

EXISTENCE, UNIQUENESS AND DATA DEPENDENCE FOR THE
SOLUTIONS OF VOLTERRA-FREDHOLM INTEGRAL EQUATIONS
IN L^2 SPACES

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Abstract. In the present paper we give an existence and uniqueness theorem and a data dependence theorem for Volterra-Fredholm nonlinear integral equations, using the theory of weakly Picard operators.

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Key words. Fixed point, weakly Picard operator, data dependence, Volterra-Fredholm integral equation.

REFERENCES

- [1] HACIA, L., *On Some Integral Inequalities and Their Applications*, J. Math. Anal. Appl., **206** (1997), 611–622.
- [2] MANGERON, D. and KRIVOŠEIN, L.E., *Sistemi policalorici a rimanenza ed a argomento ritardato; problemi al contorno per le equazioni integro-differenziali con operatore calorico ed argomento ritardato*, Rend. Sem. Mat., Univ. Padova, 1965, 1–24.
- [3] PACHPATTE, B.G., *On Mixed Volterra-Fredholm type integral equations*, Indian J. Pure Appl. Math., **17** (1986), 488–496.
- [4] PRECUP, R., *Lecții de ecuații cu derivate parțiale*, P.U.C., Cluj-Napoca, 2004.
- [5] RUS, I.A., *Weakly Picard mappings*, Comment. Math. Univ. Carolin., **34** (1993), 769–773.
- [6] RUS, I.A., *Weakly Picard operators and applications*, Seminar on Fixed Point Theory Cluj-Napoca, **2** (2001), 41–58.
- [7] RUS, I.A., *Picard operators and applications*, Sci. Math. Jpn., **58** (2003), 191–219.
- [8] RUS, I.A. and MUREȘAN, S., *Data dependence of the fixed points set of some weakly Picard operators*, Itinerant Seminar, Cluj-Napoca, 2000, 201–208.
- [9] RUS, I.A., *Generalized Contractions and Applications*, Cluj University Press, Cluj-Napoca, 2001.

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