1.	Record Nr.	UNINA9910455578003321
	Titolo	New trends in fluid and solid models [[electronic resource]] : proceedings of the international conference in honour of Brian Straughan, Vietri sul Mare (SA), Italy, 28 February-1 March 2008 / / editors, Michele Ciarletta ... [et al.]
	Pubbl/distr/stampa	Singapore ; ; Hackensack, N.J., : World Scientific, c2010
	ISBN	1-282-76197-8
		9786612761973
		981-4293-22-9
	Descrizione fisica	1 online resource (196 p.)
	Altri autori (Persone)	CiarlettaM (Michele)
		StraughanB (Brian)
	Disciplina	532.5
	Soggetti	Fluid dynamics - Mathematical models
		Continuum mechanics
		Electronic books.
	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.
	Nota di contenuto	CONTENTS; Preface; Well-Posedness for a Ginzburg-Landau Model in Superfluidity V. Berti, M. Fabrizio; 1 Introduction; 2 A Ginzburg-Landau model for superfluidity; 2.1 Thermodynamical consistence of the model; 2.2 Rotation of a superfluid; 3 Well-posedness of the problem; References; Spherical Tolman-Bondi Models in Cosmology 1. Bochicchio, E. Laserra; 1 Introduction; 2 The principal curvatures in spherical symmetry and solutions of evolution equations; 3 Qualitative evolution of a relativistic r-shell; References Nonlinear Stability of a SIRS Epidemic Model with Convex Incidence Rate B. Buonomo, S. Rionero1 Introduction; 2 Equilibria; 3 Nonlinear stability/instability; 4 Global nonlinear asymptotic stability; 5 Conclusions; Acknowledgements; References; On the Dynamics of a Binary Model for the Competition between Bacteria and Innate Immune System M. Cerasuolo, P. Fergola, S. Rionero; 1 Introduction; 2 Preliminaries; 3 The associated kinetic system; 4 Linear Stability and Instability results for the diffusion problem (1)-(2); Acknowledgement;

References

Spatial Evolution in Linear Thermoelasticity S. Chirita, M. Ciarletta1 Introduction; 2 Formulation of problem; 3 Spatial evolution in the low frequency range; 4 A semi-infinite cylinder; 5 Some comments; Acknowledgement; References; On the Nonautonomous Lotka-Volterra System R. De Luca, S. Rionero; 1 Introduction; 2 Stability of (x, y) through model (3); 3 Stability of (x, y) through model (4); References; Structure Order Balance Law and Phase Transitions M. Fabrizio; 1 Introduction; 2 Balance law on the structure order; 3 First order phase transition; 4 Water-vapor phase transition

ReferencesSui Problemi al Contorno Mobile J.N. Flavin; Diffusione Unidimensionale con un Contorno Mobile.; Delle Osservazioni; References; A Phase-Field Model for Liquid-Vapor Transitions Induced by Temperature and Pressure A. Berti, C. Giorgi; 1 Introduction; 1.1 The phase diagram; 1.2 The energy-temperature and Andrews density-pressure diagrams; 2 Thermodynamics and phase-field equations; 3 Free energy density; 4 The vapor pressure curve; References; Wave Propagation in Continuously-Layered Media G. Caviglia, A. Morro; 1 Introduction; 2 Waves in stratified media; 3 Variational formulation

3.1 Fundamental solutions3.2 Existence and uniqueness; 4 A basis of solutions; 4.1 Successive approximations; 5 Reflection-transmission problem; 6 Conclusions; Acknowledgement; References; Nonlinear Stability for Reaction-Diffusion Models G. Mulone; 1 Introduction; 2 Linear and nonlinear stability by the reduction method; 3 Applications and global stability results; 3.1 A 2-dimensional competition model; 3.2 The asymmetric May-Leonard model with diffusion; 3.3 An epidemic model with diffusion; 4 Conclusion; References

On the Spatial Behaviour for Transversely Isotropic Plates F. Passarella, V. Zampoli

Sommario/riassunto	The Proceedings of the 1st Conference on New Trends in Fluid and Solid Models provide an overview of results and new models in fluid dynamics and, in general, in continuum mechanics. The contributions refer in particular to models in continuum mechanics, phase transitions, qualitative analysis for ODEs or PDEs models, Stability in fluids and solids, wave propagation, discontinuity and shock waves, and numerical simulations. <i>Sample Chapter(s)</i> Chapter 1: Well-Posedness for a Ginzburg-Landau Model in Superfiuidity (1,480 KB) <i>Contents: </i> Well-Posedness for a Ginzbu