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P.N. Natarajan

ON TRANSLATIVITY OF WEIGHTED MEANS IN NON-ARCHIMEDEAN FIELDS

123-130

Abstract: In this paper, K denotes a complete, non-trivially valued, non-archimedean field. sequences and infinite matrices have entries in K . The main purpose of this paper is to prove a few theorems on the translativity of the weighted means or (\overline{N}, p_n) methods in K .

Erdal Ekici

ON γ -US SPACES

131-138

Abstract: In this paper, we introduce and study γ -US topological spaces. Also, γ -convergency, sequentially γ -compact sets, sequentially γ -continuous functions, sequentially nearly γ -continuous functions, sequentially γ -compact preserving functions and sequentially sub- γ -continuous function have been introduced.

I. Franjić, J. Pečarić and A. Vukelić

GENERAL EULER-SIMPSON FORMULAE

139-157

Abstract: We consider general simpson formulae, using some Euler-type identities. A number of inequalities, for functions whose derivatives are either functions of bounded variation or Lipschitzian functions or R -integrable functions, are proved.

A. Frazer Jarvis, Peter J. Larcombe and David R. French

ON SMALL PRIME DIVISIBILITY OF THE CATALAN-LARCOMBE-FRENCH

SEQUENCE

159-181

Abstract: We present some divisibility properties of the general term of the Catalan-Larcombe-French sequence by small primes, recovering its known 2-adic valuation. new explicit results for divisibility by 3, 5, 7 and 11 are also developed, and the work generalised. numerical computations lead to some other divisibility criteria and a number theoretic link with the franel numbers.

H.W. Gould

CLASSES OF ITERATED BINOMIAL TRANSFORMS

183-203

Abstract: We define and explore several classes of binomial transforms and their iterations. standard binomial transform:

$$F(n) = \sum_{k=0}^n \binom{n}{k} f(k), \quad n \geq 0. \quad (1)$$

The r -th iteration of this is given by

$$f^r(n) = \sum_{k=0}^n \binom{n}{k} r^{n-k} f(k). \quad (2)$$

Dual binomial transform:

$$G(n) = \sum_{k=n}^{\infty} \binom{k}{n} f(k), \quad n \geq 0. \quad (3)$$

Even index binomial transform:

$$H(n) = \sum_{k=0}^n \binom{2n}{2k} f(k), \quad n \geq 0. \quad (4)$$

General iteration of (4):

$$H^{(r)} = f(n) + \sum_{k=0}^{n-1} \binom{2n-2k}{k} f(k) \frac{1}{2^{r-1}} \sum_{j=0}^{\lfloor \frac{r-1}{2} \rfloor} \binom{r}{j} (r-2j)^{2n-2k}, \quad (5)$$

Modulo s binomial transform:

$$H(n, s) = \sum_{k=0}^n \binom{sn}{sk} f(k), \quad (6)$$

First iteration of $H(n, s)$:

$$H^{(2)}(n, s) = \sum_{k=0}^n \binom{sn}{sk} f(n-k) \frac{1}{s} \sum_{j=1}^s (1 + \omega_s^j)^n. \quad (7)$$

Where ω_s are the s -th roots of unity.

R.K. Deka, M.K. Mazumdar and V.M. Soundalgekar

EFFECT OF FREQUENCY ON THE TRANSIENT FOR STOKES'S OSCILLATING
PLATE-AN EXACT SOLUTION IN KNOWN FUNCTIONS 205-261

Abstract: An exact solution to the transient for Stokes's oscillating plate is derived in terms of time t and the frequency ω , when the plate oscillating as $\sin(\omega t)$ or $\{-\cos(\omega t)\}$. It is observed that the maximum of the transient solution shifts towards the oscillating plate as ω increases and this is more in the case of $\{-\cos(\omega t)\}$ as compared to the case of $\sin(\omega t)$. However, the transient solution which is the difference between the steady-state and starting profile decreases as ω increases showing the existence of steady-state solution. In general, in the presence of frequency the oscillation does not require longer time for transition to decay.

M.L. Mittal, Uday Singh, Vishnu N. Mishra, Shalini Priti and Saurabh Shyam Mittal

APPROXIMATION OF FUNCTIONS (SIGNALS) BELONGING TO $LIP(\xi(t), p)$ -CLASS
BY MEANS OF CONJUGATE FOURIER SERIES USING LINEAR OPERATORS

217-229

Abstract: Mittal and Rhoades ([6]-[9]) have initiated the studies of error estimates $E_n(f)$ through Trigonometric Fourier Approximations (t.f.a.) for the situations in which the summability matrix T does not have monotone rows. In this note, we determine the degree of approximation of function \tilde{f} , conjugate of a periodic function f , belonging to Lip $(\xi(t), p)$ -class by matrix (without monotone rows) operators on a conjugate series of Fourier series associated with f . Our theorem generalizes the results of Lal and Nigam [4] and Qureshi [12, 13].

Sanjib Kumar Datta

ON THE GROWTH OF COMPOSITION OF ENTIRE AND MEROMORPHIC FUNCTIONS

231-248

Abstract: In this paper above we study the growth properties of composite entire and meromorphic functions improving earlier results.

B.K. Lahiri and Kalishankar Tiwari

PERIODIC POINT OF A SET-VALUED MAPPING

249-257

Abstract: We prove two periodic (possibly fixed) point theorems for set-valued mappings in a metric space using the Hausdorff metric.

Baljeet Singh, Jagdish Singh and Ajay Kumar

PROPAGATION OF THERMOELASTIC WAVES AT A SOLID-SOLID INTERFACE

IN PRESENCE OF CRACKS

259-278

Abstract: The reflection and refraction of plane thermal wave at an interface between a generalized thermoelastic solid half-space and a generalized thermoelastic solid half-space in presence of saturated cracks is studied. The boundary conditions at the interface are solved to obtain six nonhomogeneous equations involving reflection and refraction coefficients. These six equations are solved numerically for a

particular model. The reflection and refraction coefficients are plotted against angle of incidence of obliquely incident thermal wave. Various reflected and refracted waves are found affected by the presence of saturated cracks.

Hemant Kumar Nashine

EXISTENCE OF BEST APPROXIMANT FOR GENERALIZED I -NONEXPANSIVE
MAPS IN NON-CONVEX SET 279-288

Abstract: Some results on existence of best approximant in terms of a common fixed point for generalized I -nonexpansive mappings without using the starshapedness condition of domain and affineness condition of mappings in a banach space are established. The present work generalizes the recent result of shahzad [14] and the result of Mukherjee and Som [7]. A property known as Property (Γ) is defined to restore the affineness nature of mappings.

S. Bhargava*, Chandrashekar Adiga* and N. Anitha

ON A CLASS OF N -PARITY PARTITIONS 289-293

Abstract: In this paper, we introduce the notion of n -parity partitions and obtain the generating function for a certain class of such partitions. we will thus be able to relate such partitions to certain compositions.

U. C. De, Y. H. Kim and Absos Ali Shaikh

CONTACT METRIC MANIFOLDS WITH ξ BELONGING TO THE (k, μ) -NULLITY
DISTRIBUTION 295-304

Abstract: This paper presents a study of contact metric manifolds with characteristic vector field ξ belonging to the (k, μ) -nullity satisfying $R(X, \xi) C = 0$, where $R(X, Y)$ is considered as a derivation of

the tensor algebra at each point of the manifold for tangent vectors X, Y and C is the Weyl conformal curvature tensor of type $(1,3)$.
