Turkish Journal of Mathematics

Maximal Oscillatory Singular Integrals with Kernels in L log L(S^{n-1})

Ahmad AL-SALMAN
Department of Mathematics
Yarmouk University
Irbid-JORDAN
e-mail: alsalman@yu.edu.jo

🔍 Keywords
🔍 Authors

@

Abstract: In this paper, we study the L^p mapping properties of a certain class of maximal oscillatory singular integral operators. We establish the L^p boundedness of our operators provided that their kernels belong to the natural space L log $^+$L(S^{n-1}). Our result substantially improves a previously known result. Moreover, the approach developed in this paper can be applied to handle more general maximal oscillatory singular integral operators.

Key Words: Oscillatory singular integrals, Rough kernels, Maximal functions