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Fractional Differential Operators with Classical and New Memory Kernels

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Message from the Guest Editors

Dear Colleagues,

Fractional calculus has a rich history in the modelling of nonlinear problems in physics and engineering. Formally, the apparatus of fractional calculus includes a variety of fractional-order differintegral operators, such as the ones named after Riemann, Liouville, Weyl, Caputo, Riesz, Erdelyi, Kober, etc., which give rise to a variety of special functions. Beyond this, some new trends in modelling involve integral operators with nonsingular kernels, as well as operators defined on fractal sets. These were proposed to model dissipative phenomena that cannot be adequately modelled by classical operators. This Special Issue addresses contemporary modeling problems in science and engineering involving fractional differential operators with classical and new memory kernels. This is a call to authors involved in modeling with new and classical fractional differential operators to share their results in fractional modelling theory and applications.

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Guest Editors