

CONTENTS WITH ABSTRACT

**B. Srutha Keerthi, B. Adolf Stephen, A. Gangadharan
and S. Sivasubramanian**

SOME NOVEL CLASS OF ANALYTIC FUNCTIONS INVOLVING
GENERALIZED FRACTIONAL CALCULUS OPERATORS 129-138

Abstract: In the present paper, by making use of certain operators of generalized fractional calculus, we introduce a novel class $T_{\lambda}^{\mu, \phi, \eta}(n; \alpha)$ of functions which are analytic and univalent in the open unit disk U . A necessary and sufficient condition for a function to be in the class $T_{\lambda}^{\mu, \phi, \eta}(n; \alpha)$ is obtained. Relevant connections of the results presented here with those obtained in earlier works are pointed out.

Xiangling Zhu

GENERALIZED WEIGHTED COMPOSITION OPERATORS
FROM BLOCH TYPE SPACES TO WEIGHTED BERGMAN
SPACES 139-150

Abstract: The boundedness and compactness of the generalized weighted composition operator from Bloch type spaces to weighted Bergman spaces are discussed.

S. Arumugam and I. Sahul Hamid

Abstract: A simple graphoidal cover of a graph G is a collection ψ of (not necessarily open) paths in G such that every path in ψ has at least two vertices, every vertex of G is an internal vertex of at most one path in ψ , every edge of G is in exactly one path in ψ and any two paths in ψ have at most one vertex in common. The minimum cardinality of a simple graphoidal cover of G is called the simple graphoidal covering number of G and is denoted by $\eta_s(G)$. A simple graphoidal cover ψ of G with $|\psi| = \eta_s$ is called a *minimum simple graphoidal cover* of G . Two minimum simple graphoidal covers ψ_1 and ψ_2 of G are said to be *isomorphic* if there exists an automorphism α of G such that $\psi_2 = \{\alpha(P) : P \in \psi_1\}$. In this paper we characterize trees, unicyclic graphs and complete graphs in which any two minimum simple graphoidal covers are isomorphic.

D. R. Sahu and S. D. Diwan

Abstract: In this paper, we prove a common fixed point theorem for Gregus type mappings in a metric space without using the convexity property. Our result extends the result of Huang and Cho [5].

Niranjan Guha

Abstract: The object of this paper is to study the properties of weakly symmetric and weakly Ricci-symmetric manifold admitting quasi Einstein Ricci tensor.

Kenneth S. Berenhaut^{a,*}, Augustine B. O' Keefe^a

RECURSIVE SEQUENCES OF THE FORM $y_n = a_n y_{n-1} + y_{n-3}$

WITH INTEGER COEFFICIENTS

189-209

Abstract: This paper studies recursive sequences of the form $y_n = a_n y_{n-1} + y_{n-3}$ with positive integral coefficients. Several properties of terms related to the coefficient sequence are determined as well as some coefficients with maximal characteristics.

Santosh Kumar, Elias Munapo and B. C. Jones

AN INTEGER EQUATION CONTROLLED DESCENDING PATH

TO A PROTEAN PURE INTEGER PROGRAM

211-237

Abstract: Integer programming problems can be computationally demanding even for relatively smaller size problems. In this paper, a method is developed to find the descending path to reach the required integer solution for the pure integer-programming (PIP) problem. The path is controlled by an integer equation, derived from the LP relaxation of the given PIP. The computational effort required is compared with some of the existing methods. It is claimed that the method presented in this paper seems to be computationally superior. In addition, the proposed method has many special features unique to it. The method has been extended to find the k^{th} best PIP solution and also to solve a protean PIP problem. The method is still in the developing stages, and much more work has to be done to establish its computational superiority, if any, and various other characteristics of this approach.

**Chandrashekar Adiga, M. S. Mahadeva Naika
and Jung Hun Han**

GENERAL MODULAR TRANSFORMATIONS FOR
THETA-FUNCTIONS

239-251

Abstract: In this paper, we introduce four variable functions $a'(q, \varsigma, z, d)$, $a(q, \varsigma, z, d)$, $b(q, \varsigma, z, \omega, d)$ and $c(q, \varsigma, z, d)$, which are generalizations of the functions due to Hirschhorn et al. [8], Bhargava and Fathima [3]. The Main purpose of this paper is to establish the Laurent series expansions for Cubic, Quintic and Septic theta-functions and some new transformation formulas for our functions which generalizes the recent results of Bhargava and Fathima [3] and Cooper [7].

D. K. Thakkar and Rajiv V. Viradia

STRONGLY FEEBLY COMPACT SPACES

253-262

Abstract: We define strongly feebly compact spaces in this paper. Their characterizations using functions having strongly closed graphs, strongly subclosed graphs have been obtained. It is proved that a Hausdorff space Y is strongly feebly compact if and only if for each first countable space X and for each bijection $g : X \rightarrow Y$ with strongly closed graph is weakly continuous. Further it is proved that a space X is strongly feebly compact if and only if each countable filter base on X is θ -adherent convergent. An example of a feebly compact space which is not strongly feebly compact space is given. Some other characterizations of strongly feebly compact spaces have also been obtained.