CONTENTS

Abstract: In this paper we are interested in the existence of a solution for the nonlinear degenerate elliptic equations $Lu(x)+H(x,u,\nabla u)\,\omega = f$ in the setting of the weighted Sobolev space $W_0^{1,p}(\Omega,\omega)$, where H is a nonlinear term with natural growth with respect to ∇u and $f \in L^1(\Omega)$.

Abstract: A finite or infinite matrix A is image partition regular provided that whenever $\mathbb{N}$ is finitely colored, there must be some $\vec{x}$ with entries from $\mathbb{N}$ such that all entries of $A\vec{x}$ are in some color class. In [6], it was proved that the diagonal sum of a finite and an infinite image partition regular matrix is also image partition regular. It was also shown there that centrally image partition regular matrices are closed under diagonal sum. Using Theorem 3.3 of [2], one can conclude that diagonal sum of two infinite image partition regular matrices may not be image partition regular. In this paper we shall study the image partition regularity of diagonal sum of some infinite image partition regular matrices. In many cases it will produce more infinite image partition regular matrices.

S. B. Joshi and P. P. Yadav

Abstract: The purpose of the present paper is to establish necessary and sufficient conditions for Gaussian hypergeometric functions to be in certain subclass of analytic univalent functions in the unit disc U. We also consider an integral operator related to the hypergeometric functions.

N. Sabu

Abstract: We consider the eigenvalue problem for Koiter's model. We show that the eigensolutions of the Koiters model converge to the eigensolutions of the flexural shell model if the space of inextensional displacement is infinite dimensional and if the space is finite dimensional, then the limits of the eigenvalues could belong to the spectra of both flexural and membrane shells.

Balvir Singh and Saurabh Porwal

Abstract: The object of the present paper is to establish some results involving coefficient conditions, extreme points, distortion bounds, convolution conditions and convex combination for a new class of harmonic univalent functions. It is worth mentioning that many of our results are either extensions or new approaches to those corresponding previously known results.

S. K. Panchal, Pravinkumar V. Dole and Amol D. Khandagale

k-Hilfer-Prabhakar fractional derivatives and

its applications   367-383

Abstract: In this paper we define the regularized version of k-Prabhakar fractional derivative, k-Hilfer-Prabhakar fractional derivative, regularized version of k-Hilfer-Prabhakar fractional derivative and find their Laplace and Sumudu transforms. Using these results, the relation between k-Prabhakar fractional derivative and its regularized version involving k-Mittag-Leffler function is obtained. Similarly the relation between k-Hilfer-Prabhakar fractional derivative and its regularized version is also obtained. Further, we find the solutions of some problems in physics in which k-Hilfer-Prabhakar fractional derivative and its regularized version are involved.

Shyamal Kumar Hui and Pradip Mandal

Pseudo parallel contact cr-submanifolds of Kenmotsu

manifolds   385-402

Abstract: The present paper deals with the study of Deszcz-pseudo parallel and Chaki-pseudo parallel contact CR-submanifolds of Kenmotsu manifolds with respect to Levi-Civita connection as well as semisymmetric metric connection and prove that corresponding these two classes are equivalent with a certain condition.

Ahmad Mohammadhasani and Asma Ilkhanizadeh Manesh

L-rays of integral row stochastic matrices and row

stochastic matrices   403-408

Abstract: Let $\mathbf{M}_n$ be the set of all n-by-n real matrices. A matrix $R \in \mathbf{M}_n$ with nonnegative entries is called row stochastic if all its row sums are one. A matrix R is called integral row stochastic, if each row has exactly one nonzero entry, $+1$, and other entries are zero. In the

present paper, we describe L-ray of a matrix and characterize L-rays of integral row stochastic matrices and row stochastic matrices. In [4] L-rays of permutation matrices and doubly stochastic matrices were studid.

V. S. Prasad, C. S. Bagewadi and K. Ajaykumar

ON SUBMANIFOLDS OF CODIMENSION TWO AND ONE OF KENMOTSU
MANIFOLDS   409-423

Abstract: We obtain necessary and sufficient condition for a submanifold M of codimension-2 of Kenmotsu manifolds $\overline{M}$ to have Kenmotsu structure. Further an inequality is obtained between the sectional curvatures of M and $\overline{M}$. Later, we show that if there exists an almost Hermite hypersurface M of Kenmotsu manifold, then it is Kahlerian.

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