

CONTENTS WITH ABSTRACT

Fu-Gui Shi

(L, M) -FUZZY METRIC SPACES

231-250

Abstract: In this paper, the notion of (L, M) -fuzzy metric is introduced in (L, M) -fuzzy topology. It is a generalization of George-Veeramani's fuzzy metrics, Kramosil-Michalek's fuzzy metrics, Morsi's fuzzy metrics and Shi's fuzzy metrics. Some characterizations of an (L, M) -fuzzy (pseudo-quasi-)metric are presented. An (L, M) -fuzzy pseudo-quasi-metric induces an (L, M) -fuzzy topology. A T_2 axiom compatible with (L, M) -fuzzy metrics is introduced.

Pasquale Vetro, Akbar Azam and Muhammad Arshad

FIXED POINT RESULTS IN CONE METRIC SPACES FOR
CONTRACTIONS OF ZAMFIRESCU TYPE

251-262

Abstract: We prove a result on points of coincidence and common fixed points in cone metric spaces for two self mappings satisfying a weak generalized contractive condition of Zamfirescu type. We deduce some results on common fixed points for two self mappings satisfying a weak contractive type condition. These results generalize some well-known recent results.

Uday Chand De and Abul Kalam Mondal

ON LP -SASAKIAN MANIFOLDS SATISFYING CERTAIN
CURVATURE CONDITIONS

263-274

Abstract: The object of the present paper is to classify an LP -Sasakian manifold satisfying certain curvature conditions.

**Ömür Deveci, Erdal Karaduman, Colin M. Campbell
and Sait Tas**

k -NACCI SEQUENCES IN MINIMAL NON-ABELIAN p -GROUPS

275-286

Abstract: In this paper, we obtain the periods of k -nacci sequences in minimal non-abelian p -groups and we show that these groups are not k -nacci sequenceable.

Pulak Sahoo

UNIQUENESS THEOREMS OF ENTIRE FUNCTIONS WHOSE
NONLINEAR DIFFERENTIAL POLYNOMIALS HAVE ONE
NONZERO PSEUDO VALUE

287-310

Abstract: In the paper, we prove two uniqueness theorems of entire functions whose nonlinear differential polynomials have one nonzero pseudo value. The results in this paper improve the corresponding ones given by J. F. Chen, X. Y. Zhang, W. C. Lin and S. J. Chen [2] recently.

Abhijit Banerjee and Pranab Bhattacharjee

SOME FURTHER RESULTS CONCERNING A QUESTION OF
GROSS

311-330

Abstract: Using the notion of weighted sharing of sets, we prove some uniqueness theorems of meromorphic functions that share two or three sets. The results in this paper improve some recent

ones of the first author and consequently provide a better answer to the question of Gross than that was given previously.

George A. Anastassiou

TRANSFERS OF REAL APPROXIMATIONS TO VECTORIAL AND
FUZZY SETTING

331-355

Abstract: Here we transfer basic real approximations to corresponding vectorial and fuzzy setting of: Bernstein polynomials, Bernstein-Durrmeyer operators, genuine Bernstein-Durrmeyer operators, Stancu type operators and special Stancu operators. These are convergences to the unit operator with rates. We also present the convergence with rates to zero of the difference of genuine Bernstein-Durrmeyer and special Stancu operators. All approximations involve Jackson type inequalities and moduli of smoothness of various orders. In order to transfer we develop basic and important general results at the vectorial and fuzzy level. Our technique goes from real to vectorial and then to fuzzy setting. Our work is motivated by [3], [1].

M. K. Aouf

APPLICATIONS OF DIFFERENTIAL SUBORDINATION TO CERTAIN
SUBCLASSES OF MEROMORPHICALLY MULTIVALENT FUNCTIONS
ASSOCIATED WITH GENERALIZED HYPERGEOMETRIC FUNCTION 357-380

Abstract: By making use of the principle of differential subordination, we investigate several inclusion relationships and other interesting properties of certain subclasses of meromorphically multivalent functions which are defined by certain linear operator involving the generalized hypergeometric function.

Sayali S. Joshi

SUBCLASSES OF HARMONIC UNIVALENT FUNCTIONS RELATED
WITH UNIFORMLY STARLIKE AND CONVEX FUNCTIONS 381-390

Abstract: Making use of familiar family S_H of all harmonic, univalent and sense-preserving mappings $f = h + \bar{g}$, where h and g are analytic functions in the open unit disk U , two subclasses of S_H denoted by $S_H[k, \lambda, \beta]$ and $K_H[k, \lambda, \beta]$ are introduced and basic properties are established. Further we have proved sufficient conditions for hypergeometric convolution operator $\Omega(f)$ to be in respective classes.

Zuliang Lu and Yanping Chen

ERROR ESTIMATES OF SEMI-DISCRETE MIXED FINITE ELEMENT
METHODS FOR NONLINEAR PARABOLIC OPTIMAL
CONTROL PROBLEMS 391-413

Abstract: The aim of this work is to investigate the semi-discrete mixed finite element discretization of convex optimal control problems governed by nonlinear parabolic partial differential equations. The state and co-state are approximated by the lowest order Raviart-Thomas mixed finite elements spaces and the control is approximated by piecewise constant functions. By applying some error estimates results of standard mixed finite element methods, we derive a priori error estimates of optimal order both for the coupled state and the control approximation.

V. Ganesh

NEW UPPER BOUND FOR THE GROWTH RATE AND A MODIFIED
INSTABILITY REGION FOR THE EXTENDED TAYLOR-GOLDSTEIN
PROBLEM 415-427

Abstract: For the extended Taylor-Goldstein problem of hydrodynamic stability dealing with stability of shear flows of an

inviscid, incompressible but density stratified fluid in sea straits of arbitrary cross section, a new estimate for the growth rate of an arbitrary unstable normal mode is derived. Furthermore, a modified instability region is obtained which reduces and intersects the semielliptical and semicircle instability regions under some conditions.