

66TH MIDWEST PDE SEMINAR

On a quasi-linear equation with nonlocal Robin boundary conditions on non-smooth domains

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Abstract

This talk will focus on the solvability of a class of quasi-linear elliptic boundary value problems with nonlocal Robin boundary conditions on non-smooth domains. We will obtain existence, uniqueness, and global regularity of weak solutions of this equation on bounded general domains whose boundary is an upper d -set with respect to a Borel regular measure μ , for some $d \in (0, \infty)$, and who have a suitable Sobolev embedding, and a trace embedding. We shall give examples of bounded domains with all this characteristics.