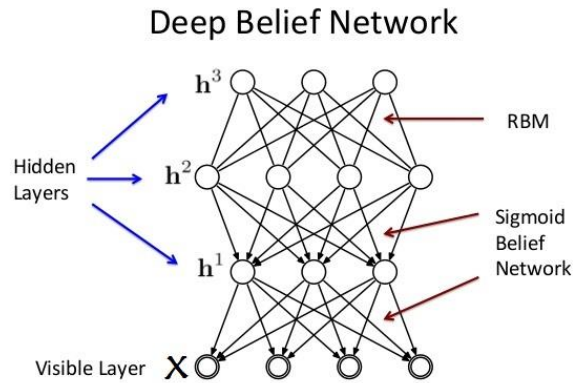


Learning: A flow in parameter space driven information geometry

= renormalization from QFT point of view

$$\frac{\partial \ln(M_{\Theta}(\theta^*; t))}{\partial t} = \mathcal{D}_{KL}[T_{Y|\Theta}(y | \theta^*) \parallel M_Y(y; t)]$$



(Hinton et.al. Neural Computation 2006)

Bayes as a QFT

$$P(\vec{s}|\vec{y}) = \frac{e^{\log(P(\vec{y}|\vec{s})) + \log(P(\vec{s}))}}{Z}$$

Renormalisation, Bayes and machine learning  
(with Jon Heckman and Marc Klinger)