
TONG ZHANG, Memorial University

Liouville-type theorem for the fractional p -Laplacian inequalities

This work addresses an open question posed in [Math. Ann. 2022, "Quasilinear Laplace equations and inequalities with fractional orders"]. In the process of resolving this problem, we uncovered a key structural insight. This discovery enables us to establish the existence of solutions for a broad class of fractional p -Laplacian inequalities, extending to cases with logarithmic, exponential, and power-law decay at infinity. (Joint work with Professor Jie Xiao.)