CONTENTS WITH ABSTRACT

N. Faried and A. A. Bakery

On $k$-nearly uniformly convex property in Nakano difference sequence space 407-417

Abstract: The main purpose of this paper is to show that the sequence space $\ell_\Delta(p_n)$ studied in [9], where $(p_n)$ is a bounded sequence of positive real numbers is $k$-nearly uniformly convex $(k-NUC)$ for $k \geq 2$ when $\liminf_{n \to \infty} p_n > 1$. Therefore it is fully $k$-rotund $(kR)$, $NUC$ and has a drop property.

Arif Rafiq

A new implicit iteration process for three strongly pseudocontractive mappings 419-428

Abstract: The purpose of this paper is to establish a strong convergence of an implicit iteration process to a common fixed point for three continuous strongly pseudocontractive mappings. The results presented in this paper extend and improve the corresponding results of [14-15, 20].

A. T. Oladipo and O. Fagbemiro

Certain classes of univalent functions with negative coefficients 429-458
Abstract: In this paper, the authors introduce and study the classes $S_{s,n}(\omega)T(\omega, \alpha, \beta)$, $S_{sc,n}(\omega)T(\omega, \alpha, \beta)$ and $S_{c,n}(\omega)T(\omega, \alpha, \beta)$ consisting of analytic functions with negative coefficients defined by using Sălăgean derivative operator. These classes are respectively, $n$-starlike with respect to symmetric points, $n$-starlike with respect to conjugate points and $n$-starlike with respect to symmetric conjugate points. Properties such as coefficient estimates, distortion theorem, extreme points, Radius theorem, and the consequences of the parametrics involved are discussed.

S. N. Mukhopadhyay and S. Ray

Generalized absolutely $k^{th}$ continuous function 459-466

Abstract: A monotonicity Theorem for $AC_kG$ function is given by using higher order approximate derivative

M. K. Aouf, R. M. El-Ashwah, A. A. M. Hassan and A. H. Hassan

Generalization of multivalent functions with negative coefficients defined by using a differential operator 467-494

Abstract: In this paper, we introduce the generalized class $S_{p}^{q}(p, q, \alpha; A, B)$ of analytic and $p$-valent functions with negative coefficients defined by the operator $D_{p}^{q}f^{(q)}(z)$. We give some properties of functions in this class and obtain numerous sharp results including (for example) coefficient estimates, distortion theorem, radii of starlikeness, convexity, close-to-convexity and modified-Hadamard products of functions belonging to this class. Finally, several applications involving an integral operator and certain fractional calculus operators are also considered.
M. S. Mahadeva Naika, S. Chandankumar and K. Sushan Bairy

ON SOME PARAMETER INVOLVING RAMANUJAN’S CUBIC CONTINUED FRACTION

Abstract: In this paper, we find several new modular relations connecting $\xi(q^4)$, $\xi(q^5)$, $\xi(q^7)$, $\xi(q^9)$, $\xi(q^{11})$ and $\xi(q^{13})$, where $\xi(q)$ is the parameter associated with Ramanujan’s cubic continued fraction introduced by Mahadeva Naika.

J. John Arul Singh and R. Kala

A NOTE ON DOM-COLOR NUMBER OF A GRAPH

Abstract: The concept of dom-color number of a graph was introduced by Arumugam, Sahul Hamid and Muthukamatchi [1]. The dom-color number $d_{\chi}(G)$ is the maximum number of color classes which are dominating sets of $G$, where the maximum is taken over all $k$-colorings of $G$. In this paper we have characterized a family of graphs with $d_{\chi}(G) = 1$ and also graphs with $\Delta(G) = n - 1$ and $\rho(G) = \beta_0(G)$. We find a relation between dom-color number and fall coloring number. We also show that edge stability number and edge subdivision number are one and the same.

Anitha Thomas

SOME SPECIAL FUNCTIONS AND FRACTIONAL LAPLACE EQUATION

Abstract: A fractional order Laplace equation is obtained from the standard Laplace equation by replacing the integer order partial derivatives by fractional Riesz-Feller derivative and Caputo
derivative. The exact solution (Green function) to the fractional Laplace equation described as a Cauchy problem is obtained by using Laplace and Fourier transforms. Starting from its Fourier-Laplace representation, the exact solution is investigated with respect to its scaling and similarity properties. An exact solution in Mainardi function for the fractional Laplace equation is also derived as a special case. The existence of the Mellin-Barnes integral of the Mittag-Leffler and the Mainardi functions and the series representation of the $H$-function are also obtained.