

1. Record Nr.	UNINA9910634048103321
Titolo	Spin Dynamics in Confined Magnetic Structures I // edited by Burkard Hillebrands, Kamel Ounadjela
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2002
ISBN	3-540-40907-6
Edizione	[1st ed. 2002.]
Descrizione fisica	1 online resource (XVI, 340 p.)
Collana	Topics in Applied Physics, , 0303-4216 ; ; 83
Disciplina	538.3
Soggetti	Magnetism Magnetic materials Magnetism, Magnetic Materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	An Introduction to Micromagnetics in the Dynamic Regime -- Nonlinear Spinwaves in One- and Two-Dimensional Magnetic Waveguides -- Spinwaves in Laterally Confined Magnetic Structures -- Stroboscopic Microscopy of Magnetic Dynamics -- Dynamics of Magnetization Reversal: From Continuous to Patterned Ferromagnetic Films -- Small Amplitude Dynamics of Nonhomogeneous Magnetization Distributions: The Excitation Spectrum of Stripe Domains -- Frequency Domain Magnetic Measurements from Kilohertz to Gigahertz -- Laser-Induced Ultrafast Demagnetization: Femtomagnetism, a New Frontier? -- The Micromagnetics of Magnetoresistive Random Access Memory.
Sommario/riassunto	This book covers the main aspects of dynamic phenomena in confined magnetic structures so that researchers can find a comprehensive compilation of the current status in the field. Introductory chapters help newcomers to understand the basic concepts, and the more advanced chapters give the current state of the art for most spin dynamic issues in the milliseconds to femtoseconds range. Emphasis is placed on both the discussion of the experimental techniques and on the theoretical work. The comprehensive presentation of these developments makes this volume very timely and valuable for every researcher working in the field of magnetism. It describes the new

experimental techniques which have advanced this field very rapidly. Among the techniques covered, particular attention is given to those involving high temporal and spatial resolutions, down to the femtosecond and submicrometer regime, as well as to techniques involving magnetic field pulses with very short rise times and durations, and new detection schemes.
