

**ANALYTICAL AND APPROXIMATE SOLUTIONS FOR
CONFORMABLE FRACTIONAL ORDER CORONA-VIRUS
(COVID-19) EPIDEMIC MODEL**

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Abstract:In this investigation, we discussed the SARS-CoV-2 virus into a system of equations and we apply the Conformable Fractional Differential Transformation Method (CFDTM) to COVID-19 mathematical model described by the system of non-linear conformable fractional order differential equations. The aspire of this study is to estimate the effectiveness of preventive measures, predicting future outbreaks and potential control strategies using the mathematical model. The impacts of various biological parameters on transmission dynamics of COVID-19 is examined. These results are based on different values of the fractional parameter and serve as a control parameter to identify the significant strategies for the control of the disease. In the end, the obtained results are demonstrated graphically to justify our theoretical findings.

Keywords and Phrases: Mathematical models, Epidemic model, Corona-virus (COVID - 19), α -differentiable, Conformable Fractional Differential Transform Method.

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