

**BULLETIN OF THE  
ALLAHABAD MATHEMATICAL SOCIETY**

Vol. 32, Part 1, 2017

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H. K. Nashine**

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**Abstract:** The purpose of the present paper is to derive new common fixed point results for a pair of compatible as well as relatively asymptotically regular mappings defined on an orbitally ordered complete metric space using the orbital continuity of the involved mappings. Various consequences of all theorems are observed. Numerical examples are illustrated to justify and strengthen the present investigation. Moreover, as an application, existence of the solution of an integral equation is proved.

**Tanusree Choudhury**

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**Abstract:** Here we study Fatou's type lemma in  $\mathbb{P}_1(\Sigma, \mu, X)$ , the space of Pettis integrable multifunctions taking values in a separable Banach space  $X$ . Then we give an exact version of Fatou's lemma in  $\mathbb{P}_1(\Sigma, \mu, X)$ . Finally we discuss Kuratowski-Mosco convergence in  $\mathbb{P}_1(\mu, X)$ .

**Sanjay Kumar and Meenakshi Gugnani**

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**Abstract:** In this paper we prove strong and weak convergence results using SP and Noor iterative sequences for countable family of multi-valued generalized nonexpansive mappings by using some conditions in uniformly a convex real Banach space. Our result extends and improves the corresponding result of Chang et al. [8]. Also it is proved that the iterative scheme used in our results have better rate of convergence than other existing iterative schemes.

**George A. Anastassiou**

PRINCIPLES OF GENERAL FRACTIONAL ANALYSIS FOR  
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**Abstract:** Here we present a general fractional analysis theory for Banach space valued functions of real domain. A series of general Taylor formulae with Bochner integral remainder is presented. We discuss the continuity of general Riemann-Liouville Bochner fractional integrals and we prove their semigroup property. Then we introduce the right and left generalized Banach space valued fractional derivatives and we establish the corresponding fractional Taylor formulae with Bochner integral remainders. Furthermore we study the iterated generalized left and right fractional derivatives and we establish Taylor formulae for the case, and we find interesting Bochner integral representation formulae for them. We study the differentiation of the left and right Riemann-Liouville fractional Bochner integrals. At the end we give Ostrowski type inequalities on this general setting, plus other interesting applications.

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