

Editorial

Preface to “Mathematical Methods, Modelling and Applications”

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The reality is more complex than it seems. The segmentation of science does not help capture the reality; each scientific point of view seems to be a partial mirror of the problem under consideration. A model is an approximation to represent an actual phenomenon in a simplified way, disregarding some factors but considering enough of them to achieve an acceptable answer. A mathematical model is an idealization of the phenomenon one wishes to represent in mathematical terms, typically an equation. The modelling process is divided in several parts:

- i. Observations obtaining data and Pattern Recognition.
- ii. Hypothesis, identification of variables. Building the Mathematical Model.
- iii. Resolution of the Model and applications.

The present book contains the 21 articles accepted for publication in the Special Issue “Mathematical Methods, Modelling and Applications” of the MDPI “Mathematics” journal. The contents of the book are organized in the following way. Papers [1–3] are concerned with step (i) of the modelling process. Papers [4–6] are linked to step (ii). All the remaining papers [7–21] are related to step (iii) covering a wide spectrum of methods, deterministic and random, algebraic and differentials, in different fields Hydrodynamic, Physics, Health Sciences.

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