

ON COMMON FIXED POINT OF GENERALIZED CONTRACTIVE MAPPINGS IN METRIC SPACES

Mujahid Abbas and Hassen Aydi

Abstract. Existence of common fixed points is established for two self-mappings satisfying a generalized contractive condition. The presented results generalize several well known comparable results in the literature. We also study well-posedness of a common fixed point problem related to these mappings.

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References

- [1] M. Abbas, G. Jungck, *Common fixed results for noncommuting mappings without continuity in cone metric spaces*, J. Math. Anal. Appl. **341**(2008), 416–420.
[MR2394094](#)(2008m:47071). [Zbl 0960.43003](#).
- [2] G. V. R. Babu, M. L. Sandhya, M. V. R. Kameswari, *A note on a fixed point theorem of Berinde on weak contractions*, Carpathian J. Math. **24**(2008), 8-12.
[MR2410201](#)(2009e:54086). [Zbl 1199.54205](#).
- [3] Lj. B. Ćirić, *Generalized contractions and fixed point theorems*, Publ. Inst. Math. (Beograd), **12**(1971), 19–26. [MR0309092](#)(46#8203). [Zbl 0234.54029](#).
- [4] Lj. B. Ćirić, *A generalization of Banach's contraction principle*, Proc. Amer. Math. Soc. **45**(1974), 267–273. [MR0356011](#) (50#8484). [Zbl 0291.54056](#).
- [5] Lj.B. Ćirić, *Fixed point of asymptotically regular mappings*, Mathematical Communications, **10**(2005), 111-114. [MR2199099](#). [Zbl 1089.54515](#).
- [6] G. Jungck, *Commuting mappings and fixed points*, Amer. Math. Monthly , **73**(1976), 261–263. [MR0400196](#)(53#4031).

2010 Mathematics Subject Classification: 54H25; 47H10.

Keywords: Coincidence point; Point of coincidence; Common fixed point; Contractive type mapping.

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- [7] G. Jungck, *Compatible mappings and common fixed points*, Int. J. Math. Math. Sci. **9**(1986), 771-779. [MR1255221](#).
- [8] G. Jungck, *Common fixed points for noncontinuous nonself maps on nonmetric spaces*, Far East J. Math. Sci. **4**(1996), 199-215. [MR1426938](#). [Zbl 0928.54043](#) .
- [9] R. Kannan, *Some results on fixed points*, Bull. Calcutta Math. Soc. **10**(1968), 71-76. [MR0300264](#)(45#9310). [Zbl 0257.54044](#).
- [10] E. Karapinar, *Fixed point theory for cyclic weak ϕ - contraction*, Appl. Math. Lett. **24**(2011), 822-825. [Zbl pre05874611](#) .
- [11] M. Păcurar, I. A. Rus, *Fixed point theory for cyclic φ - contractions*, Nonlinear Anal. **72**(2010), 1181-1187. [Zbl 1191.54042](#).
- [12] S. Reich, A. J. Zaslowski, *Well posedness of fixed point problems*, Far East J. Math. Sci. Special Volume, Part III (2001) 393-401. [MR1888108](#)(2003d:54058).
- [13] P. L. Sharma and A. K. Yuel, *Fixed point theorems under asymptotic regularity at a point*, Math. Sem. Notes, **35** (1982), 181-190. [MR0834895](#)(87f:54061).
- [14] S. Sessa, *On a weak commutativity condition of mappings in fixed point consideration*, Publ. Inst. Math. **32** (1982), 149-153. [MR0710984](#)(85f:54107). [Zbl 0832.54034](#).

M. Abbas
 Department of Mathematics,
 Lahore University of Management Sciences,
 54792-Lahore, Pakistan.
 e-mail: mujahid@lums.edu.pk

H. Aydi
 Université de Sousse,
 Institut Supérieur d'Informatique et des
 Technologies de Communication de Hammam Sousse,
 Route GP1, Hammam Sousse-4011, Tunisie.
 e-mail: hassen.aydi@isima.rnu.tn
