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CONTENTS WITH ABSTRACT

Abstract: Suppose G is an abelian p-group with a large subgroup L. It is proved that G is (1) $p^{\omega+n}$-projective, $n \in N \cup \{0\}$; (2) $p^{\omega+1}$-injective; (3) projectively thick; (4) an ω-elongation of a totally projective p-group (respectively of a summable p-group) by a $p^{\omega+n}$-projective group, $n \in N \cup \{0\}$, and their modifications, precisely when so is L. These statements enlarge results due to Benabdallah et al (Acta Math. Acad. Sci. Hungar., 1970) and due to the author (Proc. Indian Acad. Sci. - Math. Sci., 2004).

Some other related concepts are established as well.

Abstract: The present paper concerns fixed point theorems for the sum $A + B$, where A and B are maps acting on locally convex spaces. We first discuss the case where A is compact and B is a Banach contraction. Our fixed point results are obtained under Schaefer, Leray-Schauder and Furi-Pera type conditions. Also, we

consider the case where A is weakly-strongly sequentially continuous and B is a Banach contraction. The multivalued versions of the fixed point results above are also presented. Our results extend and cover a number of earlier works.

Abstract: For Banach spaces E, F and a compact Hausdorff space X, let $L : E \to C(X, F)$ be a continuous linear mapping and for every $x \in X$, $T_x : E \to F$ be defined as: $T_x(e) = L(e)(x)$. Weak compactness of L is charaterized in terms of weak compactness of $T_x(x \in X)$. The result is extended to the case when E, F are locally convex spaces.

Abstract: The notion of R-weak commutativity of mappings is extended to the larger framework of Tychonoff spaces (Hausdorff Uniform spaces). Moreover, we extend the formulation of Meir-Keeler type contractive condition to the framework of Tychonoff spaces. These extended formulations are then used to prove common fixed point theorems in Tychonoff spaces. Several known results in the metric fixed point theory follow as easy corollaries of our results. In particular, the results obtained in the process generalize certain results of Tarafdar [16], Park and Bae [12], Jungck [6], Boyd and Wong [4], and Pant [13].

Abstract: The object of the present paper is to study M-projectively recurrent LP-Sasakian manifold. Also some equivalent properties of an LP-Sasakian manifold has been studied. A necessary and sufficient condition for a hypersurface of a M-projectively recurrent LP-Sasakian manifold to be minimal is obtained.

Abstract: In this paper, using Nagy's webs formalism, Frölisher-Nejenhuis theory for derivation associated to vector differential forms, and Grifone's connection theory for tensorial algebra on the tangent bundle, we find invariants associated to almost-grassmann structures and give an interpretation in terms of these invariants, for the isoclinic, transversally geodesic and grassmanizable webs.

Abstract: The object of the present paper is to investigate some inclusion relationships and a number of other properties of several subclasses of multivalent analytic functions, which are defined here by using the Wright generalized hypergeometric function. Relevant connections of the results presented here with those obtained in earlier works are pointed out.

Abstract: The article is devoted to stochastic processes with values in finite- and infinite-dimensional vector spaces over infinite fields **K** of zero characteristics with non-trivial non-archimedean norms. For different types of stochastic processes controlled by measures with values in **K** and in complete topological vector spaces over **K** stochastic integrals are investigated. Moreover, spectral functions of non-archimedean stochastic processes are established.

Abstract: Stochastic functions with values in complete topological vector spaces over a non-archimedean normed field **K** are studied. For stochastic functions controlled by **K** valued measures stochastic integrals are investigated. Stochastic measures and integrals with values in complete topological vector spaces over **K** are considered. Moreover, theorems about spectral decompositions of non-archimedean stochastic processes are proved.

Abstract: Let K be a nonempty closed convex subset of a real Banach space E, $T : K \to K$ a uniformly continuous asymptotically pseudocontractive mapping having $T(K)$ bounded with sequence $\{k_n\}_{n\geq 0} \subset [1, \infty)$, $\lim\limits_{n\to\infty} k_n = 1$ such that $x^* \in F(T) = \{x \in$

$K : Tx = x\}$. Let $\{\alpha_n\}_{n\geq 0}, \{\beta_n^j\}_{n\geq 0} \in [0,1]$, $j = 1, 2, ..., p-1$; $p \geq 2$ be such that $\sum_{n\geq 0} \alpha_n^2 = \infty$ and $\lim_{n\to\infty} \alpha_n = 0 = \lim_{n\to\infty} \beta_n^1$. For arbitrary $x_0 \in K$ let $\{x_n\}_{n\geq 0}$ be iteratively defined by

$$\begin{aligned} x_{n+1} &= (1-\alpha_n)\, x_n + \alpha_n T^n y_n^1, \\ y_n^i &= \left(1-\beta_n^i\right) x_n + \beta_n^i T^n y_n^{i+1}, \\ y_n^{p-1} &= \left(1-\beta_n^{p-1}\right) x_n + \beta_n^{p-1} T^n x_n, \end{aligned}$$

$n \geq 0$, $i = 1, 2, ..., p-2$; $p \geq 2$. Then $\{x_n\}_{n\geq 0}$ converges strongly to $x^* \in F(T)$.

A. O. Mostafa and M. K. Aouf

THE QUASI-HADAMARD PRODUCTS OF SOME MULTIVALENT FUNCTIONS DEFINED BY USING A DIFFERENTIAL OPERATOR 193-207

Abstract: The purpose of this paper is to get many interesting results of the quasi-Hadamard products of functions belonging to the classes $S_n(p,q,\alpha)$ and $C_n(p,q,\alpha)$ of p-valently analytic functions. Some of these results correct the results obtained by Chen et al. [1].

Dibyendu Banerjee and Srimanta Jana

RELATIVE FIX-POINTS OF FACTOR ORDER OF TRANSCENDENTAL ENTIRE FUNCTIONS 209-216

Abstract: If $f(z)$ and $\phi(z)$ are transcendental entire functions, we show that $f(z)$ has relative fix-points of factor order n, for all values of n except for at most one value.

Necati Özdemir

ADAPTIVE SAMPLING DATA INTEGRAL CONTROL USING CURRENT ERROR OF INFINITE-DIMENSIONAL SYSTEMS 217-230

Abstract: In this paper we present adaptive sampled-data low-gain I-control algorithms using current error integrator for multi variable infinite-dimensional systems in which the sampling period

is not constant. The system is assumed to be exponentially stable with invertible steady state gain and its steady-state gain matrix has eigenvalues in open right half plane. The choice of the integrator gain is based on steady-state gain information. We also consider robustness with respect to error in measuring the steady state gain.