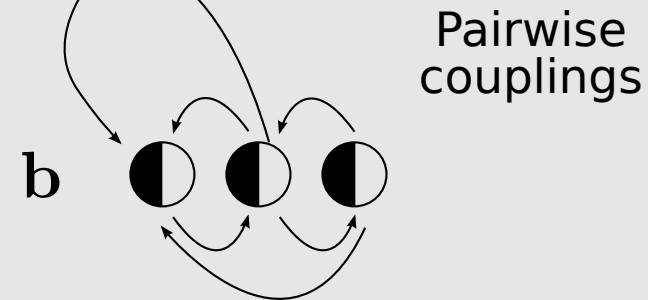
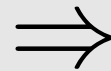


Stimulus (continuous)



Neural response (binary)

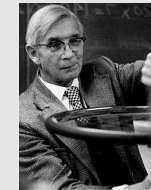
Second order moments



Maximum entropy

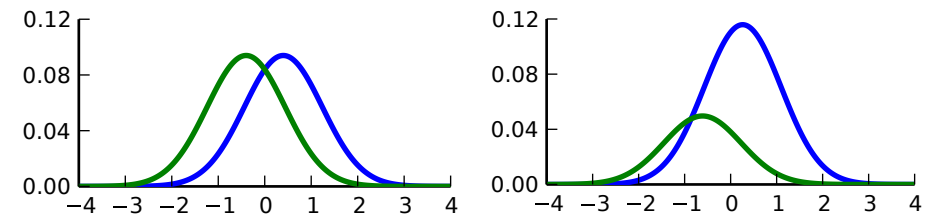
Joint Ising-Gauss model

$$\exp \left(\frac{1}{2} \begin{pmatrix} \mathbf{x} \\ \mathbf{b} \end{pmatrix}^\top \Lambda \begin{pmatrix} \mathbf{x} \\ \mathbf{b} \end{pmatrix} + \boldsymbol{\lambda}^\top \begin{pmatrix} \mathbf{x} \\ \mathbf{b} \end{pmatrix} \right)$$



Properties:

Marginal stimulus distribution: Mixture of Gaussians



Marginal binary distribution: Ising type

Extension to spike-triggering

