IV. CONCLUSIONS

The equations for calculating the steady-state gains and the elements of the covariance matrix for a fixed-lag alpha-beta smoother were derived and presented. A step-by-step method is given for computing the gains and covariances for an alpha-beta smoother with a fixed lag of N. The performance improvements from the use of fixed-lag smoothing were demonstrated and characterized. The α and β gains decrease as the fixed lag increases for small values of the tracking index Γ. Fixed-lag smoothing significantly reduces position and velocity variance for $\Gamma < 1$. Most of the performance gains in position and velocity can be achieved with a fixed lag of $N = 1$ for $\Gamma \approx 1.5$ and $\Gamma \approx 3$, respectively. For large tracking indices, a performance gain in velocity can be achieved with a large fixed lag.

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IEEE Transactions on Aerospace and Electronic Systems, **36**, 2 (Apr. 2000), 701–709.

Errata: Observability of an Integrated GPS/INS During Maneuvers[1]

The following additions to text should be made.

On page 527: In the first complete paragraph in the right column:
Add, on line 1 DEFINITION 1 *before* System (1) is completely....
Add, on line 4 DEFINITION 2 *before* System (1) is differentially....
Add, on line 6 THEOREM 1 *before* System (1) is completely....
Add, on line 8 THEOREM 2 *before* System (1) is differentially....

In the third complete paragraph in the right column:
Add, on line 1 DEFINITION 3 *before* System (1) is said....

On page 529: In the left column, following line 20 (...always unobservable.)
Insert THEOREM 3 *before* 1) If....

On page 531: At the top of the left column:
Insert THEOREM 4 *before* Assume the....

In the right column, following the end of the second complete paragraph (...becomes observable):
Insert LEMMA 1 *before* Suppose that....

Just before the fourth line from the bottom of the right column:
Insert THEOREM 5 *before* Assume the....

The authors regret the omission of these terms in manuscript and need for this Errata.

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