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Autore	Kaimakamis George
Titolo	Geometry of Submanifolds and Homogeneous Spaces
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Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Sommario/riassunto	The present Special Issue of Symmetry is devoted to two important areas of global Riemannian geometry, namely submanifold theory and the geometry of Lie groups and homogeneous spaces. Submanifold theory originated from the classical geometry of curves and surfaces. Homogeneous spaces are manifolds that admit a transitive Lie group action, historically related to F. Klein's Erlangen Program and S. Lie's idea to use continuous symmetries in studying differential equations. In this Special Issue, we provide a collection of papers that not only reflect some of the latest advancements in both areas, but also highlight relations between them and the use of common techniques. Applications to other areas of mathematics are also considered.

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Autore	Altenbach Holm
Titolo	Creep in Structures VI : IUTAM Symposium Proceedings / / edited by Holm Altenbach, Konstantin Naumenko
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Collana	Advanced Structured Materials, , 1869-8441 ; ; 194
Altri autori (Persone)	NaumenkoKonstantin
Disciplina	531.7 620.11233
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Nota di contenuto	Chapter 1: Phase-Field Damage Modeling in Generalized Mechanics by using a Mixed Finite Element Method (FEM) -- Chapter 2: Creep-Damage Processes in Cyclic Loaded Double Walled Structures -- Chapter 3: Creep Mechanics – Some Historical Remarks and New Trends -- Chapter 4: Various State-of-the-Art Methods for Creep Evaluation of Power Plant Components in a Wide Load and Temperature Range -- Chapter 5: Creep and Irradiation Effects in Reactor Vessel Internals -- Chapter 6: Analysis of Damage and Fracture in Anisotropic Sheet Metals Based on Biaxial Experiments -- Chapter 7: Effect of Physical Aging on the Flexural Creep in 3D Printed Thermoplastic -- Chapter 8: Development of a Microstructure-Based Finite Element Model of Thermomechanical Response of a Fully Metallic Composite Phase Change Material -- Chapter 9: The Effect of Dynamic Loads on the Creep of Geomaterials -- Chapter 10: A Novel Simulation Method for Phase Transition of Single Crystal Ni based Superalloys in Elevated

Temperature Creep Regions via Discrete Cosine Transform and Maximum Entropy Method -- Chapter 11: Anisotropic Creep Analysis of Fiber Reinforced Load Point Support Structures for Thermoplastic Sandwich Panels -- Chapter 12: Time-Swelling Superposition Principle for the Linear Viscoelastic Properties of Polyacrylamide Hydrogels -- Chapter 13: Application of Nonlinear Viscoelastic Material Models for the Shrinkage and Warpage Analysis of Blow Molded Parts -- Chapter 14: Modeling Solid Materials in DEM Using the Micropolar Theory -- Chapter 15: The Development of a Cavitation-Based Model for Creep Lifetime Prediction Using Cu-40Zn-2Pb Material -- Chapter 16: Self-heating Analysis with Respect to Holding Times of an Additive Manufactured Aluminium Alloy -- Chapter 17: Creep Under High Temperature Thermal Cycling and Low Mechanical Loadings -- Chapter 18: The Development and Application of Optimisation Technique for the Calibrating of Creep Cavitation Model Based on Cavity Histogram -- Chapter 19: A Temperature-Dependent Viscoelastic Approach to the Constitutive Behavior of Semi-Crystalline Thermoplastics at Finite Deformations.

Sommario/riassunto

This book offers a current state of the art in analysis and modeling of creep phenomena with applications to the structural mechanics. It presents the some presentations from the IUTAM-Symposium series "Creep in Structures", which held in Magdeburg (Germany) in September 2023, and it discusses many advances and new results in the field. These are for example: interlinks of mechanics with materials science in multi-scale analysis of deformation and damage mechanisms over a wide range of stresses and temperature; development and analysis of new alloys for (ultra)high-temperature applications; formulation and calibration of advanced constitutive models of inelastic behavior under transient loading and temperature conditions; development of efficient procedures and machine learning techniques for identification of material parameters in advanced constitutive laws; introduction of gradient-enhanced and non-local theories to account for damage and fracture processes; and application of new experimental methods, such as digital image correlation, for the analysis of inelastic deformation under multi-axial stress state.