1158-35-255 Subhash Subedi^{*} (ssubedi@coastal.edu) and Aghalaya S Vatsala. Quenching behavior of Time Caputo Fractional Reaction-Diffusion Equation in a Circular Domain.

We study the quenching problem for a time-dependent Caputo-fractional reaction-diffusion equation with a nonlinear source in a finite circular domain. We establish the existence and quenching of the solution. We also obtain the sufficient condition of quenching of the solution and the bounds for the quenching time of the solution. (Received March 02, 2020)