

Errata:

Unscented Kalman Filtering on Riemannian Manifolds

Søren Hauberg

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This document provides a list of known issues for the paper “*Unscented Kalman Filtering on Riemannian Manifolds*” [1]. Please contact Søren Hauberg in case you find further mistakes.

- Equation 38 of the paper states that

$$\bar{\mathbf{x}}_t = \hat{\mathbf{x}}_t + \mathbf{K} \text{Log}_{\hat{\mathbf{y}}_t}(\mathbf{y}_t). \quad (1)$$

It should be noted this update is performed in the tangent space $T_{\hat{\mathbf{x}}_t} \mathcal{M}$; consequently, $\hat{\mathbf{x}}_t = 0$ and the above equation simplifies to

$$\bar{\mathbf{x}}_t = \mathbf{K} \text{Log}_{\hat{\mathbf{y}}_t}(\mathbf{y}_t). \quad (2)$$

Thanks to Hugo Tadashi and Henrique Menegaz for pointing out this mistake.

References

- [1] Søren Hauberg, François Lauze and Kim S. Pedersen, *Unscented Kalman Filtering on Riemannian Manifolds*, Journal of Mathematical Imaging and Vision 46(1) pp. 103–120, Springer Netherlands, 2013.