

Stable Limits

-8-

$f \in \mathcal{R}$ is stable if $\forall (f_n) \xrightarrow{\delta_{\square}} f$
is Cauchy wrt δ_1 .

Th $f \in \mathcal{W}$ is stable iff a.e. $x \in I^2$
 $f(x) = 0$ or 1 .

\Rightarrow See not. Random graph $G(n, f)$:
random $x_1, \dots, x_n \in I$, $\text{Prob}(ij \in E) = f(x_i, x_j)$.

With prob 1 $G(n, f) \xrightarrow{\delta_{\square}} f$.

$G(m, f)$

$\text{Prob}(\text{edge}) \in (\varepsilon, 1-\varepsilon)$

$$E(d_1(G(n, f), G(m, f))) \geq \varepsilon^3$$

$$\text{Prob}(d_1 < \varepsilon^3/2) = o((n!)^{-1})$$

$$\text{A.s. } d_1 \geq \varepsilon^3/2$$

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$G(n, f)$