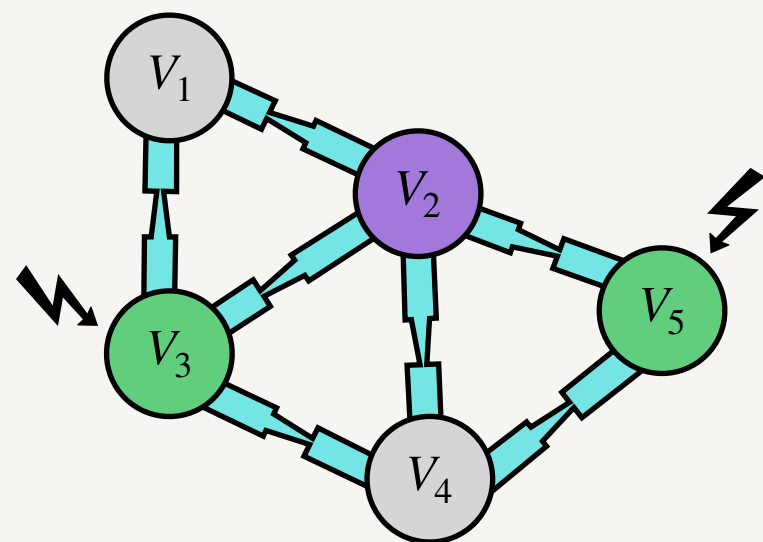
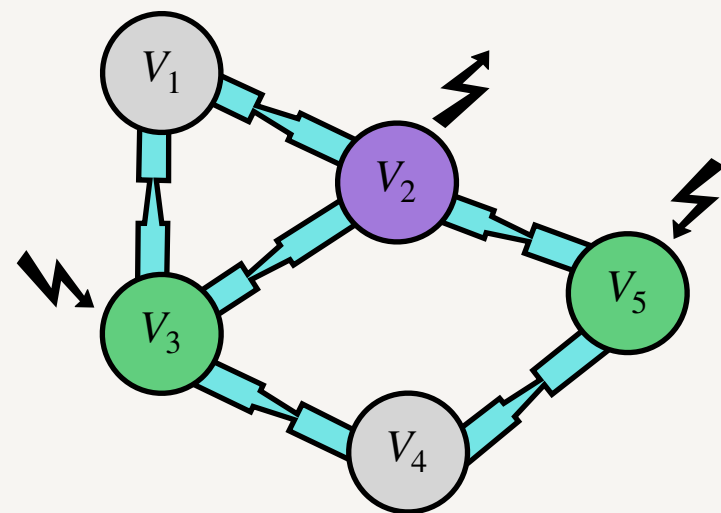


FORWARD PASS



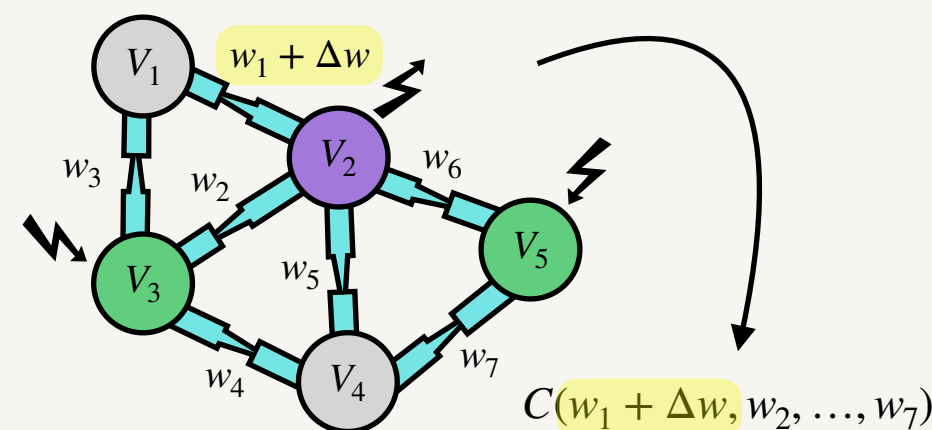
Physical relaxation



Cost function $C(\mathbf{w})$

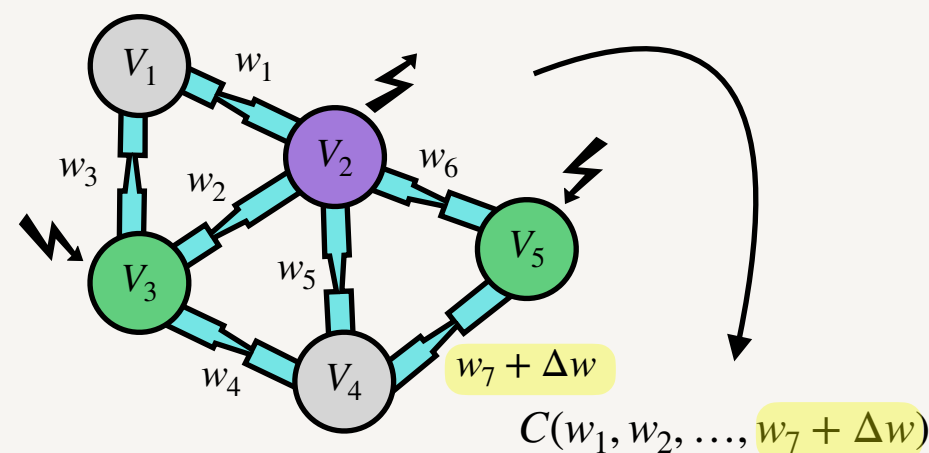
BACKWARD PASS

EDGE PERTURBATION



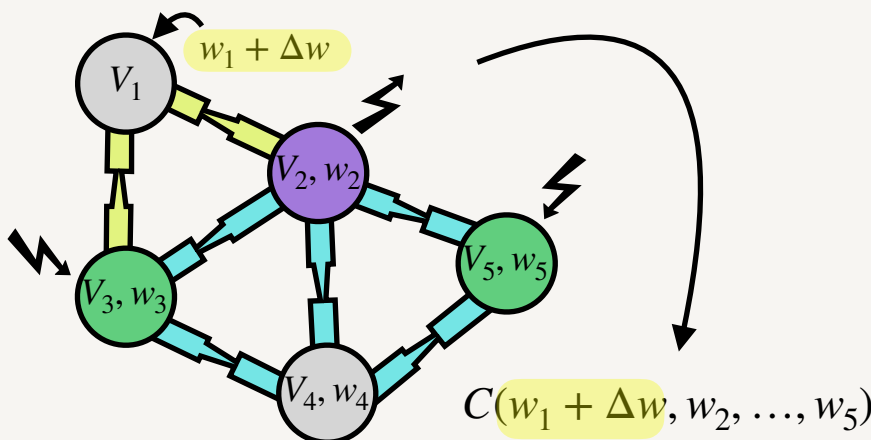
$$\frac{\partial C(\mathbf{w})}{\partial w_1} = \frac{C(w_1 + \Delta w, w_2, \dots, w_7) - C(\mathbf{w})}{\Delta w}$$

⋮



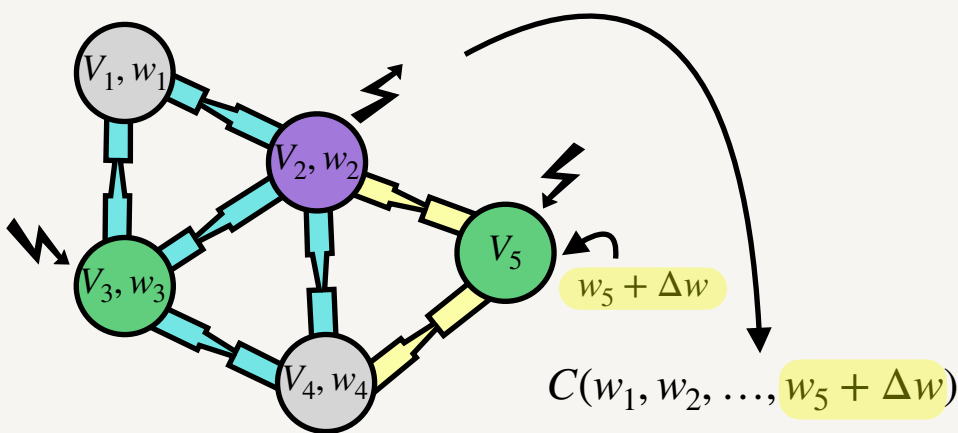
$$\frac{\partial C(\mathbf{w})}{\partial w_7} = \frac{C(w_1, w_2, \dots, w_7 + \Delta w) - C(\mathbf{w})}{\Delta w}$$

NODE PERTURBATION



$$\frac{\partial C(\mathbf{w})}{\partial w_1} = \frac{C(w_1 + \Delta w, w_2, \dots, w_5) - C(\mathbf{w})}{\Delta w}$$

⋮



$$\frac{\partial C(\mathbf{w})}{\partial w_5} = \frac{C(w_1, w_2, \dots, w_5 + \Delta w) - C(\mathbf{w})}{\Delta w}$$