CONTENTS

Abstract: The object of the present paper is to study Sasakian mainfolds satisfying the condition $R(X, Y) \cdot B = 0$, where B is the C-Bochner curvature tensor and $R(X, Y)$ is considered as a derivation of the tensor algebra at each point of the tangent space. Also Sasakian mainfolds in which the divergence of the C-Bochner curvature tensor vanishes are studied.

Abstract: The aim of this paper is to continue the study of almost s-continuous functions initiated recently by Noiri et al. [18]. We improve some of their results and present some new ones. The class of quasi-open sets is introduced.

Abstract: Some characterizations of best approximation element, of proximinal, semitchebychefian and tchebychefian linear subspaces in real normed spaces are given.

Abstract: We prove two main theorems:

1. There exist polynomials $Q_i(n, p)$ of degree $p + 1 - i$ in n such that

$$\sum_{k=j}^{n} k^p \binom{k}{j} = \sum_{i=1}^{p+1} (-1)^{i-1} Q_i(n, p) \binom{n+1}{j+i},\tag{1}$$

with $Q_i(n, p) = 0$ for $i < 1$ or for $i > p + 1$. They satisfy the recurrence $Q_{i+1}(n, p) = Qi(n, p) - Qi(n - 1, p)$. Also $Q_1(n, p) = n^p$ and $Q_{p+1}(n, p + 1) = p!$.

Explicitly $Q_i(n, p) = \sum_{r=0}^{i-1} (-1)^r \binom{i-1}{r} (n - r)^p$.

2. There exist polynomials $R_i(j,p)$ of degree p in j such that

$$\sum_{k=j}^{n} k^p \binom{k}{j} = \sum_{i+1}^{p+1} R_i(j,p) \binom{n+1}{j+i}, \text{ with } R_i(j,p) = 0 \text{ for } i < 1. \qquad (2)$$

or $i > p+1$. The R's satisfy the recurrence $R_i(j,p+1) = jR_i(j,p)+(j+1)R_{i-1}(j+1,p)$. Also $R_1(j,p) = j^p$ and $R_{p+1}(j,p) = (j+1)(j+2)\cdots(j+p) = j!\binom{j+p}{j}$.

Explicitly

$$R_i(j,p) = \sum_{s=j}^{i+j-1} (-1)^{i+j-s-1} \binom{i+j}{s+1} \sum_{k=j}^{s} k^p \binom{k}{j}.$$

Numerous consequences of these expansions and their connections with the Stirling numbers are presented. Programs using the language C_{++} have been devised to compute tables of the Q and R polynomials efficiently.

Mona Khare
Metric entropy and sufficient families   191-204

Abstract: The aim of the present paper is to introduce the concept of sufficient families in the study of metric entropy $h(\phi, \mathcal{N})$ of an F-measure preserving transformation ϕ relative to a sub σ-algebra $\mathcal{N}$ of an F-dynamical system $\Phi = (X, M, m, \phi)$, having finitely many atoms. Results including the Rokhlin inequality have been obtained. It is proved that if $\mathcal{N}$ is a one-sided generator for $[\mathcal{L}]$ with respect to ϕ, then the entropy $h(\Phi, [\mathcal{L}]) = 0$. This result includes the corresponding classical result as a particular case.

Byung-Soo Lee and Mee-Kwang Kang
A generalization of Som and Mukherjee's fixed point theorem   205-209

Abstract: In this paper a fixed point theorem which generalizes a main result of Som and Mukherjee [**6**] is obtained.

Yi-Hai Ma
On a class of mixed monotone operators and a kind of two-point boundary value problems   211-220

Abstract: Fixed point theorems for an important class of mixed monotone operators are proved and an application to the two-point boundary value problem for second order impulsive differential equation is given.

S. M. Mazhar
Absolute summability factors for Fourier series   221-229

Abstract: A theorem on absolute summability factors for Fourier series is obtained. Our result generalizes certain theorems due to Dikshit and Dubey and others.

B. Pal, J. C. Misra, A. Pal and A. S. Gupta

Abstract: An analysis is made of the steady flow of an incompressible viscoelastic and electrically conducting fluid in a parallel plate channel in the presence of a uniform transverse magnetic field. Both the channel walls are stretched in their own plane with a velocity varying linearly with distance from a fixed point. Solution for the velocity distribution is obtained by integrating numerically the ordinary differential equation derived from the governing equations by suitable transformation. For small values of Reynolds number R, the ordinary differential equation also admits of an analytical solution which shows close agreement with the numerical solution. It is found that for fixed R and M (M being the magnetic parameter). The wall shear stress τ_w decreases very slowly with increase in the viscoelastic parameter K_1. Further it turns out that τ_w increases with increase in M for fixed R and K_1. A novel result of the present analysis is that the reverse flow arising out of the streamwise velocity changing sign in the transverse direction in the absence of magnetic field ($M = 0$) can be almost eliminated by the application of a strong magnetic field.

G. K. Panda, N. Dash and B. B. Sahoo

Abstract: Recently Singh et al. [6] have given a very beautiful generalization of a result of F. E. Browder on the existance of solution of a variational inequality problem using pseudo-monotone mappings in the setting of a Hausdorff topological vector space. Behera and Panda [1, 2] have also studied several generalizations of Browder's result by considering variational-like inequalities. The aim of this paper is to study one more generalization of a result of Singh et al. which includes some results of Behera and Panda [1, 2] and Siddiqi et al. [5] as particular cases.

K. P. R. Rao and N. Srinivasa Rao

Abstract: In this paper we obtain a common coincidence point theorem for a pair of multi-valued maps with respect to a single-valued map in a normed linear space satisfying a generalized contractive condition using Ishikawa type iteration procedure.

D. Rath

Abstract: A representation theorem for elements of l_1 in terms of r-convex sequences is obtained which is used to establish matrix characterization theorems generalizing earlier results of Hahn, Dawson. The sequences spaces M_r, bv_p are defined, certain related matrix classes are characterized and the α-duals, β-duals of certain sequences spaces are determind.

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B. E. Rhoades

Abstract: It is shown that certain generalized Hausdorff matrices are bounded operators on l^2, and a formula is obtained for their l^2-norm. This paper extends some of the results of [**11**] to generalized Hausdorff matrices.

Ian Tweddle

Abstract: A barrelled countable enlargement (BCE) is obtained when the dual of a barrelled space is extended by a countably infinite number of dimensions in such a way that barrelledness is preserved. Here we consider how the extending vectors of a BCE may be perturbed to produce a new BCE.

Z. Govindarajulu

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