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CONTENTS WITH ABSTRACT

Abstract: Making use of Dziok-Srivastava operator, we define a new subclass of analytic functions with negative coefficients and obtain coefficient estimates, distortion bounds and the results on integral transform. Further we investigate the results on neighbourhood and partial sums. Some interesting consequences of our result are also stated without proof.

Abstract: In the present paper we obtain a necessary and sufficient condition for a Riemannian space to be a quasi-Einstein space. Next we study decomposable and semi-decomposable quasi-Einstein spaces.

Abstract: Integral means inequalities are obtained for the fractional derivatives of order $p+\lambda \quad (0 \leq \lambda < 1, \quad 0 \leq p \leq n-1, \quad n \geq 2)$ of functions belonging to uniformly convex functions

method. Transient and steady-state velocity and temperature profiles, the local as well as average skin friction and the Nusselt number are shown graphically. The effects of heat transfer for different parameters like magnetic field parameter, radiation parameter, Prandtl number and thermal Grashof number are studied. It is observed that the number of steps for convergence to steady state depends strongly on Gr.

Abstract: Here we present Poincaré type fractional inequalities involving fractional derivatives of Canavati, Riemann-Liouville and Caputo types. The results are general L_p inequalities forward and converse, univariate and multivariate on a spherical shell. We give applications to ODE and PDE. We present also mean Poincaré type fractional inequalities.

Abstract: The geometry of nonholonomic bundle gerbes, provided with nonlinear connection structure, and nonholonomic gerbe modules is elaborated as the theory of Clifford modules on nonholonomic manifolds which positively fail to be spin. We explore an approach to such nonholonomic Dirac operators and derive the related Atiyah–Singer index formulae. There are considered certain applications in modern gravity and geometric mechanics of Clifford–Lagrange/ Finsler gerbes and their realizations as nonholonomic Clifford and Riemann–Cartan modules.

Abstract: The paper is dealt with the study of Einstein manifold admitting Ricci quarter-symmetric metric connection $\overline{\nabla}$ and several interesting results are obtained.

Abstract: In this paper, we study the global asymptotic behavior of the following rational difference equation

$$y_{n+1} = \frac{r + py_n + y_{n-1}}{qy_n + y_{n-1}}, \quad n = 0, 1, 2, \ldots,$$

where the parameters $p, q, r \in (0, \infty)$, and the initial conditions y_{-1}, y_0 are positive real numbers. Our results partly show that local stability of the positive equilibrium of the equation implies global stability, which partly affirms Conjecture 10.5.2 in [M. R. S. Kulenovic and G. Ladas, Dynamics of Second Order Rational Difference Equations, 2002].

Abstract: New fixed point theorems for multivalued maps between Fréchet spaces are presented. We discuss first J maps, then admissible maps and finally permissible maps. In particular we use degree and index theory and a Lefschetz fixed point theorem to obtain applicable fixed point theorems in Fréchet spaces for general classes of maps.

Abstract: A new definition of S-closedness is presented in L-topological spaces when L is a complete DeMorgan algebra. It is defined by means of semiopen L-sets and their inequality. This definition does not rely on the structure of the basis lattice L and no distributivity in L is required. It can also be characterized by semiclosed L-sets, regularly closed L-sets, regularly open L-sets, regularly semiopen L-sets, regularly semiclosed L-sets and their inequalities. When L is a completely distributive DeMorgan algebra, its many characterizations are presented.

Abstract: A property designated as semi-($\mathbb{C}_2$) that a large class of topological spaces including the Moore spaces satisfy, is discovered and in terms of this property the new characterizations of Moore spaces and metrizable spaces are established:
1. A topological space is a Moore space if and only if it is a $w\triangle$ space with the semi-($\mathbb{C}_2$) and the quasi (α_1) properties.
2. A topological space is a Moore space if and only if it is a T_1 quasi-developable β space with the semi-($\mathbb{C}_2$) property.
3. A topological space is a metrizable space if and only if it is a wM (a fortiori, M or countably compact) space with the semi-($\mathbb{C}_2$) and the quasi (α_1) properties.

Abstract: Let X and Y be real or complex Banach spaces with Schauder bases $\{x_n\}$ and $\{y_n\}$, respectively. If $x = \sum_{n\in\mathbf{N}} (x(n))\, x_n$

and $y = \sum_{n\in\mathbf{N}} (y(n))\, y_n$ are such that $x(n)\, y(n) = 0$ for every n; we write $x * y = 0$. An additive map $H : X \to Y$ such that $x * y = 0 \Rightarrow Hx * Hy = 0$ is called a *basis separating map*. By considering this limited form of multiplication-preservation, we utilized some function space-Banach algebra techniques to obtain automatic continuity and open mapping type results in [7] and [8]. Specifically, we developed a canonical form for basis separating maps which under certain circumstances reduces to what we call a *weighted composition* [Definition 3.3]. In order to define a weighted permutation, we need to know, given $h : \mathbf{N} \to \mathbf{N}$, for what nonvanishing sequences (**weights**) $w : \mathbf{N} \to \mathbf{K} = \mathbf{R}$ or $\mathbf{C}$ does $\sum_{n\in\mathbf{N}} w(n)x(h(n))\, y_n$ converges for all $x = \sum_{n\in\mathbf{N}} x(n)\, x_n \in X$? We obtain some general conditions under which w is a weight for maps between ℓ_p spaces (Theorem 4.1), Lorentz spaces (Theorem 5.6), and Orlicz spaces (Theorems 6.7, 6.11 and Corollary 6.12).