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Common fixed points of mappings satisfying implicit relations in partial metric spaces.
(English) [Zbl 1432.54086](#)
J. Nonlinear Sci. Appl. 6, No. 3, 152-161 (2013).

Summary: *S. G. Matthews* [in: Papers on general topology and applications. Papers from the 8th summer conference at Queens College, New York, NY, USA, June 18–20, 1992. New York, NY: The New York Academy of Sciences. 183–197 (1994; [Zbl 0911.54025](#))] introduced and studied the concept of partial metric space, as a part of the study of denotational semantics of dataflow networks. He also obtained a Banach type fixed point theorem on complete partial metric spaces. Very recently *V. Berinde* and the second author [*Fixed Point Theory Appl.* 2012, Paper No. 105, 8 p. (2012; [Zbl 1273.54044](#))] discussed, in the setting of metric and ordered metric spaces, coincidence point and common fixed point theorems for self-mappings in a general class of contractions defined by an implicit relation. In this work, in the setting of partial metric spaces, we study coincidence point and common fixed point theorems for two self-mappings satisfying generalized contractive conditions, defined by implicit relations. Our results unify, extend and generalize some related common fixed point theorems of the literature.

MSC:

- [54H25](#) Fixed-point and coincidence theorems (topological aspects)
- [54E40](#) Special maps on metric spaces
- [54E50](#) Complete metric spaces
- [54F05](#) Linearly ordered topological spaces, generalized ordered spaces, and partially ordered spaces

Cited in **2** Reviews
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Keywords:

[coincidence point](#); [common fixed point](#); [contraction](#); [implicit relation](#); [partial metric space](#)

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