

**BULLETIN OF THE
ALLAHABAD MATHEMATICAL SOCIETY**

Vol. 8-9, 1993-94

CONTENTS

Sukumar Das Adhikari

LATTICE POINTS IN SPHERES 1-13

Asuman Güven Aksoy

s -NUMBERS, MEASURE AND WEAK MEASURE OF NONCOMPACTNESS
AND REAL INTERPOLATION 15-35

Abstract: The basic methods of interpolation theory were constructed to give quantitative results about norms of operators. It was, however, soon discovered that qualitative properties like compactness, degree of compactness, and weak compactness could also be interpolated. In this survey, we have collected and ordered some of this (partly very new) knowledge.

S. S. Dragomir and B. Mond

SOME MAPPINGS ASSOCIATED WITH CEBYSEV'S INEQUALITY FOR
SEQUENCES OF REAL NUMBERS 37-55

M. Irfan

ON PULLBACK AND PUSHOUT DIAGRAMS IN GENERAL AND SUPER
COMMA CATEGORIES 57-62

Abstract: Pullback and pushout diagrams in Comma Category $(T \downarrow A)$ have already been studied [3]. The present paper deals

with the study of pullback and pushout diagrams in the (general) Comma Category $(T \downarrow S)$ and the (Super-comma Category $(Cat \downarrow C)$).

Shouli Jiang

ON A KATUTA-JUNNILA PROBLEM

63-68

Abstract: We consider the Katuta-Junnila problem, namely:

- (1) Is a space metacompact if every directed open cover of the space has a cushioned refinement ?
- (2) Is a space θ -refinable if every directed open cover of the space has a σ -cushioned refinement ?

We summarize some previous efforts towards the solution of these questions and raise some related questions. From section 2, we know that the answer for the first question is yes for the class of orthocompact, preorthocompact, locally compact, σ -orthocompact, and subordinate spaces. From sections 3 we know that the answer for the second question is yes for the class of locally compact, orthocompact, σ -orthocompact, preorthocompact, and point-star orthocompact spaces. We provide some characterization theorems, which should lead to some interesting counterexamples.

B. Ramakrishnan

THEORY OF NEWFORMS

69-89

Abstract: The theory of newforms plays a key role in studying the arithmetical nature of modular forms of integral weight. We will present here an overview of the works of Atkin-Lehner and Li.

V. Soundararajan and A. L. Christina

TABLES OF SUSPENSION SYSTEM WITH REPETITIVE GROUP
SAMPLING (*RGS*) PLAN AS A REFERENCE PLAN 91-110

Abstract: This paper provides tables for selection of suspension system with Repetitive Group Sampling (*RGS*) plan as reference plan.

Laszló Szili

WEIGHTED (0,2)-INTERPOLATION ON THE ROOTS OF THE CLASSICAL
ORTHOGONAL POLYNOMIALS 111-120

Abstract: The aim of this paper is to give a short summary (with additional remarks) of the results with respect to the problem of weighted (0,2)-interpolation. We want to show that this problem can be treated in a unified way on the roots of all classical orthogonal polynomials with respect to its existence, uniqueness and representation.
