

1. Record Nr.	UNINA9910298272303321
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Titolo	Morphomechanics of Development / / by Lev V. Belousov
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-13990-8
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (206 p.)
Disciplina	570 571.4 571.8
Soggetti	Developmental biology Systems biology Biophysics Developmental Biology Systems Biology Biological and Medical Physics, Biophysics
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	From strict determinism to self-organization -- From molecules to cells: machines, symmetries and feedbacks -- Morphogenesis on the multicellular level: patterns of mechanical stresses and main modes of collective cell behavior -- Morphomechanical feedbacks -- Morphomechanics of plants -- Concluding remarks.
Sommario/riassunto	This book outlines a unified theory of embryonic development, assuming morphogenesis to be a multi-level process including self-organizing steps while also obeying general laws. It is shown how molecular mechanisms generate mechanical forces, which in the long run lead to morphological changes. Questions such as how stress-mediated feedback acts at the cellular and supra-cellular levels and how executive and regulatory mechanisms are mutually dependent are addressed, while aspects of collective cell behavior and the morphogenesis of plants are also discussed. The morphomechanical approach employed in the book is based on the general principles of self-organization theory.

