Evolution of Lightweight Structures [Analyses and Technical Applications /

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editor

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Monografía

This volume contains studies on the evolution and function of lightweight constructions of planktonic and other organisms, and examples of how they can be used to create new solutions for radical innovations of lightweight constructions for technological application. The principles and underlying processes responsible for evolution and biodiversity of marine plankton organisms are highly relevant and largely unresolved issues in the field of marine science. Amongst the most promising objects for the study of evolution of stable lightweight constructions are marine organisms such as diatoms or radiolarians. Research in these fields requires interdisciplinary expertises such as in evolutionary modelling, paleontology, lightweight optimization, functional morphology, and marine ecology. Considerable effort and expert knowledge in production engineering or lightweight optimization is necessary to transfer knowledge on biogenic structures and evolutionary principles into new lightweight solutions. This book show methods and examples of how this can be achieved efficiently

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