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A NEW CONTRIBUTION TO DISCONTINUITY AT FIXED POINT

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Abstract. The aim of this paper is to obtain new solutions to the open question on the existence of a contractive condition which is strong enough to generate a fixed point but which does not force the map to be continuous at the fixed point. To do this, we use the right-hand side of the classical Rhoades' inequality and the number $M(x,y)$ given in the definition of an (α,β)-Geraghty type-I rational contractive mapping. Also we give an application of these new results to discontinuous activation functions.
Key Words and Phrases: Discontinuity, fixed point, fixed circle, metric space, activation function.
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