



ÇANKAYA UNIVERSITY
FACULTY OF ARTS AND SCIENCES
DEPARTMENT OF MATHEMATICS

SEMINAR

“New aspects of the fractional optimal control problems involving Mittag-Leffler nonsingular kernel”

SPEAKER : Amin Jajarmi (Department of Electrical Engineering, University of Bojnord, Bojnord, Iran)

DATE : 21 November, 2017

TIME : 15:20

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

ABSTRACT : Fractional calculus is one of the most interesting topics in the area of mathematical analysis, which has a wide range of applications in different fields of science and engineering. Recently, a new fractional derivative with nonlocal and nonsingular kernel was constructed by using the generalized Mittag-Leffler function. In this research, we employ this recently introduced differentiation to formulate the fractional optimal control problems in a new sense. An efficient numerical technique to solve this problem is also developed based on the Euler convolution quadrature rule to discretize the convolution integral. Simulation results verify that the model based on this new derivative has the potential to better control the undesirable behaviors of the real-world phenomena than the other FC derivatives.

All interested are cordially invited.

ADDRESS : Eskişehir Yolu 29.km, 06810, Etimesgut/ANKARA