FIXED POINT THEORY FOR CYCLIC BERINDE OPERATORS

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Abstract. Inspired by the considerations in [Kirk, W.A., Srinivasan, P.S., Veeramany, P., *Fixed points for mappings satisfying cyclical contractive conditions*, Fixed Point Theory, **4** (2003), No. 1, 79-89], which were further discussed in [Rus, I.A., *Cyclic representations and fixed points*, Ann. T. Popoviciu Seminar Funct. Eq. Approx. Convexity, **3** (2005), 171-178], we establish the existence and uniqueness of the fixed point for cyclic strict Berinde operators. Following [Rus, I.A., *The theory of a metrical fixed point theorem: theoretical and applicative relevances*, Fixed Point Theory, **9** (2008), No. 2, 541-559], we build a so-called theory of the main result, referring concepts and phenomena like Picard operators, data dependence, limit shadowing, well-posedness of the fixed point problem. A Maia type result for cyclic strict Berinde operators is also given.

Key Words and Phrases: Cyclic almost contraction, cyclic Berinde operator, Picard operator, data dependence, well-posedness of a fixed point problem, limit shadowing.

2010 Mathematics Subject Classification: 47H10, 54H25.

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