1. Record Nr. UNINA9910402358603321

Autore	De Fontaine, Didier <1931->
Titolo	Principles of classical thermodynamics : applied to materials science / / Didier de Fontaine (University of California, Berkeley, USA)
Pubbl/distr/stampa	Singapore ; ; Hackensack, NJ : , : World Scientific Publishing Co. Pte. Ltd., , [2019] ©2019
ISBN	9789813222687
Descrizione fisica	XIV, 375 p. : ill. ; 24 cm
Disciplina	536/.7
Locazione	FINBC
Collocazione	13 SC I P 63
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Basic thermodynamics: Thermo systems; Fundamental laws (caratheodory treatment); Thermo equilibria; Ideal cases; One-component equilibrium; Solutions -- Derived topics: Introduction to statistical mechanics; Phase diagrams; Glass transformation; Chemical reactions; Point defect equilibrium; Interfaces; Phase stability; Spinodal concept; Nucleation and growth; Summary and conclusion.
Sommario/riassunto	"The aim of this book is to present Classical Thermodynamics in a unified way, from the most fundamental principles to non-uniform systems, thereby requiring the introduction of coarse graining methods, leading for instance to phase field methods. Solutions thermodynamics and temperature-concentration phase diagrams are covered, plus also a brief introduction to statistical thermodynamics and topological disorder. The Landau theory is included along with a general treatment of multicomponent instabilities in various types of thermodynamic applications, including phase separation and order-disorder transitions. Nucleation theory and spinodal decomposition are presented as extreme cases of a single approach involving the all-important role of fluctuations. In this way, it is hoped that this coverage will reconcile in a unified manner techniques generally presented separately in physics and materials texts"--

2. Record Nr. UNINA9910484594503321

Titolo	Models@run.time : Foundations, Applications, and Roadmaps / / edited by Nelly Bencomo, Robert B. France, Betty H.C. Cheng, Uwe Aßmann
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2014
ISBN	3-319-08915-3
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (X, 319 p. 89 illus.)
Collana	Programming and Software Engineering ; ; 8378
Disciplina	005.1
Soggetti	Software engineering Computer programming Management information systems Computer science Computer simulation Software Engineering Programming Techniques Management of Computing and Information Systems Simulation and Modeling
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	A Reference Architecture and Roadmap for Models@run.time Systems -- Mechanisms for Leveraging Models at Runtime in Self-adaptive Software -- Living with Uncertainty in the Age of Runtime Models -- Using Models at Runtime to Address Assurance for Self-Adaptive Systems -- Model-Driven, Moving-Target Defense for Enterprise Network Security -- ModelLAND: Where Do Models Come from? -- From Model-Driven Software Development Processes to Problem Diagnoses at Runtime -- Research Challenges for Business Process Models at Runtime -- Fine-Grained Semi-automated Runtime Evolution -- Evolution as «Reflections on the Design» -- Safety Assurance of Open Adaptive Systems.
Sommario/riassunto	Traditionally, research on model-driven engineering (MDE) has mainly focused on the use of models at the design, implementation, and verification stages of development. This work has produced relatively

mature techniques and tools that are currently being used in industry and academia. However, software models also have the potential to be used at runtime, to monitor and verify particular aspects of runtime behavior, and to implement self-* capabilities (e.g., adaptation technologies used in self-healing, self-managing, self-optimizing systems). A key benefit of using models at runtime is that they can provide a richer semantic base for runtime decision-making related to runtime system concerns associated with autonomic and adaptive systems. This book is one of the outcomes of the Dagstuhl Seminar 11481 on models@run.time held in November/December 2011, discussing foundations, techniques, mechanisms, state of the art, research challenges, and applications for the use of runtime models. The book comprises four research roadmaps, written by the original participants of the Dagstuhl Seminar over the course of two years following the seminar, and seven research papers from experts in the area. The roadmap papers provide insights to key features of the use of runtime models and identify the following research challenges: the need for a reference architecture, uncertainty tackled by runtime models, mechanisms for leveraging runtime models for self-adaptive software, and the use of models at runtime to address assurance for self-adaptive systems.