Non-algorithmic Mathematical Models of Biological Organization

Guest Editor:

Dr. Sergio Rubin
Georges Lamaitre Center for
Earth and Climate Research,
Earth and Life Institute,
Université catholique de Louvain,
B-1348 Louvain, Belgium

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Message from the Guest Editor

Understanding the biological organization from non-algorithmic mathematical models is one of the most important fields in mathematical biology. We welcome articles, reviews, communications, hypothesis, essays and opinions that aim to advance the use of the (M,R)-system and other non-algorithmic mathematical models in the understanding of the causality of biological systems organization involving self-fabrication -autopoiesis- and hence cognition, autonomy and anticipation and the fundamental differences with respect of artificial systems and non-biological systems. We welcome articles related to any of these topics:

- Categorical and indicational models of the causality of biological organization;
- Modelling relation between autopoietic and (M,R)-systems;
- Formal and causal differences of biological and non-biological systems;
- Cognition, autonomy, anticipation and self-reference in the causal organization of biological systems;
- Scales of realization or instantiation of autopoietic and (M,R)-systems;
- Novel non-algorithmic mathematical methods to study biological organization.

Special Issue

Editor-in-Chief

Prof. Dr. Francisco Chiclana
School of Computer Science and
Informatics, De Montfort
University, The Gateway,
Leicester LE1 9BH, UK

Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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