ÇANKAYA UNIVERSITY
FACULTY OF ARTS AND SCIENCES
DEPARTMENT OF MATHEMATICS

SEMINAR

Dynamical investigations of Fractional order HIV model

SPEAKER : **Assist. Prof. Dr. Sadia Arshad**

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PLACE : **Çankaya University (Central Campus), R-213**

Abstract

In this manuscript we studied the cycling CD4+ T cells model of HIV infection under the consideration of two different fractional operators namely Caputo and Caputo-Fabrizio (CF). The stability of the equilibrium points both for non-infected and infected cases is obtained. Appropriate numerical methods are constructed to solve these fractional models effectively. Further, the stability and convergence of the proposed schemes using Caputo and CF fractional operators are analyzed. We investigate the dynamics of the generalized models by varying the infection rate. To compare the dynamics of these two fractional operators, we perform the numerical simulations of the HIV model for different fractional order.

All interested are cordially invited.

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