BOUNDEDNESS FOR MULTILINEAR COMMUTATORS
OF INTEGRAL OPERATORS IN HARDY AND
HERZ–HARDY SPACES ON HOMOGENEOUS SPACES

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Abstract. In this paper, we shall study the Hardy-boundedness for the multilinear commuta-
tors related to the singular integral operators on the space of homogeneous type. By using the
Hölder’s inequalities and the $L^q(1 < q < \infty)$ boundedness for the singular integral operators on
the space of homogeneous type, we obtain the $(H^p_b, L^p)$ and $(H^{p,q,\alpha}_q, K^{p,q,\alpha}_q)$ type boundedness
for the multilinear commutators on the space of homogeneous type.

Keywords and phrases: Singular integral, multilinear commutator, BMO, Hardy space; Herz-Hardy
space, space of homogeneous type.

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