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**Abstract:** We present here a stronger version of a theorem of Davis, Dean and Singer regarding projections with finite dimensional range in an infinite dimensional Banach space. Our theorem, which is new, also implies the Complemented Subspaces Theorem. Our proof of the CS Theorem is also new.

**Seema Mehra and Meenakshi Gugnani**

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**Yang Gang and Liu Zhong-Kui**

ON GENERALIZATIONS OF FITTING MODULES	85-99
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**Abstract:** Let  $R$  be a commutative ring. An  $R$ -module  $M$  is called SSH (resp. SSCH) if for any element  $r \in R$  the chain

$Ann_M(r) \subseteq Ann_M(r^2) \subseteq \dots$  (resp.  $Mr \supseteq Mr^2 \supseteq \dots$ ) stabilizes. In the paper we provide some examples to show that the class of SSH (resp. SSCH) modules lies properly between the class of strongly Hopfian (resp. strongly co-Hopfian) and the class of semi Hopfian (resp. strongly co-Hopfian) modules. Also some new characterizations of artinian rings and strongly  $\pi$ -regular rings are given. Finally, an analogue to Hilbert's basis theorem for SSH modules is proved.

### Poom Kumam and Somyot Plubteing

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OF MULTI-VALUED AND SINGLE-VALUED NONEXPANSIVE RANDOM  
OPERATORS IN A SEPARABLE BANACH SPACE 101-115

**Abstract:** Let  $(\Omega, \Sigma)$  be a measurable space with  $\Sigma$  a sigma-algebra of subsets of  $\Omega$ . Let  $C$  be a nonempty closed bounded convex and separable subset of a Banach space  $X$ , which satisfying the DL condition and let  $f : \Omega \times C \rightarrow C, T : \Omega \times C \rightarrow KC(C)$  be a single valued and a multivalued nonexpansive random operators respectively, where  $KC(C)$  is the family of nonempty compact convex subset of  $X$ . Assume that  $f$  and  $T$  are commuting. Then  $T$  and  $f$  have a common random fixed point. Moreover, we also derive a random coincidence points for a pair of multi-valued and single-valued commuting random operators in Banach spaces.

### R. Saravanan and R. Vijayaragavan

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**Abstract:** This paper delineates some fundamental properties of the set of strongly unique best approximation in a linear 2-normed

space.

**Dibyendu Banerjee and Srimanta Jana**

RELATIVE FIX-POINTS OF FACTOR ORDER OF RATIONAL  
ENTIRE FUNCTIONS

127-136

**Abstract:** We introduce the idea of relative fix-points of factor order and using this, we prove that if  $f(z)$  and  $\phi(z)$  are rational entire functions, then  $f(z)$  has relative fix-points of factor order  $n$ , for all values of  $n$  except for at most one value.

**Peter Danchev**

ON THE WARFIELD FUCHS 44 GROUPS

137-143

**Abstract:** We prove that any Warfield Fuchs 44 group is the direct sum of a divisible group, a bounded group and a finitely generated torsion-free group. In particular, each cotorsion Warfield group is a direct sum of a divisible group and a bounded group. This parallels a result due to Rangaswamy (Bull. Soc. Math. France, 1964) who showed that reduced cotorsion  $\Sigma$ -groups are bounded, i.e., cotorsion  $\Sigma$ -groups are the direct sum of a divisible group and a bounded group.

**D. B. Ba and A. S. Dabye**

ON REGULAR PROPERTIES OF THE MDE FOR NON SMOOTH  
MODEL OF POISSON PROCESS

145-162

**Abstract:** We consider the problem of parameter estimation by observations of inhomogeneous Poisson process. We suppose that the unknown parameter is  $2d$  dimensional and the intensity function of the process is smooth w.r.t. the first  $d$  components and

discontinuous w.r.t. the others  $d$  components of this parameter. We show that despite the MLE the MDE is asymptotically normal with the usual  $\sqrt{n}$  rate of convergence.

**S. Kumar and A. K. Singh**

ON HERMITIAN SPACES ADMITTING A ONE PARAMETER  
CONFORMAL TRANSFORMATION GROUP

163-182

**Abstract:** Among all the transformations known till the date, conformal transformation is very peculiar one because of having the nature of preserving the magnitude as well as sense of angle held between any oriented curves lying somewhere in the space. That's why in the geometrically oriented region of the theory of analytic functions, the problems of conformal transformation plays a dominating role. In the present area of study Hiramatu [3]<sup>\*)</sup> has contributed at large by introducing his explanations on integral inequalities in the Riemannian manifolds admitting a one parameter conformal transformation group. Moreover, Yano and Sawaki [7] have exercised on Riemannian manifolds admitting a conformal transformation group and deduced various interesting outcomes. Afterward, Singh and Panwar [1] have studied Kaehlerian spaces admitting a one parameter conformal transformation group and have investigated several theorems.

The present manuscript includes a brief look over the Hermitian spaces admitting a one parameter conformal transformation group along with few definitions on compactness of  $H_n^c$  manifolds, isometry and conformality of Hermitian manifolds. Even, the present study is fully depending on differential geometric aspects, but to make it precise and lucid, some of the Topological phenomenons may be applied. Also, some lemmas and theorems on conformal transformations admitted by  $H_n^c$  manifolds have been discussed

therein.

**K. O. Babalola**

ON A LINEAR COMBINATION OF SOME GEOMETRIC  
EXPRESSIONS

183-192

**Abstract:** Component geometric expressions of a certain linear combination are generalized via some differential operators and the conditions for univalence of the resulting linear combinations investigated. Our result completely unify earlier ones.

**Cuiping Zeng, Chunlin Lei and Degui Yang**

NORMAL FAMILIES AND SHARED VALUES OF MEROMORPHIC  
FUNCTIONS

193-206

**Abstract:** Let  $a (\neq 0)$  be a complex number, and  $k, m$  be two positive integers with  $m > 2k + 3$ , and let  $\mathcal{F}$  be a family of meromorphic functions in a domain  $D$ , all of whose poles have multiplicity at least  $m$ . If, for each  $f \in \mathcal{F}$ ,  $f$  and  $L(f)$  share  $a$ , and  $f' = L'(f) = a$  whenever  $f = a$ , then  $\mathcal{F}$  is normal in  $D$ , where  $L(f)$  is a linear differential polynomial with holomorphic coefficients. This improves the result of Lin and Yang in [5].

**S. L. Singh and Rajendra Pant**

FIXED AND APPROXIMATE FIXED POINT THEOREMS

207-224

**Abstract:** In this paper we obtain coincidence and fixed point theorems for quasi-contractions and generalized contractions on a very general setting. These results are further extended to two multivalued and two single-valued non-continuous maps. Besides discussing special cases with examples, we observe the usefulness

of results on the setting of  $b$ -metric spaces. Since in actual applications in numerical praxis, the concept of approximate fixed point is of vital importance, we have a separate section to obtain some results related to approximate fixed points.