

ON SOME C_0 -SEMIGROUP GENERATORS INVOLVING CAPUTO FRACTIONAL DERIVATIVE

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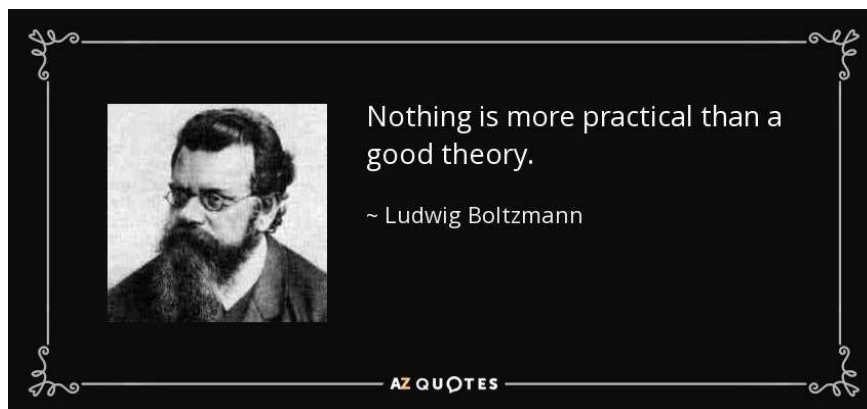
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Abstract

Our investigations are motivated by the well-posedness problem for models of diffusion with spatial fractional derivative of order $\alpha \in (1, 2)$ under various boundary conditions.



We establish the form of a C_0 -semigroup generator related to the Caputo fractional derivative.

Some properties of this generator, among them spectral ones, will be examined.

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