

ON THE DIFFERENCE OF A CONTRACTION AND AN INVERSE STRONGLY MONOTONE OPERATOR

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Abstract. In this paper we prove a unique fixed point result in real Hilbert spaces for the difference operator $T - F$, where T is a contraction and F is an inverse strongly monotone operator.

Mathematics subject classification (2010): 47H05, 47H09, 47H10.

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REFERENCES

- [1] S. M. ALSULAMI, A. LATIF AND W. TAKAHASHI, *Strong convergence theorems by hybrid methods for split feasibility problems in Hilbert spaces*, J. Nonlinear Convex Anal. **16**, 12 (2015), 2521–2538.
- [2] F. E. BROWDER AND W. V. PETRYSHYN, *Construction of fixed points of nonlinear mappings in Hilbert space*, J. Math. Anal. Appl. **20** (1967), 197–228.
- [3] J. CHEN, L. ZHANG AND T. FAN, *Viscosity approximation methods for nonexpansive mappings and monotone mappings*, J. Math. Anal. Appl. **334** (2007), 1450–1461.
- [4] K. DEIMLING, *Nonlinear functional analysis*, Springer Verlag, New York, 1985.
- [5] H. IIDUKA AND W. TAKAHASHI, *Strong convergence theorems for nonexpansive nonself-mappings and inverse-strongly-monotone mappings*, J. Convex Anal. **11**, 1 (2004), 69–79.
- [6] R. I. KACHUROVSKI, *On monotone operators and convex functionals*, Uspekhi Mat. **15** (1960), 213–215.
- [7] A. PETRUSEL, D. R. SAHU AND V. SAGAR, *An extragradient iterative scheme for common fixed point problems and variational inequality problems with applications*, An. Ştiinţ. Univ. Ovidius Constanţa, Ser. Mat. **23**, 1 (2015), 247–266.