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Peng Meijun and Liu Lanzhe

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Peter Danchev

ON A p^α -th POWER FORMULA IN MODULAR GROUP RINGS 259-262

Abstract: Let R be a commutative unital ring of prime characteristic p and G an Abelian group with p -component of torsion G_p . We prove that if G_p is nice in G , then the following formula for the normed p -component $V_p(RG)$ and the idempotent subgroup $Id(RG)$ in the group ring $R(G)$ holds for any ordinal α :

$$[V_p R(G) IdR(G)]^{p^\alpha} = V_p R^{p^\alpha}(G^{p^\alpha}) IdR(G^{p^\alpha}).$$

K. K. Dixit and Vikas Chandra

SOME FAMILIES OF NORMALIZED ANALYTIC FUNCTIONS
WITH NEGATIVE COEFFICIENTS 263-280

Abstract: In the present paper, we introduce and study a certain subclass $T_{m,n}^{\lambda,k}(\alpha, \beta, \gamma)$ of normalized analytic functions with negative coefficients by making use of familiar Salagean derivative operator. Coefficients estimates, inclusion properties associated with modified Hadamard products, class preserving integral operator are obtained for the class $T_{m,n}^{\lambda,k}(\alpha, \beta, \gamma)$. Finally, several applications involving some fractional calculus operators are also considered.

A. A. Shaikh, T. Basu and K. K. Baishya

ON THE EXISTENCE OF LOCALLY ϕ -RECURRENT LP-SASAKIAN
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Abstract: The object of the present paper is to provide the existence of locally ϕ -recurrent LP-Sasakian manifolds with several non-trivial examples.

P. K. Gupta, Jaideep Goyal and Rajesh Kumar

POSTERIOR ANALYSIS OF THE QUEUE CHARACTERISTICS IN
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Abstract: With exponential arrival and service time distributions, the traffic intensity is defined as the ratio of the arrival rate to the service rate. This ratio is also known as availability ratio in reliability theory. The system can be improved if the experimenter has and is able to combine, the prior belief about the system with the experimental data. Pursuing these concepts, the present study deals with the analysis of posterior traffic intensity distribution for a power supply system. Time truncated arrival and service information and prior beliefs about the arrival and service rate of the system have been employed in the analysis.

M. O. Olatinwo, O. O. Owojori and A. P. Akinola

SOME RESULTS ON SEGMENTING KIRK-TYPE ITERATES

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Abstract: In this paper, we introduce Kirk-Mann type and Kirk-Ishikawa type iteration processes for nonexpansive operators in uniformly convex Banach spaces. And strong convergence theorems are established for the new iterations in Banach space. Our results improve, extend and generalize those of [5, 8, 9, 10, 13, 14].

S. Elumalai and B. Baskaran

APPROXIMATION IN LINEAR 2-NORMED SPACES

315-325

Abstract: In this paper we provide some characterization theorems of best approximation in the context of linear 2-normed space $(X, \|\cdot, \cdot\|)$. We also provide some results on the properties of a closed hyperplane in the context of 2-normed space. We have

also extended the Riesz lemma in the context of linear 2-normed space. We also provide some results in unicity and strong unicity of best approximations.

Sunita Deswal and Rajneesh Kumar

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CONTAINING MICROPOLAR FLUID

327-340

Abstract: A problem of wave propagation in a cylindrical cavity filled with micropolar fluid and situated in a micropolar elastic medium of infinite extent is investigated. Frequency equation for surface wave propagation near the surface of the cylindrical bore is obtained, characterizing the dispersive nature of the wave. An earlier problem of Banerji and Sengupta has been deduced as a special case in this problem. The numerical results obtained from a magnesium crystal like material have been illustrated graphically to understand the behaviour of phase velocity versus wave number of the wave. The phase velocity in empty bore is found to be very small as compared to the bore filled with micropolar fluid.

M. J. Rani

ON THE LATTICE OF INTUITIONISTIC FUZZY IDEALS OF
A LATTICE

341-352

Abstract: In this paper the notion of the intuitionistic fuzzy ideal of a lattice is investigated and its properties are studied. The images and pre images of intuitionistic fuzzy ideals under lattice homomorphism are discussed. Also we establish a correspondence between the families of intuitionistic fuzzy ideals of two homomorphic lattices.

Ryûki Matsuda

NOTE ON KRONECKER FUNCTION RINGS OF SEMISTAR
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353-362

Abstract: We give a direct proof for the fact that, for any semistar operation on an integral domain, the Kronecker function ring which was defined by M. Fontana, F. Halter-Koch and K.A. Loper is well-defined. Furthermore, we study results on e.a.b. semistar operations for any semistar operations.

Abhishek Singh and P. K. Banerji

ON WEIERSTRASS TRANSFORM OF TEMPERED BOEHMIANS 363-370

Abstract: Tempered Boehmians are introduced as a natural extension of tempered distribution. In this paper we have attempted for an extension of Weierstrass transform, which is, further studied for the tempered Boehmians.

G. Satheesh Kumar and P. Dheena

ON BI-IDEALS AND GS IDEALS OF SUBTRACTION SEMIGROUPS 371-380

Abstract: In this paper we introduce the notion of bi-ideals and generalized semi ideals in subtraction semigroup. The notion of po-regularity has been defined and characterizations for a subtraction semigroup to be po-regular has been obtained.

Prem Chandra, S. S. Thakur and Ratna Verma

APPROXIMATION OF FUNCTIONS IN L_p -NORM BY BOREL'S
MEANS

381-386

Abstract: In this paper we take up the Borel exponential means to study the degree of approximation of an $f \in \text{Lip}(a, p)$ under L_p -norm. Two theorems are given that improve upon some earlier results due to Holland, Mohapatra and Sahney [4]. One of our theorems provides the Jakson order estimate of the function.

Peter Danchev

A NOTE ON ISOTYPE SUBGROUPS OF S -GROUPS

387-390

Abstract: We show that each isotype weakly fully invariant subgroup of an S -group, which group is a countable extension of this subgroup, is also an S -group. This extends in some aspect a result due to Hill-Megibben (Math. Z., 1985) and somewhat answers a question raised by Warfield (Trans. Amer. Math. Soc., 1975).

B. D. Acharya

ROLE OF COGNITIVE BALANCE IN SOME NOTIONS OF GRAPH LABELINGS:
INFLUENCE OF FRANK HARARY, FRIETZ HEIDER, GUSTAV
KIRCHHOFF AND LEONHARD EULER

391-413

Abstract: A *social network* is viewed as a directed network N which consists of a finite set V of *vertices*, a set E of ordered pairs of distinct vertices called *arcs* each of which is associated with an n -tuple $(a_1, a_2, a_3, \dots, a_n)$ of nonzero real numbers, called its *descriptor*, where, for each $i \in \{1, 2, \dots, n\}$, a_i denotes the *intensity* of a *positive* or a *negative* sentiment expressed by the individual u to an individual v in the corresponding *dyad* $\{u, v\}$ influenced

by the issue X_i of common concern. N is *balanced* (respectively, *cycle-balanced*) if the componentwise product of the n -tuples associated with the arcs in every semicycle (cycle) in N has all positive component values. This is the most recent form of the original definition of balance and cycle-balance given by Frank Harary way back in 1953 [28] following Friez Heider's seminal exposition of the phenomenon of *cognitive balance* in a *triad* (a social system consisting of three human individuals) in 1946 [35]. While the authors of [7] brought to light the point that the concept of balance is anticipated by Gustav Kirchhoff's Voltage Law (KVL) [43], Harary had asked this author whether such a connection of the balance principle could be linked to Leonard Euler's original notion of a connected 'even degree graph', or the famously called 'Eulerian graph'. The main objective of this paper is to exhibit existence of such a link *via* certain labeling schemes on graphs, digraphs and signed digraphs, which are not necessarily finite. Besides other results, a delightful gain in this effort has been a new extension of the notion of graceful graphs to the class of digraphs.
