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Nota di contenuto	Chapter 1: Introduction -- Chapter 2: Spontaneous breaking of space translation symmetry -- Chapter 3: Spontaneous breaking of continuous time translation symmetry -- Chapter 4: Discrete time crystals and related phenomena -- Chapter 5: Condensed matter physics in the time dimension -- Chapter 6: Phase space crystals -- Chapter 7: Photonic time crystals.
Sommario/riassunto	This book provides the first comprehensive description of time crystals which have a repeating structure in time. It introduces the fundamental concepts behind time crystals and explores the many different branches of this new research area. The book starts with the original idea of the time crystallization in quantum systems as introduced by Wilczek and follows the development of the field up to the present day. Both spontaneous formation of crystalline structures in time and concepts of the condensed matter physics in the time domain, ranging from Anderson localization in time to many-body systems with exotic interactions, are described. The prospect of creation of novel objects by means of time engineering is also presented. The book assumes knowledge of quantum mechanics to the graduate level. It serves as a valuable reference with pointers to future research directions for graduate students and senior scientists alike.