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إشراف

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In this thesis, the solvability and uniqueness of the solution of some classes of semilinear perturbed or not operators equation in finite or infinite dimensional space have been considered. The linearity of the semilinear class is of maximal monotone operator perturbed by duality mapping, and the nonlinearity are of Leray-Schauder type operator of quasi-positive or satisfying some suitable conditions, Lipschitz type operators, supported by some type of perturbations. The spaces of solvability are real reflexive Banach space or real Hilbert space.

The adapted approach of solvability and uniqueness based on Banach fixed point theorems, Leray-Schauder degree theorem as well as Minty- Browder theorem. The necessary theorem, lemmas and propositions for solvability, uniqueness of the proposed classes of semilinear operator equation have been

adapted and developed with proofs. Some useful remarks and concluding remarks have been presented and supported with a suitable illustrations.