$\underline{U}$

d

$$\begin{pmatrix} U_1^1 \\ U_2^1 \\ \vdots \\ U_{d_1}^1 \\ U_1^2 \\ \vdots \\ 1 \end{pmatrix}$$

$\underline{U_1^1}$ r

$\textcircled{2r}$

$\underline{U_1 \quad \frac{dU_1}{dt}}$

$\widetilde{U}_1^1$

$\underline{\frac{dU_1^1}{dt}}$

$M_1 + M_2 + M_3$

$\underline{2r \cdot (M_1 + M_2 + M_3)}$

L

$(i_1, t_1), \ldots (i_N, t_N)$

$u_0 \downarrow U(0)$ $\quad U_1 \quad U(t_1) \quad \ldots \quad U_N \quad U(t_N)$

$\underline{U(t)}$

BP-[illegible]

U_{i_n} $\quad U_{i_n}^{1,\backslash n}$

$$p(U_0) \prod_{n=1}^{N} p(U_n|U_{n-1})\, p(y_n|U_n, i_n) \rightarrow p\left(y_n \middle| (U^1_{i_{n_1},n} \circ \cdots \circ U^K_{i_{nK},n})^T 1\right),$$

$\Downarrow$

$\mathcal{N}(U_0|0, P_\infty)$

$\downarrow$

$$\prod_{j=1}^{d} \mathcal{N}(U_{0j}|0, (P_\infty)_{jj})$$

$\mathcal{N}(U_n|A U_{n-1}, Q_n)$

$\Downarrow$

$$\prod_{j=1}^{d} \mathcal{N}(U_{nj}|m_{nj}, V_{nj}) \cdot \mathcal{N}(U_{n-1,j}|\bar{m}_{n-1,j}, \bar{V}_{n-1,j})$$

$\underline{A}$

$q(U_n)^{\backslash n} \quad q(U_{n-1})^{\backslash n} \quad \underline{p(U_n|U_{n-1})}$

$q^*(U_n)$

$q^*(U_{n-1})$

$\underline{q(U_n)^{\backslash n}} \quad \underline{q(U_{n-1})}^{\backslash n-1} \quad \underline{p(U_n|U_{n-1})}$