1. Record Nr. UNINA9910830496603321

Titolo	Localized waves [[electronic resource] /] / edited by Hugo E. Hernandez-Figueroa, Michel Zamboni-Rached, Erasmo Recami
Pubbl/distr/stampa	Hoboken, N.J., : Wiley-Interscience, : IEEE Press, c2008
ISBN	1-281-20370-X 9786611203702 0-470-16898-6 0-470-16897-8
Descrizione fisica	1 online resource (394 p.)
Collana	Wiley series in microwave and optical engineering
Altri autori (Persone)	Hernandez-FigueroaHugo E Zamboni-RachedMichel RecamiErasmo
Disciplina	532.0593 532/.0593
Soggetti	Localized 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	Localized Waves; Contents; CONTRIBUTORS; PREFACE; Acknowledgments; 1 Localized Waves: A Historical and Scientific Introduction; 1.1 General Introduction; 1.2 More Detailed Information; 1.2.1 Localized Solutions; Appendix: Theoretical and Experimental History; Historical Recollections: Theory; X-Shaped Field Associated with a Superluminal Charge; A Glance at the Experimental State of the Art; References; 2 Structure of Nondiffracting Waves and Some Interesting Applications; 2.1 Introduction; 2.2 Spectral Structure of Localized Waves; 2.2.1 Generalized Bidirectional Decomposition 2.3 Space-Time Focusing of X-Shaped Pulses2.3.1 Focusing Effects Using Ordinary X-Waves; 2.4 Chirped Optical X-Type Pulses in Material Media; 2.4.1 Example: Chirped Optical X-Type Pulse in Bulk Fused Silica; 2.5 Modeling the Shape of Stationary Wave Fields: Frozen Waves; 2.5.1 Stationary Wave Fields with Arbitrary Longitudinal Shape in Lossless Media Obtained by Superposing Equal-Frequency Bessel Beams; 2.5.2 Stationary Wave Fields with Arbitrary Longitudinal Shape in Absorbing Media: Extending the Method; References

3 Two Hybrid Spectral Representations and Their Applications to the Derivations of Finite-Energy Localized Waves and Pulsed Beams3.1 Introduction; 3.2 Overview of Bidirectional and Superluminal Spectral Representations; 3.2.1 Bidirectional Spectral Representation; 3.2.2 Superluminal Spectral Representation; 3.3 Hybrid Spectral Representation and Its Application to the Derivation of Finite-Energy X-Shaped Localized Waves; 3.3.1 Hybrid Spectral Representation; 3.3.2 (3 + 1)-Dimensional Focus X-Wave; 3.3.3 (3 + 1)-Dimensional Finite-Energy X-Shaped Localized Waves
3.4 Modified Hybrid Spectral Representation and Its Application to the Derivation of Finite-Energy Pulsed Beams3.4.1 Modified Hybrid Spectral Representation; 3.4.2 (3 + 1)-Dimensional Splash Modes and Focused Pulsed Beams; 3.5 Conclusions; References; 4 Ultrasonic Imaging with Limited-Diffraction Beams; 4.1 Introduction; 4.2 Fundamentals of Limited-Diffraction Beams; 4.2.1 Bessel Beams; 4.2.2 Nonlinear Bessel Beams; 4.2.3 Frozen Waves; 4.2.4 X-Waves; 4.2.5 Obtaining Limited-Diffraction Beams with Variable Transformation; 4.2.6 Limited-Diffraction Solutions to the Klein-Gordon Equation
4.2.7 Limited-Diffraction Solutions to the Schrodinger Equation4.2.8 Electromagnetic X-Waves; 4.2.9 Limited-Diffraction Beams in Confined Spaces; 4.2.10 X-Wave Transformation; 4.2.11 Bowtie Limited-Diffraction Beams; 4.2.12 Limited-Diffraction Array Beams; 4.2.13 Computation with Limited-Diffraction Beams; 4.3 Applications of Limited-Diffraction Beams; 4.3.1 Medical Ultrasound Imaging; 4.3.2 Tissue Characterization (Identification); 4.3.3 High-Frame-Rate Imaging; 4.3.4 Two-Way Dynamic Focusing; 4.3.5 Medical Blood-Flow Measurements; 4.3.6 Nondestructive Evaluation of Materials
4.3.7 Optical Coherent Tomography

Sommario/riassunto

The first book on Localized Waves-a subject of phenomenal worldwide research with important applications from secure communications to medicine Localized waves-also known as non-diffractive waves-are beams and pulses capable of resisting diffraction and dispersion over long distances even in non-guiding media. Predicted to exist in the early 1970s and obtained theoretically and experimentally as solutions to the wave equations starting in 1992, localized waves now garner intense worldwide research with applications in all fields where a role is played by a wave equation, from electromagne

2. Record Nr. UNINA9910337467403321

Titolo	The Internet of Things for Smart Urban Ecosystems / / edited by Franco Cicirelli, Antonio Guerrieri, Carlo Mastroianni, Giandomenico Spezzano, Andrea Vinci
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-319-96550-6
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (389 pages)
Collana	Internet of Things, Technology, Communications and Computing, , 2199-1073
Disciplina	307.760285
Soggetti	Signal processing Image processing Speech processing systems Application software Urban geography Urban economics Signal, Image and Speech Processing Information Systems Applications (incl. Internet) Urban Geography / Urbanism (inc. megacities, cities, towns) Urban Economics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	A Social and Pervasive IoT Platform for Developing Smart Environments -- Smart City Platform Specification: a modular approach to achieve interoperability in Smart Cities -- Integrated Cyber Physical Assessment and Response for Improved Resiliency -- On the Integration of Information Centric Networking and Fog Computing for Smart Home Services -- Optimal Placement of Security Resources for the Internet of Things -- Embedding Internet-of-Things in Large-Scale Socio-Technical Systems: A Community-Oriented Design in Future Smart Grids -- Aggregation Techniques for the Internet of Things: an overview -- Swarm Intelligence and IoT-based Smart Cities: a Review -- Cost saving and ancillary service provisioning in green Mobile Networks

-- Structural Health Monitoring (SHM) -- A Smart air-conditioning plant for efficient energy buildings -- A comprehensive approach to stormwater management problems in the next generation drainage networks -- Cooperative video-surveillance framework in Internet of Things (IoT) domain -- Personal Connected Devices for Healthcare -- Evacuation and Smart Exit Sign System.

Sommario/riassunto

The main objective of this book is to provide a multidisciplinary overview of methodological approaches, architectures, platforms, and algorithms for the realization of an Internet of Things (IoT)-based Smart Urban Ecosystem (SUE). Moreover, the book details a set of real-world applications and case studies related to specific smart infrastructures and smart cities, including structural health monitoring, smart urban drainage networks, smart grids, power efficiency, healthcare, city security, and emergency management. A Smart Urban Ecosystem (SUE) is a people-centric system of systems that involves smart city environments, applications, and infrastructures. SUEs require the close integration of cyber and physical components for monitoring, understanding and controlling the urban environment. In this context, the Internet of Things (IoT) offers a valuable enabling technology, as it bridges the gap between physical things and software components, and empowers cooperation between distributed, pervasive, and heterogeneous entities.