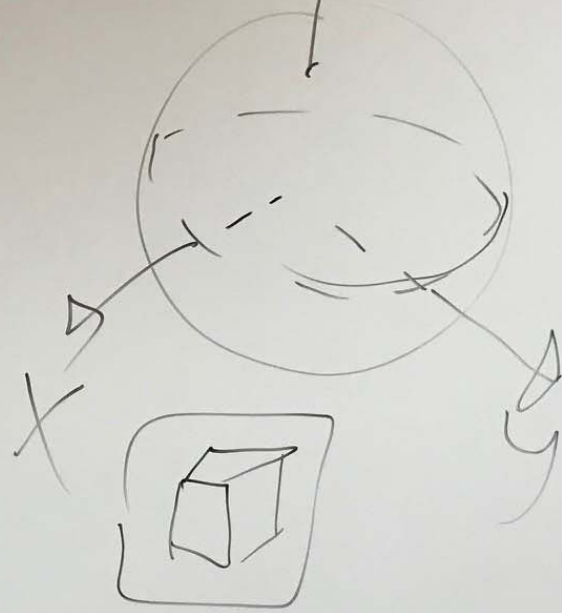


Discrepancy &
Hyperuniformity

$(X_N)_{N \in \mathbb{N}}$



Manifold $d \geq 2$



$$\mathcal{O} = \mathcal{O}_d$$

$$d \geq 2$$
$$S^d \subseteq \mathbb{R}^{d+1}$$

OPERATE SLIDING PANEL FROM THIS POSITION

High dim?

$$d \geq 2$$

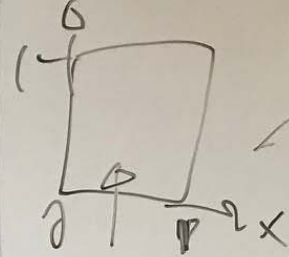
□ Uniformity

Main Unresolve:

Construct
explicit

$(X_N)_{N \in \mathbb{N}}$

Sph. Fibonacci pts

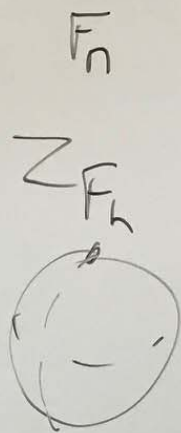


Fibonacci
lattice
 \tilde{F}_n

lit
area
preserving
map



S^2



Thm (A.-R.-D, 2012)

$$D_{L_\infty}^C(Z_{F_n}) \leq \frac{44\sqrt{8}}{\sqrt{F_n}}$$

should be
 ϕ
 $O\left(\frac{(\log F_n)^{7/2}}{F_n^{3/4}}\right)$

$$N^{-\frac{1}{2} - \frac{1}{20}}$$