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Title: Irregular Elliptic Problems in *UMD* Banach Spaces

Abstract: We prove coerciveness with a defect and Fredholmness of non-local irregular boundary value problems for second order elliptic differential-operator equations in *UMD* Banach spaces. Then, we prove coerciveness with a defect in both the space variable and the spectral parameter of the problem with a linear parameter in the equation. The results do not imply maximal L_p -regularity in contrast to previously considered regular case. Finally, application to nonlocal irregular boundary value problems for elliptic equations of the second order in cylindrical domains are presented. Equations and boundary conditions may contain differential-integral parts. The spaces of solvability are Sobolev type spaces $W_{p,q}^{2,2}$.