CONTENTS WITH ABSTRACT

Ahmet Yildiz and Uday Chand De

Abstract: In this study, we classify $(2m+1)$-dimensional trans-Sasakian manifolds of type (α, β) under the condition $\phi(grad\ \alpha) = (2m-1)grad\ \beta$ which satisfy $R \cdot S = 0$, $S \cdot R = 0$, $P \cdot R = 0$ and $P \cdot \bar{C} = 0$, where R is the curvature tensor, P is the Weyl projective curvature tensor and $\bar{C}$ is the concircular curvature tensor.

Vagif S. Guliyev and Yagub Y. Mammadov

Abstract: In this paper we obtain pointwise and integral estimates for Riesz potentials in terms of maximal and fractional maximal functions associated with the Dunkl operator on the real line. On the basis of these results the analogue of Sobolev's theorem, as well as interpolation theorems for the fractional maximal functions and the Riesz potentials associated with the Dunkl operator on the real line is proved.

Jin Liang, Shuai-Bing Luo and D. O'Regan

Abstract: The iterative approximation problem of fixed points are studied for Lipschitzian asymptotically pseudo-contractive mappings and asymptotically nonexpansive mappings in general real Banach space. New convergence theorems on modified Ishikawa iterative sequences for asymptotically pseudo-contractive in real Banach space are obtained.

J. K. Prajapat and R. K. Raina

Abstract: In this paper we use a linear multiplier operator to define a new subclass of analytic and univalent functions in the open unit disk $\mathbb{U}$. For this new function class, we establish a subordination theorem and also deduce some corollaries of this main result.

Indrajit Lahiri and Rupa Pal

Abstract: We prove theorems on the uniqueness of meromorphic functions when non-linear differential polynomials generated by them share 1-points. This improves some recent results of the present authors, Fang-Fang, Lin-Yi, Xu-Yi, M. Chao and Banerjee-Mukherjee.

T. D. Narang and Sumit Chandok

Fixed points and best approximation in metric

spaces   293-303

Abstract: By generalizing a theorem of G. Meinardus [Arch. Rational Mech. Anal. 14(1963), 301-303], B. Brosowski [Mathematica (Cluj) 11(1969), 195-220] proved a result on invariant approximation using fixed point theory. Subsequently, many generalizations of Brosowski's result appeared. This paper also deals with some extensions and generalizations of Brosowski's result by using the notion of contractive jointly continuous family, discussed by W. G. Dotson, Jr. [Proc. Amer. Math. Soc. 38(1973), 155-156] thereby extending and generalizing various known results on the subject. As a consequence, a result ensuring the existence of invariant points for a pair of commuting mappings is also given in the paper.

Zhang Qi-Ye, Fan Lei and Xie Wei-Xian

Adjoint functor theorem for fuzzy posets   305-342

Abstract: In this paper, the adjoint functor theorem (AFT) for L-fuzzy posets previously introduced by the authors [2] is proved, that is, an L-fuzzy monotone mapping between L-fuzzy complete lattices has a right (left) 1-adjoint if and only if it preserves the joins (meets) of all L-fuzzy sets w.r.t. the L-fuzzy partial order. It is also shown that a usual mapping f generates the traditional Zadeh forward powerset operator $f_L^{\rightarrow}$ and the fuzzy forward powerset operators $\widetilde{f}^{\rightarrow}, \widetilde{f}_*^{\rightarrow}, \widetilde{f}^{*\rightarrow}$ defined by the authors [24, 25, 26] via some adjunctions between concrete categories, then by the AFT, they determine the unique right 1-adjoints, which are respectively the traditional Zadeh backward powerset operator $f_L^{\leftarrow}$ and the fuzzy backward powerset operators $\widetilde{f}^{\leftarrow}, \widetilde{f}_*^{\leftarrow}, \widetilde{f}^{*\leftarrow}$.

Abstract: In the present paper, by making use of familiar Salagean derivative operator we introduce and study a certain subclass $T_{m,n}^{\lambda,k}(\alpha, \beta, \gamma)$ of normalized analytic functions with negative coefficients. Coefficients estimates, inclusion properties associated with modified Hadamard products, class preserving integral operator are obtained for the class $T_{m,n}^{\lambda,k}(\alpha, \beta, \gamma)$. Finally, several applications involving some fractional calculus operators are also considered.

Abstract: In this article, we discuss the reflective function of the polynomial differential systems and apply the results to studying the existence of periodic solutions of these systems.

Abstract: Two theorems are presented in this paper. The first theorem is about the non-existence of integer solutions of a cubic diophantine equation. In the second theorem, we show, that the first theorem implies Fermat's Last Theorem (FLT) for exponent 3. So Theorem-1 and Theorem-2 constitute an alternate elementary proof of FLT for $n = 3$.

E. Abu-Sirhan and R. Khalil

Abstract: The problem of simultaneous approximation in function spaces has attracted many researcher recently. Major results on the space of vector valued continuos functions started to appear early nineties. In 2002, results on simultaneous approximation in p-Bochner integrable functions were published. The object of this paper is to study the problem of simultaneous approximation in essentially bounded vector valued functions.

Dae Won Yoon and Joon Hee Park

Abstract: In this article, we study the surface of revolution in a Minkowski 3-space and investigate surfaces of revolution of finite type with constant mean curvature in a Minkowski 3-space.

Sehie Park

Abstract: Recently, C.-M. Chen et al. [5, 7] introduced 2-KKM maps and generalized 2-KKM maps on metric spaces and obtained a KKM type theorem for hyperconvex metric spaces. In the present paper, we show that main results in [5, 7] follow from our G-convex space theory. Consequently, we obtain equivalent formulations of the 2-KKM theorem and unify various concepts and results in [5, 7]. Some additional results are also given in the last section.

M. K. Aouf

ON CERTAIN MULTIVALENT FUNCTIONS WITH NEGATIVE
COEFFICIENTS DEFINED BY USING A DIFFERENTIAL
OPERATOR   433-451

Abstract: In this paper, we introduce the subclass $S_j(n,\, p,\, q,\, \alpha)$ of analytic and p-valent functions with negative coefficients defined by new operator D_p^n. In this paper we give some properties of functions in the class $S_j(n,\, p,\, q,\, \alpha)$ and obtain numerous sharp results including (for example) coefficient estimates, distortion theorem, radii of close-to-convexity, starlikeness and convexity and modified Hadamard products of functions belonging to the class $S_j(n,\, p,\, q,\, \alpha)$. Finally, several applications involving an integral operator and certain fractional calculus operators are also considered.