

1. Record Nr.	UNINA9910146628103321
Titolo	Ageing and the glass transition / / Malte Henkel, Michel Pleimling, Roland Sanctuary (editors)
Pubbl/distr/stampa	Berlin ; ; Heidelberg ; ; New York : , : Springer, , [2007] ©2007
ISBN	1-280-85309-3 9786610853090 3-540-69684-9
Edizione	[1st ed. 2007.]
Descrizione fisica	1 online resource (xii, 348 p.)
Collana	Lecture notes in physics ; ; 716
Disciplina	530.413
Soggetti	Glass transition temperature Thermodynamics Polymer solutions
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"This volume has grown from the invited lectures given at the summer school "Ageing and the glass transition" held at the University of Luxemburg in September 2005"--P. [v].
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Ageing, Rejuvenation and Memory: The Example of Spin-Glasses -- About the Nature of the Structural Glass Transition: An Experimental Approach -- Glassy Behaviours in A-Thermal Systems, the Case of Granular Media: A Tentative Review -- to Simulation Techniques -- From Urn Models to Zero-Range Processes: Statics and Dynamics -- Field-Theory Approaches to Nonequilibrium Dynamics.
Sommario/riassunto	Understanding cooperative phenomena far from equilibrium is one of fascinating challenges of present-day many-body physics. Glassy behaviour and the physical ageing process of such materials are paradigmatic examples. The present volume, primarily intended as introduction and reference for postgraduate students and nonspecialist researchers from related fields, collects six extensive lectures addressing selected experimental and theoretical issues in the field of glassy systems. Lecture 1 gives an introduction and overview of the time-dependent behaviour of magnetic spin glasses. Lecture 2 is devoted to an in-depth discussion on the nature of the thermal glass-

transition in structural glasses. Lecture 3 examines the glassy behaviour of granular systems. Lecture 4 gives a thorough introduction to the techniques and applications of Monte-Carlo simulations and the analysis of the resulting data through scaling methods. Lecture 5 introduces the zero-range-process concept as simple but subtle model to describe a range of static and dynamic properties of glassy systems. Lecture 6 shows how familiar RG methods for equilibrium systems can be extended to systems far from equilibrium.
