

# CORRECTION NOTE

## CORRECTION TO ON THE ASYMPTOTIC THEORY OF FIXED-SIZE SEQUENTIAL CONFIDENCE BOUNDS FOR LINEAR REGRESSION PARAMETERS<sup>1</sup>

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In the above titled article (*Ann. Math. Statist.* **36** 463–467) the following corrections should be made in order to correct formulas and rectify several omissions:

(1) On page 463, the assumption that the  $\epsilon_i$  in Equation (2.1) have 0 means was inadvertently omitted and should be inserted. In the fourth line under Equation (2.1) replace  $1 - \alpha$  by  $\alpha$ .

(2) On page 464 Equation (2.4) should read

$$(2.4) \quad \hat{\sigma}^2(n) = n^{-1} Y_n (I_n - X_n' (X_n X_n')^{-1} X_n) Y_n'$$

(3) Equation (3.6) should read:

$$(3.6) \quad \lim_{n \rightarrow \infty} P\{n(\hat{\beta}(n) - \beta)(\hat{\beta}(n) - \beta)' \leq d^2\} = P\{T(\lambda_1, \dots, \lambda_p) \leq d^2/\sigma^2\}$$

and in the first line of the proof of Corollary 3.3 we should have  $X_n X_n'$  replaced by  $(X_n X_n')^{\frac{1}{2}}$ .

(4) On page 466, line 3, replace  $n^{-1}$  by  $n$ .

(5) On page 467, in Remarks 1 and 2 the references to Equation (4.1) should instead be references to Equation (4.2). In line 1 of the proof of Theorem 4.1, the  $n^{-1}$  before  $\hat{\sigma}^2(n)$  should be deleted.

I am indebted to Professor R. A. Wijsman's review [4] of my paper for pointing out most of these errors and omissions. He also has drawn my attention to the inadequacy of two of my proofs—namely, the proof of (4.4) in Theorem 4.1 and the proof of Theorem 3.4.

As Wijsman points out [4], I have not given a clear indication as to how the results of Anscombe [1] are to be applied to prove (4.4). Rather than give my original proof, I will follow the line of attack suggested by Wijsman [4]. We prove first:

LEMMA 1. Let  $z_1, z_2, \dots$  be i.i.d. with zero means and unit variance. Let  $a_1, a_2, \dots$  be any sequence of numbers such that  $n^{-1} \sum_{i=1}^n a_i^2 \rightarrow 1$  and  $n^{-1} \max_{i \leq n} a_i^2 \rightarrow 0$  as  $n \rightarrow \infty$ . Define  $u_n = n^{-\frac{1}{2}} \sum_{i=1}^n a_i z_i$  and let  $N = N(t)$  be a positive integer—

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