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CONTENTS

Abstract: In this paper we study multipliers for the absolute Euler summability of Fourier series and its conjugate series under local conditions and improve some of the known results. Multipliers have also been obtained for a new type of conjugate series involving a non-local condition.

Abstract: In 2010, Rezapour and Haghi obtained a fixed point theorem about a nonexpansive compact multifunction. We show this result can be generalized various ways by considering some previous results of Park.

Abstract: Let $G = (V, E)$ be a simple connected graph. An ordered subset W of V is said to be a *resolving set* of G if every vertex is uniquely determined by its vector of distances to the vertices in W. The minimum cardinality taken over all resolving sets is called the

resolving number of G and is denoted by $r(G)$. If the induced subgraph $\langle W \rangle$ is a connected subgraph of G, then it is called a *connected resolving set* of G. The minimum cardinality taken over all connected resolving sets is called the *connected resolving number* of G and is denoted by $cr(G)$. These concepts are well studied in the literature [3, 4, 6, 8, 9]. In this paper, we introduce *total resolving number* as the minimum cardinality taken over all resolving sets in which $\langle W \rangle$ has no isolates. It is denoted by $tr(G)$. We determine total resolving number for standard graphs and trees. We also characterize graphs for which $tr(G)$ is 2 and 3 .

Abstract: In this paper we obtain existence and uniqueness of solutions to n-point boundary value problems associated with a system of first order matrix differential equations satisfying the general boundary conditions. This paper generalizes the results of [1] and [10] to n-point boundary value problems and includes them as a particular case when $n = 3$.

Abstract: The subject of this work is to study martingales in a reductive homogeneous space with respect to a symmetric connection. Our basic idea is to view homogenous spaces as principal fiber bundles and, thus, to study martingales on homogeneous space with aid of horizontal martingales on Lie group. Furthermore, using the stochastic logarithm we give a characterization of martingales on homogenous space. To end, we study the martingales in spheres S^n and

$SL(n,\mathbb{R})/SO(n,\mathbb{R})$, $n \geq 2$.

D. Carrasco-Olivera, R. Metzger and C. A. Morales

Abstract: We study the notion of expansivity for both homeomorphisms and measures on 2-metric spaces [8]. At first glance we show that there are infinite compact continuous 2-metric spaces exhibiting expansive homeomorphisms in the 2-metric sense (roughly speaking 2-*metric expansive homeomorphisms*). Next we prove the absence of expansive measures in the 2-metric sense (or 2-*metric expansive measures*) for homeomorphisms of S^k $(k = 1, 2)$ equipped with the standard triangle-area A induced by $\mathbb{R}^{k+1}$. We then conclude that there are no 2-metric expansive homeomorphisms of (S^k, A) for $k = 1, 2$. Finally, it is proved that the set of the set of heteroclinic points for 2-metric expansive homeomorphisms on compact continuous 2-metric spaces is countable. This extends a well-known result by Reddy [19].

D. K. Thomas

Abstract: Let f be analytic in $D = \{z : |z| < 1\}$ with $f(z) = z + \sum_{n=2}^{\infty} a_n z^n$ and suppose that $f \in B_1(\alpha)$, the class of Bazilevič functions satisfying $Re\ \frac{z^{1-\alpha} f'(z)}{f(z)^{1-\alpha}} > 0$, for $0 \leq \alpha \leq 1$. We give the sharp estimate for the second Hankel determinant $H_2(2) = |a_2 a_4 - a_3^2|$, together with sharp estimates for $|\gamma_n|$, where $\log \frac{f(z)}{z} = 2\sum_{n=1}^{\infty} \gamma_n z^n$ when $n = 1, 2$ and 3, and for the initial coefficients of the inverse function f^{-1} of $f \in B_1(\alpha)$.

Hemant Kumar Nashine

Abstract: In this paper, we prove a fixed point theorem for a map which satisfies a more general contractive condition under generalized weakly contractive condition in complete G-metric spaces endowed with partial order. We furnish an example to demonstrate the validity of the result.

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