

Partial Linear Gaussian Models for Tracking in Image Sequences Using Sequential Monte Carlo Methods

Elise Arnaud · Etienne Mémin

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We would like to correct the following typo in our paper. As shown in Fig. 1 and Fig. 6 and as correctly written in (Arnaud et al. 2005), the norm notations used in equations (20), (50) and (74) for the validation gate expressions have to be obviously replaced by an outer product. Equation (20) corrected reads:

$$\begin{aligned} \Sigma_k^{vg} &= \text{var}[\mathbf{z}_k \mid \mathbf{z}_{1:k-1}] \\ &\simeq \sum_{i=1}^N w_{k-1}^{(i)} [R_{k|\mathbf{I}} + H_{k|\mathbf{I}} Q_{k|\mathbf{I}}^{(i)} H_{k|\mathbf{I}}^t + \mathbf{b}_{k|\mathbf{I}}^{(i)} \mathbf{b}_{k|\mathbf{I}}^{(i)t}] \\ &\quad - \left(\sum_{i=1}^N w_{k-1}^{(i)} \mathbf{b}_{k|\mathbf{I}}^{(i)} \right) \left(\sum_{i=1}^N w_{k-1}^{(i)} \mathbf{b}_{k|\mathbf{I}}^{(i)} \right)^t, \end{aligned}$$

where $\mathbf{b}_{k|\mathbf{I}}^{(i)} = H_{k|\mathbf{I}} f_{k|\mathbf{I}}(\mathbf{x}_{k-1}^{(i)})$. This slip of the pen has been pointed out by Prof. Xiaojun Wu, Jiangnan University, Wuxi, China. We thank him for bringing this to our attention.

References

Arnaud, E., Mémin, E., & Cernuschi-Frias, B. (2005). Conditional filters for image sequence based tracking—Application to point tracking. *IEEE Transactions on Image Processing*, 14(1), 63–79.

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E. Arnaud (✉)
INRIA Rhône-Alpes/Universite Joseph Fourier, 38330
Montbonnot, France
e-mail: elarnaud@inrialpes.fr

E. Mémin
Universite Rennes I, Campus de Beaulieu, 35042 Rennes Cedex,
France
e-mail: memin@irisa.fr