



ÇANKAYA UNIVERSITY
FACULTY OF ARTS AND SCIENCES
DEPARTMENT OF MATHEMATICS

SEMINAR

“Time fractional third Order Variant Boussinesq System and time fractional Jaulent-Miodek system: Symmetry analysis, explicit solutions and conservation laws ”

SPEAKER : Abdullahi Yusuf, Fırat University, Science Faculty,
Department of Mathematics

DATE : 02 March, 2018

TIME : 14:20

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

ABSTRACT : In this work, we study time fractional third Order Variant Boussinesq System and time fractional Jaulent-Miodek system with RiemannLiouville

(RL) derivative. We transform the governing equations to nonlinear ordinary differential equations (ODEs) of fractional order using the obtained Lie point symmetries with a new dependent variable.

The derivative in the reduced equation is in Erdelyi-Kober (EK) sense.

We apply power series method to derive an explicit solutions for the reduced fractional ODEs. The convergence analysis for the obtained explicit solutions is investigated. Moreover, the conservation laws for the equations are constructed using new conservation theorem and the generalization of the Noether.

All interested are cordially invited.

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