1. Record Nr. UNISALENTO991001769229707536

Autore	Colloquio italo-iraniano sul poeta mistico Fariduddin Attar <1977 ; Roma>
Titolo	Colloquio italo-iraniano sul poeta mistico Fariduddin Attar : Roma, 24-25 marzo 1977
Pubbl/distr/stampa	Roma : Accademia nazionale dei Lincei, 1978
Descrizione fisica	88 p. ; 25 cm.
Collana	Accademia Nazionale dei Lincei. Fondazione Leone Caetani
Altri autori (Enti)	Accademia Nazionale dei Lincei
Disciplina	891.5
Soggetti	Congressi - Roma Fardi al-din Attar - Congressi Fondazione Leone Caetani Sanai - Congressi
Lingua di pubblicazione	Italiano
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr. UNINA9910254608803321

Autore	Miskin Marc Z
Titolo	The Automated Design of Materials Far From Equilibrium / / by Marc Z. Miskin
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
ISBN	3-319-24621-6
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (105 p.)
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053
Disciplina	530
Soggetti	Amorphous substances Complex fluids Building materials Engineering design Engineering—Materials Mechanics Mechanics, Applied Soft and Granular Matter, Complex Fluids and Microfluidics Structural Materials Engineering Design Materials Engineering Theoretical and Applied Mechanics
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	Introduction -- Artificial Evolution -- Optimization -- Inverse Problems -- Transition of Designs -- Online Design -- Conclusions.
Sommario/riassunto	This thesis conceptualizes and implements a new framework for designing materials that are far from equilibrium. Starting with state-of-the-art optimization engines, it describes an automated system that makes use of simulations and 3D printing to find the material that best performs a user-specified goal. Identifying which microscopic features produce a desired macroscopic behavior is a problem at the forefront of materials science. This task is materials design, and within it, new

goals and challenges have emerged from tailoring the response of materials far from equilibrium. These materials hold promising properties such as robustness, high strength, and self-healing. Yet without a general theory to predict how these properties emerge, designing and controlling them presents a complex and important problem. As proof of concept, the thesis shows how to design the behavior of granular materials, i.e., collections of athermal, macroscopic identical objects, by identifying the particle shapes that form the stiffest, softest, densest, loosest, most dissipative and strain-stiffening aggregates. More generally, the thesis shows how these results serve as prototypes for problems at the heart of materials design, and advocates the perspective that machines are the key to turning complex material forms into new material functions.