## Special Issue

## Asymptotic Properties of Solutions of Difference and Differential Equations

### Message from the Guest Editors

Dear colleagues, Difference and differential equations have been used since Newton's time for the understanding of physical sciences, engineering, and vitality, as well as for sport, economic, and social sciences. This is because most of the relationships between variables and laws governing both physical and engineering issues and natural phenomena can be represented by differential equations. By solving these equations, it is possible to describe and understand these issues and phenomena. However, differential equations, such as those used to solve real-life problems, may not be directly solvable, i.e., they do not have closed-form solutions. Only the simplest equations admit solutions obtained from explicit formulas. Despite this, some properties of the solutions of a given differential equation may be determined without finding their exact form. If a self-contained formula for a solution is not available, the solution may be numerically approximated using computers. In this case, a recurrence relation is needed. This is an equation that recursively defines a sequence: each term of the sequence is defined as a function of the preceding terms.

#### **Guest Editors**

Prof. Dr. Rami Ahmad El-Nabulsi

Dr. Osama Moaaz

Dr. Omar Bazighifan

### Deadline for manuscript submissions

closed (30 December 2020)



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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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