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Titolo	Materials with Memory : Initial-Boundary Value Problems for Constitutive Equations with Internal Variables / / by Hans-Dieter Alber
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Soggetti	Mathematical analysis Mechanical engineering Differential equations Mechanics, Applied Mechanics Analysis Mechanical Engineering Differential Equations Engineering Mechanics Classical Mechanics
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Nota di contenuto	Initial-boundary value problems for the inelastic behavior of metals -- Constitutive equations of monotone type and generalized standard materials -- Existence of solutions for constitutive equations of monotone type -- Transformation of interior variables -- Classification conditions -- Transformation of rate independent constitutive equations -- Application of the theory to engineering models -- Open problems and related results.
Sommario/riassunto	This book contributes to the mathematical theory of systems of differential equations consisting of the partial differential equations resulting from conservation of mass and momentum, and of constitutive equations with internal variables. The investigations are

guided by the objective of proving existence and uniqueness, and are based on the idea of transforming the internal variables and the constitutive equations. A larger number of constitutive equations from the engineering sciences are presented. The book is therefore suitable not only for specialists, but also for mathematicians seeking for an introduction in the field, and for engineers with a sound mathematical background.

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