

1165-44-36

Lyubomir Ivanov Boyadzhiev* (lboyadzhiev@qcc.cuny.edu), 222-05 56th Ave, Bayside, Queens, New York, NY 11364. *The neutral-fractional telegraph equation.*

In this talk, the neutral-fractional telegraph equation is introduced and discussed. This equation is a natural fractional generalization of the conventional telegraph equation and contains two time-fractional Caputo derivatives, and the Riesz space-fractional derivative. We consider some analytical representations of the fundamental solution to this equation and discuss its properties. A special focus is put to two prominent cases of the neutral-fractional telegraph equation, namely, to the fractional wave equation and to the fractional diffusion equation that contain only one time-fractional Caputo derivative of equal order. (Received January 09, 2021)