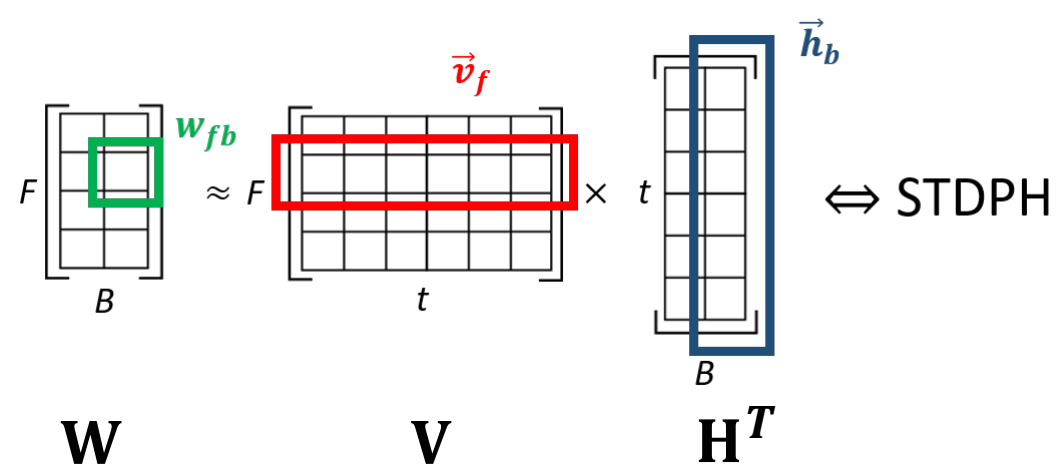
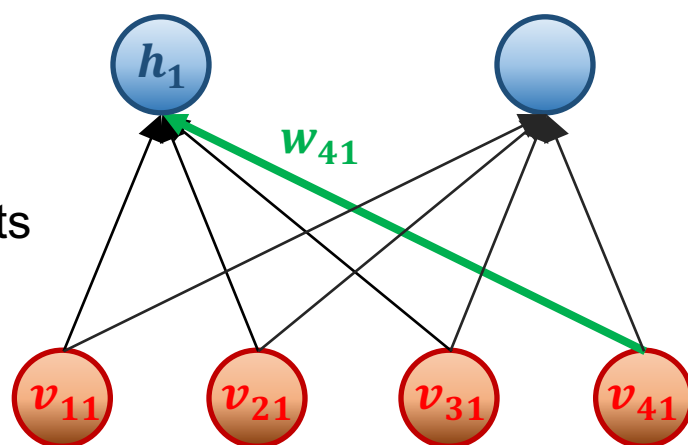


A

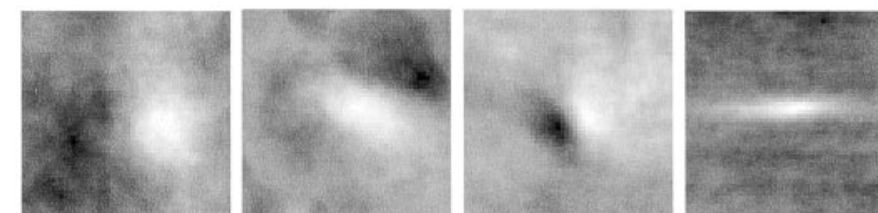
Nonnegative matrix factorization (NMF)

**H**: output neurons**W**: synaptic weights**V**: input neurons

$$w_{fb} = \vec{v}_f \vec{h}_b$$

B

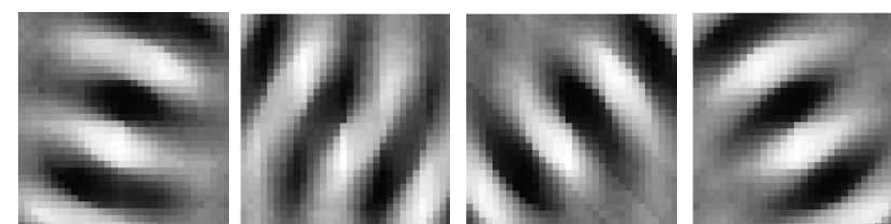
V1 Simple Cell Receptive Fields



NSC Approximation of V1 Receptive Fields

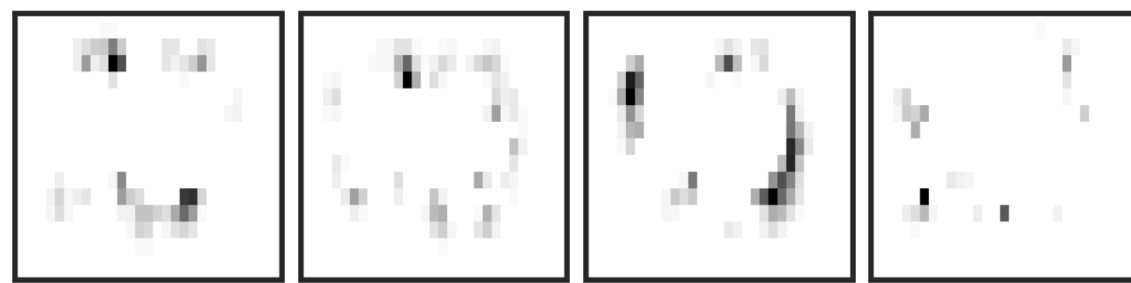


STDPH Approximation of V1 Receptive Fields



C

NMF Approximation of RSC Position Receptive Fields



STDPH Approximation of RSC Position Receptive Fields

