ÇANKAYA UNIVERSITY
FACULTY OF ARTS AND SCIENCES
DEPARTMENT OF MATHEMATICS

SEMINAR

"Caputo–Fabrizio derivative and its discretization"

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ABSTRACT : Fractional differential equations have been popular for a long time since they can capture memory effect in the system and it might be vital to use fractional operators to model some real world applications which are non-local in nature. However, some fractional differentiation operators contain non-singular kernel. To eliminate this drawback of the operators, Caputo & Fabrizio proposed a new fractional derivative without a singular kernel in 2015. In this talk, discretization techniques of Caputo-Fabrizio derivative have been presented and the rates of convergence of the proposed methods have been justified to underline the efficiency of this new derivative.

All interested are cordially invited.

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