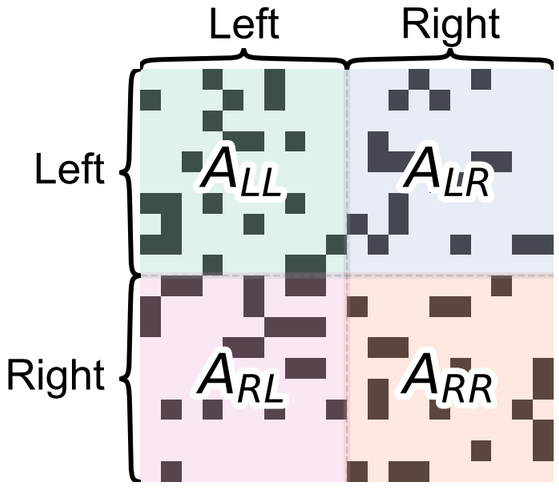
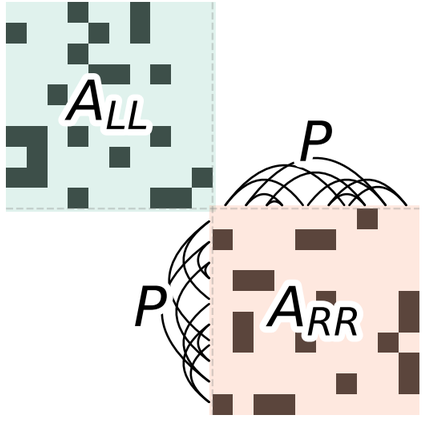
Adjacency matrix



Ipsilateral → A_{LL}, A_{RR}

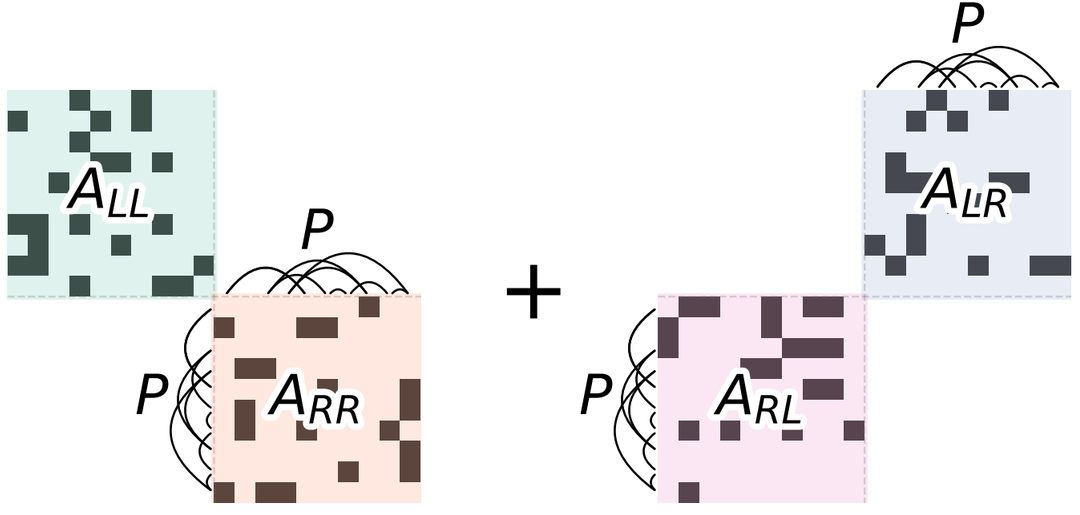
Contralateral → A_{LR}, A_{RL}

Graph matching (GM)



$$\min_P \| A_{LL} - P\, A_{RR}\, P^T \|_F^2$$

Bisected graph matching (BGM)



$$\min_P \| A_{LL} - P\, A_{RR}\, P^T \|_F^2 + \| A_{LR}\, P^T - P\, A_{RL} \|_F^2$$