



Banach J. Math. Anal. 5 (2011), no. 2, 15–24

---

**B**ANACH **J**OURNAL OF **M**ATHEMATICAL **A**NALYSIS

ISSN: 1735-8787 (electronic)

[www.emis.de/journals/BJMA/](http://www.emis.de/journals/BJMA/)

---

## A FIXED POINT THEOREM ON CONE METRIC SPACES WITH NEW TYPE CONTRACTIVITY

ISHAK ALTUN<sup>1\*</sup>, MUJAHID ABBAS<sup>2</sup> AND HAKAN SIMSEK<sup>3</sup>

Communicated by M. A. Japón Pineda

**ABSTRACT.** In the present work, a common fixed point theorem for self maps on cone metric spaces is proved. Also two examples, which shows that our main theorem is generalized version of main theorems of [A. Branciari, Int. J. Math. Math. Sci., 29 (2002), no. 9, 531–536] and [L.G. Huang and X. Zhang, J. Math. Anal. Appl. 332 (2007), no. 2, 1468–1476], are given.

<sup>1,3</sup> DEPARTMENT OF MATHEMATICS, FACULTY OF SCIENCE AND ARTS, KIRIKKALE UNIVERSITY, 71450 YAHSIHAN, KIRIKKALE, TURKEY.

*E-mail address:* [ishakaltun@yahoo.com](mailto:ishakaltun@yahoo.com)

*E-mail address:* [hsimsek@kku.edu.tr](mailto:hsimsek@kku.edu.tr)

<sup>2</sup> DEPARTMENT OF MATHEMATICS, LAHORE UNIVERSITY OF MANAGEMENT SCIENCES, 54792-LAHORE, PAKISTAN.

*E-mail address:* [mujahid@lums.edu.pk](mailto:mujahid@lums.edu.pk)

---

*Date:* Received: 1 July 2010; Revised: 13 October 2010; Accepted: 13 November 2010.

\* Corresponding author.

2010 *Mathematics Subject Classification.* Primary 54H25; Secondary 47H10.

*Key words and phrases.* Fixed point, cone metric space, integral type contraction.