

# Scaling up Variational EM

$$\underset{\substack{w, \textcolor{red}{m}_1, \dots, \textcolor{red}{m}_N \\ \textcolor{red}{s}_1, \dots, \textcolor{red}{s}_N}}{\text{maximize}} \quad \mathcal{L}(w, q_1, \dots, q_N)$$

$$\text{subject to} \quad q_i(t_i) = \textcolor{red}{\mathcal{N}}(\textcolor{red}{m}_i, \text{diag}(\textcolor{red}{s}_i^2))$$