

**Errata<sup>1</sup> for master's thesis**  
***Stability of linear and non-linear Kalman filters (2014)***  
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- p. 20 Figure 4.1 should have  $\mathbf{q}_{k-2}$ ,  $\mathbf{q}_{k-1}$  and  $\mathbf{q}_k$  instead of  $\mathbf{q}_{k-1}$ ,  $\mathbf{q}_k$  and  $\mathbf{q}_{k+1}$ .
- p. 22 The equation after (4.11) and the discussion related to it might be a bit misinformed.
- pp. 23, 24 On page 23 the observability Gramian of the system (4.1) should have  $\mathbf{R}^{-1}$  instead of  $\mathbf{R}_i^{-1}$ . Similar error is found on page 24 in the corresponding observability matrix.
- p. 37 The part of Theorem 4.15 relating to the convergence of means is somewhat dubious.
- p. 48 The last inequality of the page should have  $\mathbf{\Pi}_k$  on its right-hand side.
- p. 49 The last series of inequalities of the page should have

$$2\kappa' \|\boldsymbol{\xi}_k\|^3 \frac{1}{p_1} \left( f + \frac{fp_2h^2}{\hat{r}} \right) + \frac{1}{p_1} (\kappa')^2 \varepsilon' \|\boldsymbol{\xi}_k\|^3$$

instead of

$$2\kappa' \|\boldsymbol{\xi}_k\|^3 \left( f + \frac{fp_2h^2}{p_1\hat{r}} \right) + \frac{1}{p_1} (\kappa')^2 \varepsilon' \|\boldsymbol{\xi}_k\|^3.$$

- p. 49 Equation (5.15) should be

$$\kappa_{\text{nonl}} = \kappa' \frac{1}{p_1} \left( 2 \left( f + \frac{fp_2h^2}{\hat{r}} \right) \kappa' \varepsilon' \right).$$

- p. 57 The last inequality of the page should have  $\mathbf{P}_{k+1}^-$  instead of  $\mathbf{P}_{k+1}$  on its left-hand side. It would also be more consistent with the statement of Lemma A.2. to persist with a strict inequality.
- p. 79 The right-hand side of (6.3) should have  $d(\mu, \nu)$  instead of  $d(\mu - \nu)$ .

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<sup>1</sup>This errata is for a slightly corrected version of the thesis, to be found at <http://users.aalto.fi/~karvont2/>.