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Editor-in-Chief of Journal of Mathematical Extension

Dear Prof. Javidi,

I am writing to submit my manuscript titled "Symmetry Reductions and Exact Solutions for Caputo-Type Fractional Differential Equations and Nonlinear Fractional Wave-Diffusion Equations" for review by the editorial board of Journal of Mathematical Extension. I believe that my manuscript is well-aligned with the journal's aims and scope, and it will significantly contribute to the existing knowledge in this field.

The main objective of my research was to develop tools for the application of Lie symmetry analysis to fractional differential equations of the Caputo type, irrespective of their order. Specifically, we derived the prolongation formula for these fractional derivatives and utilized the obtained results to investigate the wave-diffusion equations of the Caputo type, which are widely applicable in physics.

The method is based on using Leibniz's formula and the Taylor's expansion of fractional derivatives, with details of proofs provided in the Appendix. Because of the intricate and technical nature of computations raising from the nonlocal characteristics of fractional derivatives, we have focused on presenting applicable formulas and expressions that hold significant value for engineering applications. This is particularly applicable for cases where $0 < \alpha < 1$ and $1 < \alpha < 2$. Although the generic case has been reported in the manuscript.

Furthermore, by employing these tools, we concentrated our efforts on a class of nonlinear fractional wave-diffusion equations, thereby determining their symmetries. The symmetries of this class have been reported, and we culminated our study by investigating the (2+1)-dimensional Burger's equation.

I would like to suggest the following experts in the field as potential reviewers for this paper:

1-Prof. Ercan Celik, Department of Applied Mathematics and information,
Krygz University, Kyrgyzstan Email: ercan.celik@manas.edu.kg

2-Prof. Mesut Karabacak, Department of Applied Mathematics, Ataturk university, Turkey Email: mkarabacak@atauni.edu.tr

3-Prof. Dr. Nigar Yildirim, Department of Mathematics, Kafkas University,
Turkey Email: nyaksoy55@kafkas.edu.tr

4- Dr. Soheila Pashaei, Nabiakram University, Tabriz, Iran Email: pashayi1360@gmail.com

I am confident that the above-mentioned experts will provide valuable feedback and contribute to improving the overall quality of our manuscript. Thank you for considering my suggestions. I look forward to hearing from you regarding the status of our submission.

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Sincerely yours,

Fariba Bahrami