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CONTENTS

Abstract: Weighted Faber polynomials $\{F_n(z;g)\}$ associated with a domain E and a weight function $g(z)$ play a very important role in the study of the asymptotic properties of orthogonal polynomials in the complex domain. Here, we present a new determinant representation of $\{F_n(z;g)\}$ which relates the zeros of $\{F_n(z;g)\}$ to the eigenvalues of a certain matrix and study the location and the asymptonic distribution of the zeros of $\{F_n(z;g)\}$ mainly in dependance on the smoothness of the weight function and the boundary of the domain.

Abstract: It is known that the integrability of a function does not gaurantee the convergence of the corresponding Walsh-Fourier series. An additional condition that implies the convergence can be made by the L^1 modulus of continuity-Dini-Lipschitz condition-, or by requiring that the function belongs to the narrower space, say $L^p[0,1)(1 < p \leq \infty)$. Another possibility is to give a convergence condition with respect to the Walsh-Fourier coefficients. In this paper we formalize such a condition by means of a shifted Sidon type inequality for the Walsh-Dirichlet kernels and by using the concepts of dyadic Hardy space and generalized de la Valleé Poussin means.

Abstract: It is shown that a left reversible semigroups of contractive selfmaps on a compact metric self space (M,d) has a unique fixed point ξ and for any x in M and any t in S and any t in S the iterates $t^n x$ converges ξ.

Abstract: A large-sample two-stage solution is obtained for the problem of setting fixed-width confidence intervals for the normal variance. This method yields a substantial reduction in the second sample size required by other existing methods.

Abstract: In this note, some simple conditions for the boundedness of all solutions of a second-order difference equations on the half-line are given.

Abstract: Bhagwat and subramanian powers of positive operators. Here a simple proof of generalization of these inequalities is given. Converses for some special cases are also established.

Abstract: We obtain a generalized minimax inequality using $H - KKM$ theorem.

Abstract: In this paper, the Knaster-Kuratowski-Mazurkeiwicz technique (KKM technique, in short) is presented. Using the technique a new alternative theorem and a new coincidence theorem are established. The results obtained in the paper unity and generalize the corresponding results in the recent works [2,10,11,15,16].

Abstract: We will investigate the existance, uniqueness and asymptotic behavior of the random solution for the stochastic integral equation

$$x(t;w) = h(r;w) + \int_0^l k(t,s;w) f(s, x(s;w)) ds, \quad t \geq 0.$$

and we give some examples of equations of this form which arise in hereditary mechanics and population growth modeling.

Abstract: In this article, we prove the partial exact controllability of a one dimensional linear thermoelastic system. We use $RHUM$ method which is a variation of HUM method to study the present system.

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