

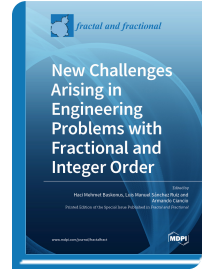


*Special Issue Reprint*

## **New Challenges Arising in Engineering Problems with Fractional and Integer Order**

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Mathematical models have been frequently studied in recent decades, in order to obtain the deeper properties of real-world problems. In particular, if these problems, such as finance, soliton theory and health problems, as well as problems arising in applied science and so on, affect humans from all over the world, studying such problems is inevitable. In this sense, the first step in understanding such problems is the mathematical forms. This comes from modeling events observed in various fields of science, such as physics, chemistry, mechanics, electricity, biology, economy, mathematical applications, and control theory. Moreover, research done involving fractional ordinary or partial differential equations and other relevant topics relating to integer order have attracted the attention of experts from all over the world. Various methods have been presented and developed to solve such models numerically and analytically. Extracted results are generally in the form of numerical solutions, analytical solutions, approximate solutions and periodic properties. With the help of newly developed computational systems, experts have investigated and modeled such problems. Moreover, their graphical simulations have also been presented in the literature. Their graphical simulations, such as 2D, 3D and contour figures, have also been investigated to obtain more and deeper properties of the real world problem.



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