Indian Journal of Mathematics
Volume 59, No. 1, 2017

CONTENTS

Abstract: Singh, Mishra and Pant [*New fixed point theorems for asymptotically regular multi-valued maps, Nonlinear Anal. 71(2009), no. 7-8, 3299-3304*] extended the work of Proinov [*Fixed point theorems in metric spaces, Nonlinear Anal. 64(2006), 546-557*] for multivalued maps. In this paper, we extend their results for multivalued mappings in the setting of $\mathcal{H}^+$-metric spaces. An example presented herein shows the usefulness of our results.

Abstract: It was known to G. H. Hardy (c.1921) that under the assumption of GRH, if one could obtain the estimate $o(n\ \log^{-2} n)$ for the integral of the representation function over the minor arcs, the Twin Prime conjecture would follow. In this paper we remove the assumption of GRH.

Abstract: In this paper, we compute the Seidel spectra of corona and neighborhood corona of two graphs.

Abstract: In the present paper, we introduce a new subclass of harmonic functions that are orientation preserving and univalent in the open unit disk U and are related to Goodman-Rønning-type uniformly convex functions by using multiplier transformation. Coefficient estimates, distortion bounds, extreme points, convolution condition and convex combination for functions belonging to this class are determined.

Abstract: In this paper, we proposed a new iterative scheme to approximate a common random fixed points for two finite families of generalized asymptotically quasi-nonexpansive random mappings and establish some strong convergence theorems for mentioned scheme and mappings in convex metric spaces. Our results extend and generalize several results from the current existing literature.

Abstract: The purpose of this paper is to extend the Banach contraction principle in the fashion of Kannan and Chatterjea, but replacing the contraction constants with functions as Geraghty [11]. The corresponding inequalities will be controlling with altering distance functions. Also, fixed point results for mappings satisfying some combinations of Kannan and Chatterjea's conditions, as well as, integral conditions are provided.

Abstract: In this article, owing to the concept of C^*-algebra, we define two new classes of contractive mappings and elicit the fixed point theorems of these mappings in C^*-algebra-valued metric spaces. Simultaneously, we notice the existence and uniqueness of fixed points for cyclic contractive mappings in the above said spaces. Also, our results generalize and unify several existing results in the literature. Moreover, we consider an example to illustrate the validity of the derived results. Finally, as an application, we provide the existence and uniqueness of solutions to a type of integral equations.

Abstract: In the present paper, we obtain the characterization of lower order and lower type of analytic functions represented by Laplace-Stieltjes transformations in terms of the rate of decrease of

$E_n(F,\beta)$ where $E_n(F,\beta)$ denotes the error in approximating the function $F(s)$ by exponential polynomial in the half plane $Re(s) \leq \beta < \alpha$. We also obtain the characterization of order, lower order, type and lower type in term of the ratio of consecutive error terms $E_{n-1}(F,\beta)/E_n(F,\beta)$.

****