1. Record Nr. UNINA9910299853703321 Autore Nachtigall Werner Titolo Bionics by Examples: 250 Scenarios from Classical to Modern Times // by Werner Nachtigall, Alfred Wisser Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2015 **ISBN** 3-319-05858-4 Edizione [1st ed. 2015.] 1 online resource (325 p.) Descrizione fisica Disciplina 531 571.4 610.28 620 Soggetti Biomedical engineering **Biophysics** Biological physics Mechanics Systems biology Biological systems **Physics** Biomedical Engineering and Bioengineering Biological and Medical Physics, Biophysics Classical Mechanics Systems Biology Applied and Technical Physics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Includes indexes. Prehistory -- Early History -- Classical Period -- Modern -- Materials Nota di contenuto and Structures -- Styling and Design -- Constructions and Devices --Building and Climate Control -- Robotics and Locomotion -- Sensors and Neural Control -- Anthropo- and Biomedical Technology --Procedures and Expiries -- Evolution and Optimization -- Systemic and

Organization -- Concepts and Documentation -- Main Focuses and

Education.

Sommario/riassunto

Bionics means learning from the nature for the development of technology. The science of "bionics" itself is classified into several sections, from materials and structures over procedures and processes until evolution and optimization. Not all these areas, or only a few, are really known in the public and also in scientific literature. This includes the Lotus-effect, converted to the contamination-reduction of fassades and the shark-shed-effect, converted to the resistance-reduction of airplanes. However, there are hundreds of highly interesting examples that contain the transformation of principles of the nature into technology. From the large number of these examples, 250 were selected for the present book according to "prehistory", "early-history", "classic" and "modern time". Most examples are new. Every example includes a printed page in a homogeneous arrangement. The examples from the field "modern time" are joint in blocks corresponding to the sub-disciplines of bionics.