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**Lj B. Ćirić, Byung Soo Lee and Arif Rafiq**

FASTER NOOR ITERATIONS 429-436

**Abstract:** In this note, by providing an example, we prove that Noor iteration process converges faster than the Mann and Ishikawa iteration processes for Zamfirescu operators.

**M. K. Aouf, A. Shamandy, R. M. El-Ashwah and  
E. E. Ali**

SOME APPLICATIONS OF DIFFERENTIAL SUBORDINATION OF  
MULTIVALENT FUNCTIONS ASSOCIATED WITH THE WRIGHT  
GENERALIZED HYPERGEOMETRIC FUNCTION 437-460

**Abstract:** Making use of the principle of differential subordination, we investigate some inclusion relationships of certain subclasses of multivalent analytic functions associated with the Wright generalized hypergeometric function.

**Ismat Beg, N. Hussain and S. H. Khan**

STRONG CONVERGENCE THEOREMS FOR COMMON FIXED  
POINTS OF BANACH OPERATOR PAIR 461-478

**Abstract:** We obtain results concerning strong convergence of common fixed points of asymptotically  $I$ -nonexpansive map  $T$  for

which  $(T, I)$  is a Banach operator pair in a Banach space with uniformly Gâteaux differentiable norm. Several common fixed point and best approximation results for this newly defined class of maps are proved.

**R. C. Dimri and N. S. Gariya**

COINCIDENCES AND COMMON FIXED POINTS IN INTUITIONISTIC  
FUZZY METRIC SPACES

479-490

**Abstract:** In the present paper, first we prove a coincidence theorem for a family of mappings on an intuitionistic fuzzy metric space. We further establish a common fixed point theorem. Our results generalize and extend some of the well known results in metric and other spaces.

**M. K. Aouf, A. Shamandy, A. O. Mostafa and  
S. M. Madian**

NEIGHBORHOOD PROPERTIES FOR CERTAIN  $p$ -VALENT  
ANALYTIC FUNCTIONS ASSOCIATED WITH COMPLEX ORDER

491-506

**Abstract:** In this paper we introduce and investigate two new subclasses of  $p$ -valent analytic functions of complex order defined by using new differential operator. Also we obtain coefficient estimates and consequent inclusion relationships involving the neighborhoods of the  $p$ -valently analytic functions.

**R. Lavanya**

INSENSITIZING CONTROLS FOR A SEMILINEAR HEAT EQUATION  
WITH LINEAR MEMORY KERNEL STRUCTURE

507-529

**Abstract:** In this paper, we consider a semilinear heat equation with an integral term in a bounded domain  $\Omega$  with partially known initial conditions. The insensitizing problem consists in finding a control function such that some functional of their state is locally insensitive to the perturbations of these initial and boundary data. Their existence is equivalent to the null controllability property for an associated cascade system. The function  $f(p)$  is assumed to be globally Lipschitz-continuous. The proof, involving global Carleman estimates and regularizing properties of the system, relies on the sharp study of those linear problems and appropriate fixed point arguments.

**T. Tamizh Chelvam, Sivagnanam Mutharasu and  
I. Rani**

DOMINATION IN GENERALIZED CIRCULANT GRAPHS

531-541

**Abstract:** A Cayley graph is a graph constructed out of a group and its generating set. In this paper, we define Generalized Circulant graphs and attempt to find dominating sets and independent dominating sets for the same. Actually we find the values of the domination number, independent domination number and total domination number for generalized circulant graphs. Also it is proved that certain generalized circulant graphs are excellent and in some other cases they are two excellent 2-excellent.

**David E. Dobbs**

WHEN DOES A RING EXTENSION OF A GOING-DOWN RING SATISFY  
GOING-DOWN?

543-556

**Abstract:** If  $A$  is a going-down ring that is locally a domain and  $B$  is a commutative unital ring extension of  $A$ , then  $A \subseteq B$  satisfies going-down if and only if the associated reduced ring of  $B$  is

locally torsion-free. The assertion fails if one deletes the hypothesis that  $A$  is locally a domain. If, in addition,  $A$  is a weak Baer ring, the above conditions are equivalent to the associated reduced ring of  $B$  being a torsion-free  $A$ -module. Some characterizations of weak Baer going-down rings are also given.

### J. P. King

TAYLOR SUMMABILITY AND PRESERVING  $x^2$

557-571

**Abstract:** A version of the Taylor summability matrix is used to construct a sequence of positive linear operators  $\{L_n\}$  with the property that

$$\lim_{n \rightarrow \infty} L_n(f)(x) = f(x)$$

for  $f \in C[1, b]$ . The operators then are modified to produce a sequence  $\{L_n^*\}$  with the property that  $L_n^*(e_2) = e_2$  for  $e_2(x) = x^2$ . Finally, some basic properties of this version of the Taylor matrix are presented.

### C. Vetro, D. Gopal and M. Imdad

COMMON FIXED POINT THEOREMS FOR  $(\phi, \psi)$ -WEAK  
CONTRACTIONS IN FUZZY METRIC SPACES

573-590

**Abstract:** Motivated by Rhoades (Nonlinear Anal., 47(2001), 2683-2693), on the lines of Khan et al. (Bull. Aust. Math. Soc., 30(1984), 1-9) employing the idea of altering distances, we extend the notion of  $(\phi, \psi)$ -weak contraction to fuzzy metric spaces and utilize the same to prove common fixed point theorems for four mappings in fuzzy metric spaces.

### Ivor J. Maddox

TAUBERIAN THEOREMS AND THE  $M$ -TRANSFORM

591-598

**Abstract:** It is shown that the traditional Tauberian conditions employed for classical summability methods are ineffective for the recently introduced  $M$ -transform.

**Vinod Kumar, Saurabh Porwal and Poonam Dixit**

A NEW SUBCLASS OF HARMONIC UNIVALENT FUNCTIONS

DEFINED BY FRACTIONAL CALCULUS

599-613

**Abstract:** In this paper, authors introduce a new subclass  $S_{H,\lambda}^*(\alpha, t)$  of  $S_H$  by using fractional calculus. We give univalence criteria and sufficient coefficient conditions for normalized harmonic functions belonging to the class  $S_{H,\lambda}^*(\alpha, t)$ , where  $0 \leq \alpha < 1$ ,  $0 \leq \lambda < 1$  and  $0 \leq t \leq 1$ . These coefficient conditions are also shown to be necessary for subclass  $TS_{H,\lambda}^*(\alpha, t)$  of  $S_{H,\lambda}^*(\alpha, t)$  in which  $h$  has negative and  $g$  has positive coefficients. This leads to extreme points, distortion bounds and radius of convexity. We also discuss a class preserving integral operator and show that the class studied in this paper is closed under convolution and convex combinations.