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Autore Gianfranco Minati

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and Approaches in Complex Systems

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Titolo

Following the classical work of Norbert Wiener, Ross Ashby, Ludwig von Bertalanffy and many others, the concept of System has been elaborated in different disciplinary fields, allowing interdisciplinary approaches in areas such as Physics, Biology, Chemistry, Cognitive Science, Economics, Engineering, Social Sciences, Mathematics, Medicine, Artificial Intelligence, and Philosophy. The new challenge of Complexity and Emergence has made the concept of System even more relevant to the study of problems with high contextuality. This Special Issue focuses on the nature of new problems arising from the study and modelling of complexity, their eventual common aspects, properties and approaches—already partially considered by different disciplines—as well as focusing on new, possibly unitary, theoretical frameworks. This Special Issue aims to introduce fresh impetus into systems research when the possible detection and correction of mistakes require the development of new knowledge. This book contains contributions presenting new approaches and results, problems and proposals. The context is an interdisciplinary framework dealing, in order, with electronic engineering problems; the problem of the observer; transdisciplinarity; problems of organised complexity; theoretical incompleteness; design of digital systems in a user-centred way: reaction networks as a framework for systems modelling: emergence of a stable system in reaction networks; emergence at the fundamental systems level; behavioural realization of memoryless