

Linear Galerkin numerical methods  
for quasilinear time-fractional diffusion equation  
with nonsmooth data.

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**Abstract**

In this talk we will present some results concerning construction and analysis of Galerkin numerical methods for nonlocal in time quasilinear diffusion equation. These can be implemented both in the spectral or finite element setting. We will take into account the lack of sufficient regularity of the solution and initial data that reduces the order of the method. The nonlinearity is dealt with extrapolation in time that results in a linear scheme. Lastly, we support the theory with numerical experiments.