

**PARTIAL CONE RECTANGULAR METRIC SPACES AND FIXED
POINT THEOREMS**

SHISHIR JAIN AND POOJA CHAUBEY

ABSTRACT. Our present work introduce the new space named as “partial cone rectangular metric spaces” (abbr. PCRMS) over Banach space. In this new setting, we prove Banach contraction principle in such a space. Some properties and examples are also discuss here.

REFERENCES

- [1] A. Azam, M. Arshad and I. Beg: *Banach contraction principle on cone rectangular metric spaces*, Appl. Anal. Discrete Math., **3**(2009), 236-241.
- [2] A. Branciari: *A fixed point theorem of Banach-Caccioppoli type on a class of generalized metric spaces*, Publ. Math. Debrecen, **57**(2000), No. 1, 31-37.
- [3] M. Fréchet: *Sur queless points du calcul Fonctionnel*, Rend. Circ. Mat. Palermo (2), **22**(1906), 1-74.
- [4] Huang Long-Guang and Zhang Xian: *Cone metric spaces and fixed point theorems of contractive mappings*, J. Math. Anal. Appl., **332**(2007), No. 2, 1468-1476.
- [5] H. Liu and S. Xu: *Cone metric spaces with Banach Algebras and fixed point theorems of generalized Lipschitz mappings*, Fixed Point Theory Appl., 2013, 2013:320, 10 pages.
- [6] S. Malhotra, S. Shukla and R. Sen: *Some fixed point results in θ -complete partial cone metric spaces*, J. Adv. Math. Stud., **6**(2013), 97-108.
- [7] R. Rashwan and S.M. Saleh: *Some fixed point theorems in cone rectangular metric spaces*, Mathematica Eterna, **2**(2012), 573- 587.
- [8] S. Shukla: *Partial rectangular metric space and fixed point theorems*, Sci. World J., **2014**(2014), Article ID 756298, 7 pages.

Shri Vaishnav Vidyapeeth Vishwavidyalaya
Department of Mathematics
Sanwer Road, Indore (M.P.) 453331, India
E-mail address: jainshishir11@rediffmail.com

Shri Vaishnav Vidyapeeth Vishwavidyalaya
Department of Mathematics
Sanwer Road, Indore (M.P.) 453331, India
E-mail address: chaubey.pooja8991@gmail.com

Received: January 22, 2020. Revised: May 19, 2020.

2010 Mathematics Subject Classification: 47H10, 54A05.

Key words and phrases: Partial cone rectangular metric spaces, fixed point theorem.