waves" by the same editors brings together leading researchers in non-diffractive waves to cover the most important results in their field and as such is the first to present the current state. The well-balanced presentation of theory and experiments guides readers through the background of different types of non-diffractive waves, their generation, propagation, and possible applications. The authors include a historical account of the development of the field, and cover different types of non-diffractive waves, including A