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Jin-Lin Liu

ON APPLICATION OF CERTAIN INTEGRAL OPERATOR 1-6

Abstract: The object of the present paper is to give an application of certain integral operator Q_β^α introduced and studied recently by Jung, Kim and Srivastava [*J. Math. Anal. Appl.*, **176**(1993), 138-147].

Shanli Ye

AN INTEGRAL OPERATOR FROM BMOA SPACE TO LOGARITHMIC
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Abstract: In this paper we study the Volterra type operator $T_g(f)(z) = \int_0^z f(t)g'(t)dt$ between the logarithmic Bloch space β_l and the *BMOA* space on the unit disk. Some necessary and sufficient conditions are given for which T_g is a bounded operator or a compact operator from *BMOA* to β_l .

A. R. Khan and A. A. Domlo

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Abstract: We prove some coincidence and common fixed point theorems for nonself maps (not necessarily continuous) satisfying

different contractive conditions on an arbitrary nonempty subset of a metric space. As applications, we demonstrate the existence of : (i) common fixed points of the maps from the set of best approximations, (ii) solutions to nonlinear eigenvalue problems. Our work sets analogues, unifies and improves the earlier results of a number of authors.

Carlos Carpintero, Ennis Rosas and Jose Sanabria

A TYCHONOFF THEOREM FOR α -COMPACTNESS AND SOME APPLICATIONS

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Abstract: In this article, we have introduced a new class of associated operators on the product topology on which each factor of the product space has an associated operator to the respective topology and we will prove an analogue to the Tychonoff theorem for α -compactness. Moreover, we investigate the relationship between the new operators on the product topology and the operators associated to each factor, and we study some classes of functions and their connections with the notions mentioned.

Sadek Hossain Mallik and M. Kanoria

A TWO DIMENSIONAL PROBLEM IN GENERALIZED THERMOELASTICITY FOR A ROTATING ORTHOTROPIC INFINITE MEDIUM WITH HEAT SOURCES

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Abstract: This paper deals with a two dimensional problem of thermoelastic wave propagation in a rotating orthotropic medium in the presence of instantaneous heat sources in the context of generalized thermoelasticity. The basic equations for this problem are expressed in the form of a vector matrix differential equation in Laplace-Fourier transform domain which is then solved by eigenvalue approach. The inversions of solutions in transform domains

have been done numerically by using MATLAB programming language and presented graphically for cobalt material. A comparison of the results for thermoelasticity with thermal relaxation (LS Model) and thermoelasticity without energy dissipation (GN model type II) has been presented.

S. N. Mukhopadhyay and S. Ray

CONVEXITY CONDITIONS FOR APPROXIMATE SYMMETRIC
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Abstract: It is proved that if a function f has n -th order approximate de la Vallee Poussin derivative $D_a^n f$ in (a, b) and if $f, D_a^n f, D_a^{n-2} f, \dots$ are Darboux and Baire*-1 in (a, b) and if the upper derivate $\bar{D}_a^{n+2} f$ is nonnegative in (a, b) then f is $(n+2)$ convex, or equivalently, the ordinary n -th derivative $f^{(n)}$ exists and is convex in (a, b) .

P. Chandrakala and S. Antony Raj

RADIATIVE HEAT TRANSFER OF A VISCOUS INCOMPRESSIBLE
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Abstract: Numerical technique is employed to derive a solution to the transient natural convection flow of an incompressible viscous fluid past an impulsively started semi-infinite vertical plate with variable temperature in the presence of magnetic field and thermal radiation. Heat transfer effects are taken into account and the governing equations are solved using implicit finite-difference method. Transient and steady-state velocity and temperature profiles, the local as well as average skin friction and the Nusselt number are shown graphically. The effects of heat transfer for different parameters like magnetic field parameter, radiation parameter,

Prandtl number and thermal Grashof number are studied. It is observed that the number of steps for convergence to steady state depends strongly on Gr .

Baljeet Singh and Rajneesh Kumar

WAVE REFLECTION AT AN INTERFACE BETWEEN A CRACKED
ELASTIC SOLID AND A MICROPOLAR ELASTIC SOLID

111-127

Abstract: Reflection and transmission of plane waves is considered at an interface between two dissimilar elastic solid half-spaces. Upper half-space in which incidence takes place is assumed to be containing micro-cracks, whereas the lower half-space is assumed to be micropolar elastic solid half-space. Numerical analysis is presented graphically for incidence of P- and SV- waves. Effects of crack density are shown on amplitude ratios of reflected and transmitted waves for incident P wave. These amplitude ratios are also studied numerically in the presence of cracks and their saturation for incident SV wave.