

CORRIGENDUM

Corrigendum to ‘Error-constrained finite-horizon tracking control with incomplete measurements and bounded noises’ [*International Journal of Robust and Nonlinear Control*, 2012; **22**(2): 223–238]

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Received 7 June 2011; Revised 9 October 2011; Accepted 25 October 2011

KEY WORDS: tracking control; time-varying systems; bounded noises

In [1], the main results are obtained on the basis of the implicit assumption that the nonlinear functions $g(k, x(k-\tau))$ in (26) and (27) are dependent on $r_1(k)$ and $r_2(k)$. However, it follows from (23) that the functions $g(k, x(k-\tau))$ should be dependent on $r_1(k-\tau)$ and $r_2(k-\tau)$. Fortunately, the minor errors that occurred in [1] can be readily corrected as follows.

In Theorem 1 and Algorithm 1, all ‘ $(i = 1, 2, \dots, 6)$ ’ and ‘ $(j = 1, 2, 3, 4)$ ’ should be replaced by ‘ $(i = 1, 2, \dots, 7)$ ’ and ‘ $(j = 1, 2, 3, 4, 5)$ ’. Accordingly, in (30), ‘ $\varepsilon_1(k), \varepsilon_2(k), \dots, \varepsilon_6(k)$ ’ and ‘ $\lambda_1(k), \lambda_2(k), \dots, \lambda_4(k)$ ’ should read as ‘ $\varepsilon_1(k), \varepsilon_2(k), \dots, \varepsilon_7(k)$ ’ and ‘ $\lambda_1(k), \lambda_2(k), \dots, \lambda_5(k)$ ’, respectively. Additionally, $-L(k)\Delta_0 M_1(k)$ in $\Omega(k)$ should be corrected to $-L(k)\Delta_0 C(k)M_1(k)$.

In (33), zero matrices with appropriate dimensions should be added between the first and the second sub-blocks in matrices $\Phi_{22}(k-\tau)$ and $\Phi_{42}(k-\tau)$ and should also be added between the second and the third sub-blocks in matrices $\Omega(k)$ and $\Pi(k)$. In (44)–(49) and (56) and (57), zero matrices should be added between the second and the third diagonal elements for all diagonal matrices. Also, $r_1^T(k-\tau)$, $r_2^T(k-\tau)$, $\varepsilon_7(k)I$, $\lambda_5(k)I$, $-\varepsilon_7(k)I$ and $-\lambda_5(k)I$ should be inserted between the second and the third sub-blocks of $\xi_1(k)$ in (36), $\xi_2(k)$ in (37), $\Upsilon(k)$ in (33), $\Gamma(k)$ in (33), the diagonal matrix in (58) and the diagonal matrix in (59), respectively.

There should be additional terms $-\varepsilon_7(k)$, $-E_z(k)\theta(k)$, $-\lambda_5(k)$, $+\varepsilon_7(k)$ and $+\lambda_5(k)$ in the first sub-blocks of $\Upsilon(k)$, $\Pi(k)$, $\Gamma(k)$, the diagonal matrix of (58) and the diagonal matrix of (59), respectively.

In (33), all indices 3 of the zero matrices in the matrices $\Phi_1(k)$ and $\Phi_3(k)$ should be 4, and all indices 2 of the zero matrices in the matrices $\Phi_2(k-\tau)$ and $\Phi_4(k-\tau)$ should be 3.

For the matrices $\Phi_{21}(k)$ and $\Phi_{41}(k)$ in (33), the zero row and zero column with appropriate dimensions should be added between the first and the second rows and between the first and the second columns, respectively. For the matrices $\Phi_{11}(k)$ and $\Phi_{31}(k)$, the zero row and zero column should be added between the second and the third rows and between the second and the third columns, respectively.

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After (47), an extra statement should be added as follows: 'Also, $|r_i(k - \tau)| \leq 1$ ($i = 1, 2$) can be represented as $\xi_1^T(k) \text{diag}\{-1, 0, I, 0, 0, 0, 0, 0\} \xi_1(k) \leq 0$ and $\xi_2^T(k) \text{diag}\{-1, 0, I, 0, 0, 0\} \xi_2(k) \leq 0$ '.

REFERENCES

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