

Fredholm Alternative and Power Bounded Operators

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Integral equations have been around since the 19th century. The first systematic approach to integral equations was due to Fredholm (1903) who gave a theory for solvability of certain integral equations. This theory is known today as “Fredholm Alternative”. Later, around 1912, Riesz showed that compact operators, which may be considered counterparts of matrices in the infinite dimensional Banach space setting, satisfy Fredholm Alternative and exhibit some nice spectral properties. Motivated by this, we study another class of operators, namely power bounded operators, for analogous results. (This is a joint work with Ali Ülger)