$$\sum_{i=1}^{n_{sim}} \sum_{j=1}^{M_i(D)} \mathbb{1}[$$

$$\frac{1}{n_{sim}} \sum_{i=1}^{n_{sim}} \#$$ ~~points s.t~~ local maxima above u for which A holds

$$\longrightarrow \mathbb{E}[M_u(D)\, \mathbb{1}[A]]$$

---

t_j: loc of jth local maxima

$$\sum_{j=1}^{M_i(D)} \mathbb{1}[A_{t_j} \text{ holds}]$$

$$\mathbb{E}\left[\sum_{j=1}^{M_i(D)} \mathbb{1}[A_{t_j} \text{ holds}]\right] \quad \mathbb{P}(A)$$

Let $D = B_\varepsilon(t)$ then as $\varepsilon \to 0$ $\quad P(X>1) = P X$

$$\mathbb{1}[A_{t_j}] \longrightarrow \mathbb{1}[A_{t_0}]$$

easy as $\nabla Y \mid \nabla Y$ is a gaussian process

need to show that $\partial \in X$

$P_{X|Y}(x|y)$

$P_Y(y)$

$P_{Y|X}(y|x)$

$= P_{X,Y}(x,y)$

$P_X(x)$