Qilin Yang

ON THE COHOMOLOGY STRUCTURE OF NON-COMPACT 1-CONVEX KÄHLER MANIFOLDS

Abstract: For a compact Kähler manifold, the de Rham cohomology and the Dolbeault cohomology are related via the Hodge decomposition theorem. In this paper we use the Leray and Frölicher spectral sequences to study the cohomology structure of the non-compact 1-convex Kähler manifolds by purely algebraic method. We prove that for a 1-convex manifold, if the fibre dimensions of its Remmert reduction are less than $k$, then the associated Frölicher spectral sequence degenerates at $E_{k+2}$. As a corollary we calculate the de Rham cohomology of a Stein manifold in a very simple way, and conclude that the Hodge decomposition theorem is not true for a non-compact 1-convex Kähler manifold which even have plenty of holomorphic functions.

W. T. Sulaiman

GENERAL EXTENSIONS FOR ABSOLUTE SUMMABILITY

Abstract: New general results concerning absolute summability of an infinite series are presented. other special cases are also deduced.
K. Das

MHD peristaltic pumping of a Johnson-Segalman fluid in an inclined asymmetric porous channel

Abstract: This paper looks at the influence of magnetic field on the peristaltic flow of a Johnson-Segalman fluid in an inclined asymmetric porous channel under the supposition of long wave length. The asymmetry is produced by choosing the peristaltic wave train on the walls to have different amplitudes and phase. Both analytical and numerical solutions are presented. The analysis for the analytical solution is carried out for small Weissenberg number. The closed form solutions have been obtained for the stream function, axial velocity and the longitudinal pressure gradient. Numerical calculations are carried out for the pressure rise. The features of the flow characteristics are analyzed by plotting graphs for different values of emerging parameters and discussed in detail.

M. K. Aouf, A. Shamandy, A. O. Mostafa and E. A. Adwan

Subordination theorem of analytic functions defined by Dziok-Srivastava operator

Abstract: In this paper, we derive several interesting subordination results of analytic functions defined by Dziok-Srivastava operator.

P. N. Natarajan

Some properties of regular Nörlund methods in non-Archimedean fields

243-269

271-285

287-299
Abstract: Throughout the present paper, $K$ denotes a complete, non-trivially valued, non-archimedean field. The entries of sequences, series and infinite matrices are in $K$. In the present paper, we prove some nice properties of regular Nörlund methods in $K$.

H. W. Gould and Jocelyn Quaintance

A one parameter generalization of Bell’s sum 301-329

Abstract: In 1930, E. T. Bell discovered the identity
\[
\sum_{k=0}^{2n} (-1)^k \binom{2n}{k} \binom{2n+k}{k} \binom{2k}{k} 2^{4n-2k} = \binom{2n}{n}^2.
\]
A simple generalization of Bell’s identity occurs by inserting an integer parameter $m$ into the factor $\binom{2n+k}{k}$, namely let $\binom{2n+k}{k}$ become $\binom{2n+k+m}{k}$. Such a sum is called a one parameter Bell sum. This paper utilizes three different combinatorial techniques to calculate closed forms for the family of one parameter Bell sums.

M. D. Guay and S. A. Naimpally

Continuity in convexity topological spaces 331-337

Abstract: Recent results of S. A. Naimpally contained in his paper “When is a Function Continuous?” are generalized to convexity-preserving functionals defined on a convexity topological space.

Luiz Antonio Pereira Gomez and Eduardo Brandani Da Silva

Vector-valued singular integral operators on product Hardy space $H^p$ 339-369
Abstract: For $0 < p < 1$, conditions are established for certain vector singular integral operators be bounded from product Hardy space $H^p(\mathbb{R} \times \mathbb{R})$ to $L^p(\mathbb{R}^2)$. The operators in question are similar to some bounded operators on $L^p = L^{p_1}(L^{p_2})$ spaces, with mixed norm of Benedek-Panzone, which are known in the literature. An application of the main result is also given.

Absos Ali Shaikh and Shyamal Kumar Hui

On decomposable weakly pseudo quasi-conformally symmetric manifolds

Abstract: The object of the present paper is to study decomposable weakly pseudo quasi-conformally symmetric manifolds with an interesting example.

George A. Anastassiou

Multivariate radial mixed Caputo fractional Ostrowski inequalities

Abstract: Very general multivariate radial mixed Caputo fractional Ostrowski inequalities are presented. One of them is proved sharp and attained. Estimates are with respect to $\| \cdot \|_p$, $1 \leq p \leq \infty$.  