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V. M. Soundalgekar, U. N. Das and R. K. Deka

FREE CONVECTION EFFECTS ON MHD FLOW PAST AN INFINITE
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Abstract: The free convection flow of a viscous incompressible fluid past an infinite vertical oscillating plate with constant heat flux and in the presence of a transverse magnetic field has been discussed under the assumption of small magnetic Reynold's number. An exact solution to the governing equations has been obtained by the Laplace transform technique. The effects of M , the magnetic field parameter; ω the frequency of oscillations; Pr , the Prandtl number; G , the Grashof number; and ωt , the phase angle on velocity and temperature fields are shown graphically and discussed. The variation of the skin friction for different values of the parameters is also shown in a table.

U. C. DE and S. C. Biswas

ON AN EINSTEIN PROJECTIVE RECURRENT MANIFOLD

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Abstract: Let B_r be the closed ball of center at 0 and radius $r > 0$ in a reflexive separable Banach space X , and $f : B_r \rightarrow X$ a continuous mapping in the weak topology of X . Here we introduce the following boundary condition: there exists $p > 1$ such that

$$\|x - fx\|^p \geq \|fx\|^p - \|x\|^p$$

for all $x \in \partial B_r$. This paper contains several fixed point theorems under the above boundary condition, which is a generalization of Altman-Shinbrot condition.

Ashok Ganguly and Kamal Wadhwa

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Z. Govindarajulu

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Abstract: Two-stage sequential procedures are obtained for the problem of setting fixed-width confidence intervals for the normal variance. Unlike the existing two-stage methods, the current method utilizes the first stage data also in the final estimate of the variance. Further, the two stage procedure is compared with the sequential procedure in terms of expected sample sizes.

Zeqing Liu

DENSIFYING MAPPINGS AND COMMON FIXED POINTS

235-240

Abstract: Equivalent conditions are given for the existence of common fixed points of two self mappings on bounded complete metric spaces. Some common fixed point theorems for densifying self mappings on complete metric spaces are established which extend results given by Sharma and Srivastava [6], Rao [7], Iséki [8], Ray and Fisher [9].

K. S. Padmanabhan

ON CERTAIN SUBCLASSES OF BAZILEVIČ FUNCTIONS

241-260

Abstract: If $f(z) = ((\alpha + i\beta) \int_0^z p(\zeta)g^\alpha(\zeta)\zeta^{i\beta-1}d\zeta) \frac{1}{\alpha+i\beta}$, $|z| < 1$ where g is starlike, $\text{Re } p > 0$ and $\alpha, \beta \in \mathbf{R}$ with $\alpha > 0$, f is a Bazilevič function. The subclasses that arise by the choice of g as a starlike function associated with a parabolic region are investigated.

Jukka Pihko

COMPUTATIONAL COMMENTS ON A PAPER OF VAIDYA

261-265

Abstract: We define and using the computer, calculate some “Gupta numbers”. These are connected with the n first prime numbers, arising from a variation of Euclid’s proof of the infinitude of primes by Hansraj Gupta.

V. Narasimha Charyulu

MAGNETO HYDRO FLOW THROUGH A STRAIGHT POROUS TUBE OF AN
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267-274

Abstract: The MHD steady flow of a viscous in-compressible, slightly conducting fluid through an infinite long straight porous tube of an arbitrary cross-section in the presence of a constant pressure gradient, under the influence of a uniform transverse magnetic field has been studied. A numerical difference scheme is employed. The equilateral cross-section situation is dealt as an application. An appropriate numerical solution of velocity is obtained. The effect of the permeability of the porous medium together with the magnetic parameter on the flow of the fluid is examined at length.

Janusz Matkowski and Shyam Lal Singh

ROUND-OFF STABILITY OF FUNCTIONAL ITERATIONS ON
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275-286

Abstract: The main purpose of this paper is to obtain certain results concerning the stability of Picard type sequence of iterates of a system of operators on a product space. Stability theorems of Ostrowski, Harder-Hicks and Singh et al. are obtained

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Bhagwat Prasad

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Abstract: In this paper W_2 -curvature tensor on Kenmotsu manifold have been studied.

Burbuqe Pepo

PROPERTIES OF GENERALIZED CANTOR SETS

293-305

Abstract: In an arbitrary b -enumeration system (b is the base), we define the generalized Cantor sets, $A_{i,j}$, then establish for $m + n \geq b - 1$, the equality

$$T_{m,n}(A_{i,j}) = \left[\frac{mi - nj}{b - 1}, \frac{mj - nj}{b - 1} \right]$$

where $m, n \in N$ and

$$T_{m,n}(A_{i,j}) = \underbrace{A_{i,j} + A_{i,j} + \cdots + A_{i,j}}_{m \text{ times}} - \underbrace{A_{i,j} - A_{i,j} - \cdots - A_{i,j}}_{n \text{ times}}.$$

This provides many sets of measure zero for which the sum or difference set is an interval.

An algorithm showing how to obtain the representation of an arbitrary number $x \in T_{m,n}(A_{i,j})$ as

$$\sum_1^m x_k - \sum_1^n y_k,$$

where $x_k, y_k \in A_{i,j}$ are also given.
