1107-35-114   **Mahamadi Warma*** (`mjwarma@gamil.com`), University of Puerto Rico, Rio Piedras Campus, College of Natural Sciences, Department of Mathematics, San Juan, PR 00936. *The Pohozaev identity for the regional fractional Laplacian with fractional Neumann type boundary conditions*

Let $\Omega \subset \mathbb{R}^N$ be a bounded open set of class $C^{1,1}$ with boundary $\partial\Omega$. We obtain the fractional version of the Pohozaev identity associated with the regional fractional Laplace operator defined on the open set Ω and satisfying a fractional Neumann type boundary conditions. An application to the existence of solutions of some semi-linear elliptic problem and some controllability and orbservability results of some evolution equations involving the regional fractional Laplace operator with fractional Neumann type boundary conditions are given.