

## **A $T1$ criterion for Hermite-Calderón-Zygmund operators on the $BMO_H(\mathbb{R}^n)$ space and applications**

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**Abstract.** In this paper we establish a  $T1$  criterion for the boundedness of Hermite-Calderón-Zygmund operators on the  $BMO_H(\mathbb{R}^n)$  space naturally associated to the Hermite operator  $H$ . We apply this criterion in a systematic way to prove the boundedness on  $BMO_H(\mathbb{R}^n)$  of certain harmonic analysis operators related to  $H$  (Riesz transforms, maximal operators, Littlewood-Paley  $g$ -functions and variation operators).

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