

1. Record Nr.	UNINA9910785504303321
Titolo	Advances in strength of materials [[electronic resource]] : selected peer reviewed papers from the Strength of Materials Laboratory at 85 years, 21 - 22 November 2008, Timisoara, Romania / / edited by Liviu Marsavina
Pubbl/distr/stampa	Stafa-Zurich, Switzerland ; ; Enfield, N.H., : Trans Tech Publications, c2009
ISBN	3-03813-274-8
Descrizione fisica	1 online resource (220 p.)
Collana	Key engineering materials, , 1013-9826 ; ; v. 399
Altri autori (Persone)	MarsavinaLiviu
Disciplina	620.1/12
Soggetti	Strength of materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"This volume is a collection of papers presented at the 'Strength of Materials Laboratory at 85 years' conference, held in Timisoara, Romania, during 21 - 22 November 2008."--Pref.
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Advances in Strength of Materials; Committees; Preface; Table of Contents; I. Metallic Materials; Constraint Parameter for a Longitudinal Surface Notch in a Pipe Submitted to Internal Pressure; Application of Complete Gurson Model for Prediction of Ductile Fracture in Welded Steel Joints; Fatigue Crack Growth under Variable Amplitude Loadings: A Theoretical Study; Fracture Mechanics and Non-Destructive Testing for Structural Integrity Assessment ; Bulk Amorphous Soft Magnetic Iron Based Alloy with Mechanical Strength and Corrosion Resistance Fractal Analysis of Fracture Surfaces of Steel Charpy SpecimensThe Assessment of Remaining Life of Chemical Reactor Exposed to Creep and Fatigue; II. Composite Materials; On the Time-Dependent Behavior of FGM Plates; Impact Fatigue of Adhesive Joints; Multiscale Modelling of Damage Processes in Polycrystalline Ceramic Porous Composites; The Effect of Geometry and Material Properties on the Load Capacity of Single-Strapped Adhesive Bonded Joints; Behaviour Analysis of Adhesive Joints Used in Ship Structures Evaluation of Interlaminar Damage and Crack Propagation through Digital Image Correlation MethodExperimental and Numerical Analysis of Buckling Behaviour of the Ship Plates Made of Composite Materials;

Polyurethane Foams Behaviour. Experiments versus Modeling ; Investigations Regarding the Thermoplastic Resistance Evaluation with Simulated Imperfections ; III. Construction and Building Materials; A Pull-Shear Test for Debonding of FRP- Laminates for Concrete Structures ; Influence of Cracks on the Service Life of Concrete Structures in a Marine Environment
Experimental and Numerical Analysis of the Behaviour of Ceramic Tiles under Impact Micromechanical Material Model of Wooden Veneers for Numerical Simulations of Plywood Progressive Failure ; Mathematical Modelling of the Crack Propagation in Wood Materials; IV. Bio-Materials; Experimental Assessment by Finite Elements Method of the Residual Stress State and of the Heat Flow from the Laser Weldings of the Alloys of CoCrMo Used in RPD (Removable Partial Dentures) Technology
Investigation of Implant Bone Interface with Non-Invasive Methods: Numerical Simulation, Strain Gauges and Optical Coherence TomographyBiomechanical 3D Analysis of Stress Induced by Orthodontic Implants; In Vitro Experimental Testing of a Cervical Implanted Unit ; Stress Analysis of the Human Skull due to the Insertion of Rapid Palatal Expander with Finite Element Analysis (FEA); Keywords Index; Authors Index

Sommario/riassunto

This collection is the result of bringing together scientists from various countries in order to combine their knowledge concerning the latest analytical, experimental and numerical developments in the fields of Strength of Materials, Fracture Mechanics and Fatigue. The contributions are divided into: Metallic Materials, Composite Materials, Construction and Building Materials and Bio-Materials. The work therefore constitutes an authoritative and up-to-date guide to these subject-areas.
