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S. C. Arora and Ruchika Batra

ON GENERALIZED SLANT TOEPLITZ OPERATORS 121-134

Abstract: For an integer $k \geq 2$, a slant Toeplitz operator $U\varphi$ of k^{th} -order, with symbol φ in $L^\infty(\mathbf{T})$ is an operator on $L^2(\mathbf{T})$ whose representing matrix $\mathbf{M} = (\alpha_{ij})$ is given by $\alpha_{ij} = \langle \varphi, z^{ki-j} \rangle$, where $\langle \cdot, \cdot \rangle$ is the usual inner product in the space $L^2(\mathbf{T})$. Some properties like compactness, hyponormality and isometry of k^{th} -order slant Toeplitz operators and their compressions are discussed. It is also proved that the adjoint of k^{th} -order slant Toeplitz operator is not a k^{th} -order slant Toeplitz operator.

P. Dheena and P. Nandakumar

ON REGULAR SEMIRINGS 135-140

Abstract: In this paper we introduce 1-(2-) regular semirings. Equivalent conditions are obtained for a semiring to be 1-(2-) regular. We have shown that if R is a nilpotent-free semiring then R is 2-regular iff R is strongly regular.

Ming-Liang Fang and Indrajit Lahiri

UNIQUE RANGE SET FOR CERTAIN MEROMORPHIC FUNCTIONS 141-150

Abstract: In this paper, we study the uniqueness of meromorphic functions and prove the following theorem: Let $S = \{z : z^n + az^{n-1} + b = 0\}$, where $n(\geq 7)$ is a positive integer and a, b are two constants such that $z^n + az^{n-1} + b = 0$ has no multiple root. Let f and g be two nonconstant meromorphic functions having no simple pole. If $E(S, f) = E(S, g), E(\infty, f) = E(\infty, g)$ then $f \equiv g$. This result extends some results of Yi and Lahiri.

S. K. Gupta

MULTIPLIERS FROM L^p TO l_q

151-158

Abstract: Let G be a compact abelian group with dual group Γ . We study multipliers from $L^p(G)$ to $l_q(\Gamma)$ and prove some new results.

Rajneesh Kumar, Ranjit Singh and T. K. Chadda

SOME SOURCE PROBLEMS OF MICROPOLAR THEORY OF THERMOELASTIC CONTINUA

159-176

Abstract: Source problem for a half-space in micropolar theory of thermoelasticity have been investigated. The general solution of equilibrium equations is obtained for a half-space subjected to arbitrary heat source. Four particular cases, are considered. For the case of concentrated heat source, the solution is obtained in detail. The variations of normal displacement, normal force stress and tangential couple stress have been shown graphically.

Indrajit Lahiri and Sanjib Kumar Datta

SOME GROWTH PROPERTIES OF COMPOSITE ENTIRE AND
MEROMORPHIC FUNCTIONS

177-193

Abstract: In this paper we study the comparative growth of a composite entire or meromorphic function and a wronskian generated by one of the factors.

Byung-Soo Lee and Bok-Doo Lee

GENERALIZED COMMON FIXED POINT THEOREMS FOR FUZZY MAPPINGS
ON Menger PM -SPACES

195-205

Abstract: More generalized common fixed point theorems for a sequence of fuzzy mappings to the nonexpansive-type case on Menger probabilistic metric spaces, which generalize recent results of Chang et al. [7], are obtained.

Lee Lorch

A PROPERTY OF COMPLETELY [ABSOLUTELY] MONOTONIC AND OTHER
LOGARITHMICALLY CONVEX [CONCAVE] FUNCTIONS

207-210

Abstract: For $f(t)$ a logarithmically convex [concave] function, in an interval I , it is shown that $f(t + \delta)/f(t)$ is non-decreasing [non-increasing] as t increases, for each fixed $\delta > 0$. When I extends to $+\infty$, this ratio is strictly increasing [decreasing] except in those subintervals I_k in which $f(t) = c_k \exp(d_k t)$, where the constants $c_k (> 0)$, d_k can depend on the subinterval. If $f(t)$ is completely [absolutely] monotonic, $t > 0$, then $f(t + \delta)/f(t)$ is strictly increasing [decreasing] for all $t > 0$, unless $f(t) = ce^{dt}$ for all $t > 0$, where $c (\geq 0)$, d are constants. The result for completely monotonic functions has been established by Colm O'Connell in

J. Australian Math. Soc. (Series A) **42** (1987), 143-146, using a different approach.

M. S. N. Murty and B. V. Appa Rao

ON CONDITIONING FOR THREE-POINT BOUNDARY VALUE
PROBLEMS

211-221

Abstract: In this paper we investigate the close relationship between the stability constants and the growth behaviour of the fundamental matrix corresponding to the three point boundary value problems associated with the general first order matrix differential equations involving rectangular matrices.

S. K. Suneja, C. S. Lalitha and Misha G. Govil

GENERALIZED E -CONVEX FUNCTIONS IN NONLINEAR
PROGRAMMING

223-240

Abstract: In this paper E -quasiconvex, E -pseudoconvex and strictly E -pseudoconvex functions are introduced and certain interrelations are studied among these functions. An example is given to contradict the sufficient optimality theorem given by Youness [10]. Different sufficient conditions are obtained for the existence of optimal solutions of a nonlinear programming problem. Weak, strong and strict converse duality results are established by associating a mixed type of dual as introduced by Xu [9] to the primal problem.
