



ON EXISTENCE AND CRITICAL EXPONENT FOR A SEMILINEAR SECOND ORDER EVOLUTION EQUATION

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Abstract. In this paper we study the existence and uniqueness of solutions to a second order semilinear evolution equation with fractional laplacian operator which includes some partial differential equations as plate equation under effects of rotational inertia and Boussinesq type equations that model dissipative hydrodynamics problems. The nonlinearity includes fractional derivatives to get existence of a critical type exponent case.

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