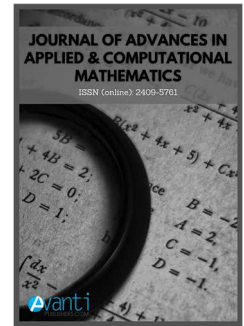




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Advances in Functional Differential Equations

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EDITORIAL

Functional differential equations are omnipresent in mathematics and related sciences, varying from applications in engineering to medicine. Early systematic approaches to differential and difference equations as independent mathematical discipline appeared in early 1900. These early contributions are concerned with a linear theory and connections to functional equations. In recent years, problems in nonlinear science modeled by functional differential and difference equations have gained much interest, leading to extensive development in the theory of discrete and continuous dynamical systems. One reason for their popularity is that functional differential and difference equations provide realistic mathematical models. Indeed, over the past 30 years we have seen many fascinating research papers and monographs which address different applications in epidemic models, neural networks, artificial intelligence, robotics and many other disciplines. Mathematical models of COVID-19 modeled by difference, fractional, and delay differential equations played a vital role in understanding the dynamics of the disease and thus in “mitigating the curve” of infections. Thus, the theory of functional differential equations will be even more important in understanding different natural phenomena in the future.

The special issue broadly deals with functional differential equations and presents the recent developments in the areas mentioned above. The guest editor believes that the papers published in this special issue will be helpful to a wide range of researchers and will motivate further research in the topics presented and in the related fields.

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