ON THE MULTIPLICATION OPERATORS ON BANACH SPACES OF ANALYTIC FUNCTIONS

B. Yousefi

Let $\mathcal{E}$ be a Banach space of analytic functions on the open unit disc. Under sufficient conditions we characterize the structure of an operator T in each cases $TM_{\varphi^n} = M_{\varphi^n}T$, $TM_{\varphi^n} = -M_{\varphi^n}T$ and $TM_{\varphi^n} = (-1)^n M_{\varphi^n}T$, where φ is a univalent multiplier of $\mathcal{E}$.

ON CERTAIN TRANSFORMATIONS INVOLVING PARTIAL MOCK-THETA FUNCTIONS

Remy Y. Denis, S.N. Singh, S.P. Singh

In this paper we make use of Bailey's pair to establish certain transformations involving partial Mock-theta functions. These relations involving poly basic hypergeometric functions are of very general nature.

ON PERIODIC SOLUTIONS OF SECOND ORDER FUNCTIONAL DIFFERENTIAL EQUATIONS

S. Mukhigulashvili

The sufficient conditions are established for the existence and uniqueness of an ω-periodic solution of the functional differential equation $u''(t) = f(u)(t)$, where f is a continuous operator acting from the space of continuously differentiable ω-periodic functions to the space of ω-periodic and Lebesgue integrable on $[0, \omega]$ functions.

ISOTOPIC FORM OF C^* DYNAMICAL SYSTEMS

M.R. Molaei, A. Nazari

The main purpose of the present paper is to study Hilbert-Santilli isospaces, and the isotopic form of C^*-algebras by considering the isotopic form of Banach spaces. We also going to study the $\hat{C}^{\hat{*}}-$isodynamical systems, and their relationship to C^*-dynamical systems.

PANORAMA OF PSEUDO-KUMMER FIELDS AND CLASS FIELD THEORY – II

Ahmed Asimi, Aboubakr Lbekkouri

This paper is a continuation of "Panorama of pseudo-Kummer fields and class field theory (I)". Here we tackle some problems in the pseudo-Kummer fields $\mathbb{Q}\left(\sqrt{d}, u^{1/N}\right)$, like solving some norm equations, which a priori require a complete investigation of the break down of prime ideals in these fields, and establish a direct connection between this type of equations and the representation of a number as a sum of two squares in the case where u is an Nth- root of unity.

THE STUDY OF DUAL SERIES EQUATIONS INVOLVING GENERALIZED BATEMAN K-FUNCTIONS

B.M. Singh, J. Rokne, R.S. Dhaliwal

In this paper closed form solution is obtained for the dual series equations involving general Bateman K-functions.

PAIRWISE COINCIDENTALLY COMMUTING MAPPINGS SATISFYING A RATIONAL INEQUALITY

M. Imdad, Javid Ali

A common fixed point theorem for four pairwise coincidentally commuting mappings satisfying a rational inequality is proved without any continuity requirement which generalizes several previously known results due to Imdad-Khan, Jeong-Rhoades, Ahmad-Imdad, Fisher, Kannan, Hardy-Rogers and others. A suitable example is furnished to establish the utility of our result proved herein.

A LYAPUNOV-TYPE EQUATION FOR EXPONENTIAL STABILITY OF EVOLUTION FAMILIES

Constantin Chilărescu, Alin Pogan, Ciprian Preda

We give a characterization for the uniform exponential stability of evolution families, using a Lyapunov type equation in a Hilbert space.

ON EXPLICIT FORMULAE FOR PRIME AND TWIN PRIME NUMBERS

Krassimir T. Atanassov, Mladen V. Vassilev-Missana

New explicit formulae for the n-th prime number, the n-th twin primes, and for $\pi(n)$ and $\pi_2(n)$ are introduced. The authors hope that the present paper is a significant step towards studying and understanding the nature of the prime and twin prime numbers.

COMMUTATIVE HYPER K-IDEALS AND QUASI-COMMUTATIVE HYPER K-ALGEBRAS

L. Torkzadeh, M.M. Zahedi

In this note first we define the notions of commutative hyper K-ideals of types 1,2,3 and 4. Then we obtain some related results. In particular, we find the relationships between these notions and the notion of (weak)hyper K-ideal. After that we define the notion of quasi-commutative hyper K-algebra and give some properties of this hyper K-algebra, in particular we discuss about the commutative hyper K-ideals of this hyper K-algebra. Finally we focus on hyper K-algebras of order 3 and extract some more results about the commutative hyper K-ideals of types 1,2,3 and 4.

DETERMINANTE DI VANDERMONDE E GENERALIZZAZIONI ASSOCIATE ALLE ALGEBRE DI LIE CLASSICHE

Wenchang Chu, Leontina Veliana Di Claudio

Variants of the Vandermonde determinant associated with the root systems of classical Lie algebras are revisited and generalized by means of combinatorial computation and the Laplace expansion formula.

Riassunto. Varianti del determinante di Vandermonde, associate ai sistemi di radici delle algebre di Lie classiche, sono revisionate e generalizzate tramite il calcolo combinatorio e la formula di Laplace.

PSEUDOMETRIC EXTENSIONS OF THE WU EQUIVALENCE RESULT

Mihai Turinici

The logical equivalence between the conditions in Takahashi [10] and Hamel [5] established by Wu [14] is deductible in a simplified manner and a (larger) pseudometric setting.

ON A CLASS OF p-GROUPS AND ITS CAYLEY GRAPHS

Mehdi Alaeiyan, Ali Reza Ashrafi

In [6], Jamali introduced a non-abelian n-generator 2-group $G_n(m)$, $m \geq 2$ and $n \geq 3$, of order 2^{2n+m-2} with exponent 2^m whose automorphism group is isomorphic to $Z_n^{n^2} \times Z_{2^{m-2}}$. In this paper, using a similar presentation for a $p-$group $G_n(m,p)$, we extend some of results of the mentioned paper to odd prime p. Also, we investigate the structure of some Cayley graphs associated to a generating set of this group.

ON FUZZY HYPER R-SUBGROUPS OF HYPERNEAR-RINGS

K.H. Kim, B. Davvaz, E.H. Roh

In this paper, we define the notions of fuzzy hyper R-subgroup, anti fuzzy hyper R-subgroup of hypernear-ring and investigate some properties of fuzzy hyper R-subgroups with respect to the level subsets, the strong level subsets and the fundamental equivalence relations. Also, using fuzzy hyper R-subgroups, we construct a uniform structure on a hypernear-ring R, which gives a topology on R.

$\star-$HOMEOMORPHISM

D. Sivaraj, V. Renuka Devi

We prove that every homeomorphism is a $\star-$homeomorphism and $\star-$homeomorphisms are nothing but pointwise $\mathcal{I}-$continuous and pointwise $\mathcal{I}-$open bijections. Also, characterizations and properties of pointwise $\mathcal{I}-$continuous functions as well as pointwise $\mathcal{I}-$open functions are given.

CAFIERO AND NIKODYM BOUNDEDNESS THEOREMS IN EFFECT ALGEBRAS

Anna Avallone

We prove a Cafiero type theorem for measures on effect algebras and a Nikodym boundedness theorem for modular measures on lattice ordered effect algebras.

UPPER ORDER HYPERGROUPS AS A REFLECTIVE SUBCATEGORY OF SUBQUASI-ORDER HYPERGROUPS

Šárka Hošková

In the contribution the category of subquasi-order hypergroups ($\mathbb{SQOHG}$) and their morphisms is introduced. This concept is the generalization of quasi-order hypergroups introduced by Chvalina in [2]. The result of the paper [13], concerning reflective subcategories, is enlarged on the category $\mathbb{SQOHG}$.

LES HYPERGROUPES D'ORDRE 3

R. Bayon, N. Lygeros

Dans cet article, nous présentons tout d'abord des résultats qui mettent en relation les posets et les P-hypergroupes de Vougiouklis via la notion fondamentale de groupe d'automorphismes. Ensuite nous exploitons cette dernière et des propositions sur la nature des hypergroupes de Marty afin de partitionner, énumérer et classifier les hypergroupes d'ordre 3 qui représentent 3999 entités deux à deux non isomorphes.

A PROBABILISTIC MODEL FOR THE MULTIPLICATIVE THEORY OF NUMBERS
Petru Minuţ

In this paper, we intend to construct a probabilistic model for the multiplicative number theory.

Let Ω be the set of all sequences of natural numbers and $\mathcal{C}$ be a subset of Ω, containing all the sequences of natural number, having a finite (eventually, none) number of non–zero terms.

LOCALLY UNIFORM ROTUNDITY IN METRIC LINEAR SPACES
Narin Petrot, Suthep Suantai

A new notion of locally uniform rotundity (**LUR**) in a metric linear space, which is a generalization of uniform rotundity introduced in [1] is defined and studied. The main purpose of this paper is to show that in a metric linear space, uniform rotundity implies locally uniform rotundity and locally uniform rotundity implies property (**H**) and we also give some examples showing that the converse of above implications are not true.