

MINIMAX CONFIDENCE BOUND OF THE NORMAL MEAN UNDER AN ASYMMETRIC LOSS FUNCTION

YUSHAN XIAO¹, YOSHIKAZU TAKADA² AND NINGZHONG SHI³

¹*College of Applied Science, Changchun University, Changchun 130022, China and
Institute of Mathematical Science, Jilin University, Changchun 130012, China*

²*Department of Computer Science, Kumamoto University, Kumamoto 860-8555, Japan*

³*Department of Mathematics, Northeast Normal University, Changchun 130024, China*

(Received July 4, 2003; revised March 31, 2004)

Abstract. This paper considers a minimax confidence bound of the normal mean under an asymmetric loss function. A minimax confidence bound is obtained for the case that the variance is known or unknown. The admissibility of the minimax confidence bound is also considered for the case of known variance.

Key words and phrases: Confidence bound, LINEX loss function, normal mean, Bayes risk, minimaxity, admissibility.