

approximate IE models

independent edge assignment of stubs (IEAS)

☒ **edges assignment probabilities defined by observed degree sequence $Q = Q(\mathbf{d})$**

independent stub assignment (ISA)

☒ Bayesian model for stub frequencies

☒ degree sequence $\mathbf{D} \sim \text{multinomial}(2m, \mathbf{p})$ where \mathbf{p} are stub assignment probabilities

$$\mathbf{M} \sim \text{RSM}(\mathbf{d})$$

Random Stub Matching
given observed degree sequence \mathbf{d}

$$\mathbf{M} \sim \text{IEAS}(\mathbf{Q}(\mathbf{d}))$$

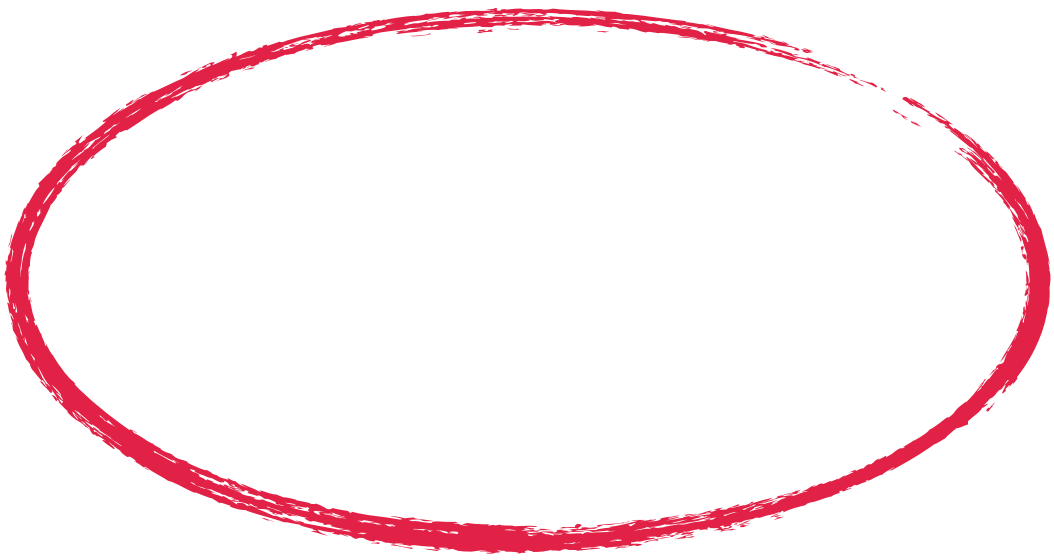
Independent Edge Assignments of Stubs
edge assignment probabilities $\mathbf{Q}(\mathbf{d})$
where \mathbf{d} is observed degree sequence

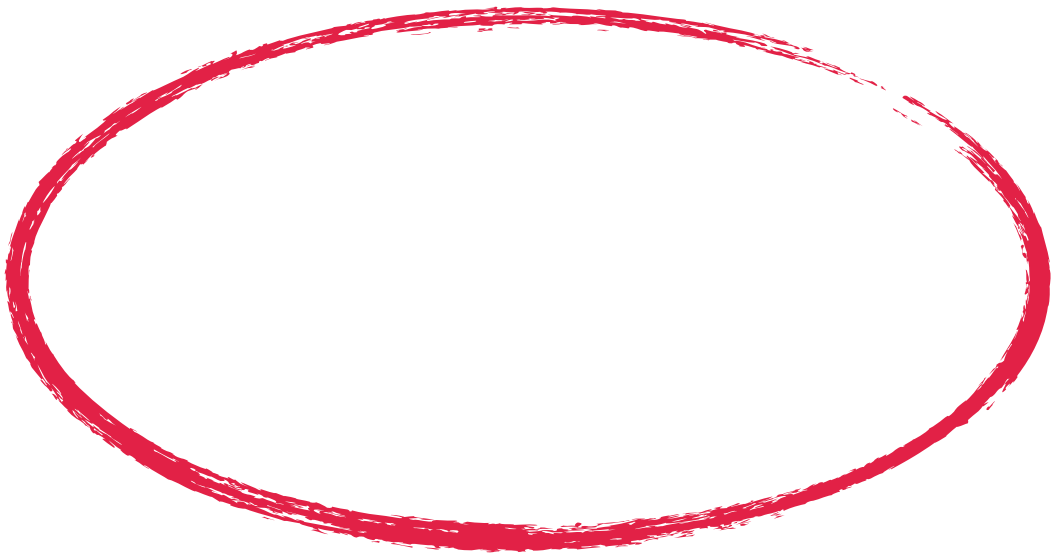
$$\mathbf{M} \sim \text{ISA}(\mathbf{Q}(\mathbf{p}))$$

Independent Stub Assignments
degree sequence $\sim \text{multinomial}(2m, \mathbf{p})$
where \mathbf{p} are stub assignment probabilities

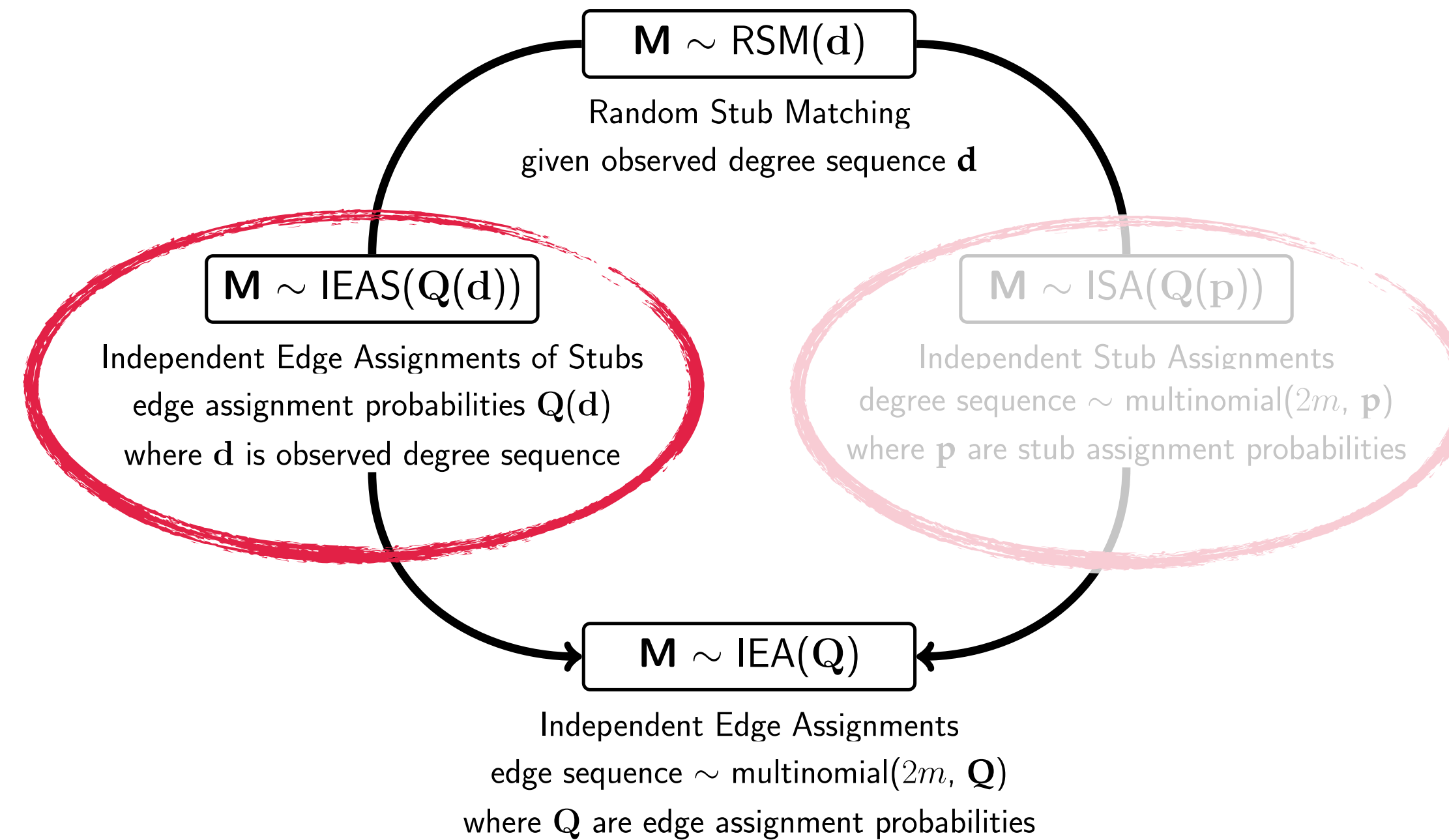
$$\mathbf{M} \sim \text{IEA}(\mathbf{Q})$$

Independent Edge Assignments
edge sequence $\sim \text{multinomial}(2m, \mathbf{Q})$
where \mathbf{Q} are edge assignment probabilities





approximate IEA models



independent edge assignment of stubs (IEAS)

- ✓ edges assignment probabilities defined by observed degree sequence $\mathbf{Q} = \mathbf{Q}(\mathbf{d})$

independent stub assignment (ISA)

- ✓ Bayesian model for stub frequencies
- ✓ degree sequence $\mathbf{D} \sim \text{multinomial}(2m, \mathbf{p})$ where \mathbf{p} are stub assignment probabilities

statistics under random multigraph models