

MULTIPLE SINGULAR INTEGRALS ON PRODUCT OF HOMOGENEOUS GROUPS

SHUICHI SATO

Abstract. We consider singular integral operators and maximal singular integral operators with homogeneous kernels on the product space of homogeneous groups and prove the L^p boundedness of them for $p \in (1, \infty)$ under the $L(\log L)^2$ integrability condition of the kernels on the product of unit spheres. Our methods will give different proofs for some previous results, where singular integrals are defined by Euclidean convolution, since our proofs will not use Fourier transform estimates explicitly. My talk is based on a joint work with Yong Ding (Beijing Normal University).

DEPARTMENT OF MATHEMATICS, FACULTY OF EDUCATION, KANAZAWA UNIVERSITY, KANAZAWA 920-1192, JAPAN

E-mail address: shuichi@kenroku.kanazawa-u.ac.jp