1. Record Nr. UNINA9910337918903321 Proceedings of the 2nd International Conference on BioGeoSciences: Titolo Modeling Natural Environments // edited by Rolando Cárdenas. Vladimir Mochalov, Oscar Parra, Osmel Martin Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa **ISBN** 3-030-04233-2 Edizione [1st ed. 2019.] 1 online resource (228 pages) Descrizione fisica Disciplina 551.015118 Soggetti Environmental sciences Applied mathematics **Engineering mathematics** Astrobiology Planetary science **Environmental Science and Engineering** Mathematical and Computational Engineering Planetary Sciences Lingua di pubblicazione Inglese Materiale a stampa **Formato** Livello bibliografico Monografia Nota di contenuto On the Quantification of Habitability: Current Approaches -- The

On the Quantification of Habitability: Current Approaches -- The Dynamical Systems Approach to Modeling: the Universe as a Case Study.-Enlarging simple ecological models: subspecies, hidden symmetries and their implications -- Multi-agent question-answering system -- Seeding programming -- Schwarzschild Metric Disturbed by the Accelerated Expansion of the Universe -- Potential changes on anammox activity after Chicxulub asteroid impact -- Quantification of phytoplankton primary habitability in the Gulf of Ana María, Cuba -- On the Subaquatic Light Fields in Lakes of Southern Chile and their Photosynthetic Potential -- Coarse detrital deposits from hurricane Wilma on the western coast of Cojimar, Havana, Cuba -- Mathematical modeling of phosphorus dynamics in aquatic ecosystems -- Mozambican Adsorbents for Zinc (II) Removal in Aqueous Solutions -- Difusivity of Cd (II) Ions in Several Porous Adsorbents -- Increasing

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## Sommario/riassunto

This book features a selection of works presented in the 2nd International Conference on BioGeoSciences in a unified framework. First, it describes several theoretical tools for the mathematical modelling of natural processes and environments, such as Quantitative Habitability Theory, dynamical systems and artificial intelligence. It then outlines applications to the broad and multifaceted area of the natural sciences and environmental engineering. This highly interdisciplinary book includes case studies with a wide range of spatio-temporal scales: from ecosystem- to astrobiological-cosmological scales.