Metric Space $\mathcal{X}$

$I = [0,1] \subset \mathbb{R}$

$\mathcal{W} = \{ f : I^2 \to I : \text{symmetric, measurable} \}$

$G = ([n], \text{edge weight } \omega) \longmapsto A_G \in \mathcal{W}$:

$I = I_1 \cup \ldots \cup I_n$, $\lambda(I_i) = 1/n$

for $x \in I_i$, $y \in I_j$: $A_G(x,y) = \omega(i,j)$

<u>Cut-norm</u>: $\|f\|_\square = \sup\limits_{S,T \subseteq I} \left| \int\limits_{S \times T} f(x,y)\,dx\,dy \right|$,

[redacted]

"<u>Relabeling" vertices</u>:

measure-preserving $\phi : I \to I$

$f^\phi(x,y) = f(\phi(x), \phi(y))$, $f^\phi \in \mathcal{W}$

<u>Distance</u> $\delta_\square(f,g) = \inf\limits_{\phi} \| f - g^\phi \|_\square$

$\mathcal{X} = \mathcal{W} / \{ \delta_\square = 0 \}$