

1. Record Nr.	UNISALENT0991002257779707536
Autore	Yserentant, Harry
Titolo	Regularity and approximability of electronic wave functions [e-book] / by Harry Yserentant
Pubbl/distr/stampa	Berlin : Springer, 2010
ISBN	9783642122484
Descrizione fisica	1 online resource (viii, 182 p.)
Collana	Lecture Notes in Mathematics, 0075-8434 ; 2000
Classificazione	AMS 35J10 AMS 35B65 AMS 41A25 AMS 41A63 AMS 68Q17
Disciplina	515.353
Soggetti	Mathematics Differential equations, partial Numerical analysis
Lingua di pubblicazione	Inglese
Formato	Risorsa elettronica
Livello bibliografico	Monografia

2. Record Nr.	UNINA9910698643403321
Titolo	Insect Chronobiology // edited by Hideharu Numata, Kenji Tomioka
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2023
ISBN	981-9907-26-8
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (XIV, 357 p. 1 illus.)
Collana	Entomology Monographs, , 2522-5278
Disciplina	571.77
Soggetti	Invertebrates Cytology Circadian rhythms Physiology Invertebrate Zoology Cellular Circadian Rhythms Animal Physiology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Chapter 1. Historical survey of chronobiology with reference to studies in insects -- Part I. Circadian rhythms -- Chapter 2. General features of circadian rhythms -- Chapter 3. Photic entrainment of circadian rhythms -- Chapter 4. Molecular mechanism of the circadian clock -- Chapter 5. Neural mechanism of the circadian clock -- Chapter 6. Peripheral circadian clock -- Chapter 7. Circa-bidian rhythm -- Chapter 8. Circadian rhythms in social insects -- Chapter 9. Environmental adaptation and evolution of circadian rhythms -- Part II. Other types of insect rhythms and photoperiodism -- Chapter 10. Lunar and tidal rhythms -- Chapter 11. Circannual rhythms -- Chapter 12. General features of photoperiodism -- Chapter 13. Molecular mechanism of photoperiodism -- Chapter 14. Neural mechanism of photoperiodism -- Chapter 15. Seasonal timer in aphids -- Chapter 16. Time-compensated celestial navigation.
Sommario/riassunto	This book reviews the physiological mechanisms of diverse insect clocks, including circadian clock, lunar clock, tidal clock, photoperiodism, circannual rhythms and others. It explains the commonality and diversity of insect clocks, focusing on the recent

advances in their molecular and neural mechanisms. In the history of chronobiology, insects provided important examples of diverse clocks. The first report of animal photoperiodism was in an aphid, and the time-compensated celestial navigation was first shown in the honeybee. The circadian clock was first localized in the brain of a cockroach. These diverse insect clocks also have some common features which deserve to be reviewed in a single book. The central molecular mechanism of the circadian clock, i.e., the negative feedback loop of clock genes, was proposed in *Drosophila melanogaster* in the 1990s and later became the subject of the Nobel Prize in Physiology or Medicine in 2017. Thereafter, researches on the molecular and neural mechanisms in diverse insect clocks other than the *Drosophila* circadian clock also advanced appreciably. Various new methods including RNAi, NGS, and genome editing with CRISPR-Cas9 have become applicable in these researches. This book comprehensively reviews the physiological mechanisms in diverse insect clocks in the last two decades, which have received less attention than the *Drosophila* circadian clock. The book is intended for researchers, graduate students, and highly motivated undergraduate students in biological sciences, especially in entomology and chronobiology. .
