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Lie Symmetries at Work in Biology and Medicine

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Message from the Guest Editor

Let us ponder those systems of differential equations that are proposed as mathematical models in Life Sciences. Numerical analysis is the most commonly used approach, although arbitrary parameters are in the way, and one has to guess which numbers to replace them with. Indeed, a crunching number approach. One may also look at the asymptotic behavior of solutions. However, to infinity and beyond may dismiss what happens in finite time. Therefore, the next best thing to do is search for Lie symmetries of those systems. They may be trivial, and they may be hidden, but, it is symmetries that allow for both a qualitative and even better quantitative analysis of a model, before going to infinity. This Special Issue invites contributions to show that Lie symmetries are indeed at work in biology and medicine.

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Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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