1. Record Nr. UNINA9910543313403321

Autore	Caltagirone Jean-Paul
Titolo	Discrete mechanics : concepts and applications / / Jean-Paul Caltagirone
Pubbl/distr/stampa	London, UK ; ; Hoboken, NJ : , : ISTE : , : Wiley, , 2019
ISBN	1-119-57516-8 1-119-48282-8 1-119-57514-1
Descrizione fisica	1 online resource
Collana	THEi Wiley ebooks
Disciplina	531
Soggetti	Mechanics, Analytic Nonlinear mechanics Fluid mechanics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Fundamental Principles of Discrete Mechanics -- Conservation of Acceleration -- Conservation of Mass, Flux and Energy -- Properties of the Discrete Formulation -- Two-Phase Flows, Capillarity and Wetting -- Stresses and Strains in Solids -- Multiphysical Extensions.
Sommario/riassunto	The discrete vision of mechanics is based on the founding ideas of Galileo and the principles of relativity and equivalence, which postulate the equality between gravitational mass and inertial mass. To these principles are added the Hodge-Helmholtz decomposition, the principle of accumulation of constraints and the hypothesis of the duality of physical actions. These principles make it possible to establish the equation of motion based on the conservation of acceleration considered as an absolute quantity in a local frame of reference, in the form of a sum of the gradient of the scalar potential and the curl of the vector potential. These potentials, which represent the constraints of compression and rotation, are updated from the discrete operators. Discrete Mechanics: Concepts and Applications shows that this equation of discrete motion is representative of the compressible or incompressible flows of viscous or perfect fluids, the state of stress in an elastic solid or complex fluid and the propagation

of nonlinear waves.

2. Record Nr. UNINA9910901897003321

Autore	Wiener Norbert <1894-1964, >
Titolo	Cybernetics ; : or, Control and communication in the animal and the machine / / Norbert Wiener ; forewords by Doug Hill and Sanjoy Mitter
Pubbl/distr/stampa	Cambridge : , : MIT Press, , 2019
ISBN	9780262355919 0262355914 9780262355902 0262355906
Edizione	[[Second edition, 2019 reissue].]
Descrizione fisica	1 online resource (353 pages)
Disciplina	003/.5
Soggetti	Cybernetics Control theory System theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Reissue of the 1961 second edition."
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preface to the second edition -- Original edition (1948) -- Introduction -- Newtonian and Bergsonian time -- Groups and statistical mechanics -- Time series, information, and communication -- Feedback and oscillation -- Computing machines and the nervous system -- Gestalt and universals -- Cybernetics and psychopathology -- Information, language, and society -- Supplementary chapters (1961) -- On learning and self-reproducing machines -- Brain waves and self-organizing systems -- Notes.
Sommario/riassunto	"Cybernetics is the interdisciplinary study of controlling the flow of information in systems with feedback loops, be they biological, mechanical, cognitive, or social. This book is widely cited for laying the theoretical foundations of information theory and influencing the development of error-correcting servomechanisms, autonomous navigation, analog computing, artificial intelligence, and neuroscience" --