

1. Record Nr.	UNINA9910151754003321
Autore	Iversen Sandra
Titolo	Long
Pubbl/distr/stampa	Iversen Publishing
ISBN	1-77661-110-1
Descrizione fisica	1 online resource (12 p.) : ill
Disciplina	428.6 530.8
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	Sequential, leveled, factual books for emergent, early, and early fluency readers that systematically and explicitly teach -- phonemic awareness and phonic skills in a sequential order, a further 60 high-frequency words, content vocabulary, comprehension, and fluency

2. Record Nr.	UNINA9910299962103321
Autore	Bressloff Paul C
Titolo	Waves in neural media : from single neurons to neural fields / / Paul C. Bressloff
Pubbl/distr/stampa	New York : , : Springer, , 2014
ISBN	1-4614-8866-4
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (xix, 436 pages) : illustrations (some color)
Collana	Lecture Notes on Mathematical Modelling in the Life Sciences, , 2193-4789
Disciplina	006.3 006.32
Soggetti	Neural networks (Neurobiology)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"ISSN: 2193-4789." "ISSN: 2193-4797 (electronic)."
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preface -- Part I Neurons -- Single Neuron Modeling -- Traveling Waves in One-Dimensional Excitable Media -- Wave Propagation Along Spiny Dendrites -- Calcium Waves and Sparks -- Part II Networks -- Waves in Synaptically-Coupled Spiking Networks -- Population Models and Neural Fields -- Waves in Excitable Neural Fields -- Neural Field Model of Binocular Rivalry Waves -- Part III Development and Disease -- Waves in the Developing and the Diseased Brain -- Index.
Sommario/riassunto	Waves in Neural Media: From Single Cells to Neural Fields surveys mathematical models of traveling waves in the brain, ranging from intracellular waves in single neurons to waves of activity in large-scale brain networks. The work provides a pedagogical account of analytical methods for finding traveling wave solutions of the variety of nonlinear differential equations that arise in such models. These include regular and singular perturbation methods, weakly nonlinear analysis, Evans functions and wave stability, homogenization theory and averaging, and stochastic processes. Also covered in the text are exact methods of solution where applicable. Historically speaking, the propagation of action potentials has inspired new mathematics, particularly with regard to the PDE theory of waves in excitable media. More recently, continuum neural field models of large-scale brain networks have generated a new set of interesting mathematical questions with regard

to the solution of nonlocal integro-differential equations. Advanced graduates, postdoctoral researchers and faculty working in mathematical biology, theoretical neuroscience, or applied nonlinear dynamics will find this book to be a valuable resource. The main prerequisites are an introductory graduate course on ordinary differential equations and partial differential equations, making this an accessible and unique contribution to the field of mathematical biology. .

---