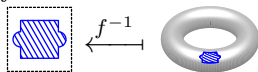


Borel subsets of $\mathbb{I}^2 := [0, 1]^2$

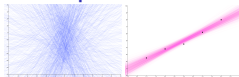
1.  rectangles
2.  $\xrightarrow{\text{complements}}$ 
3. 
 countable $\downarrow$ unions
 

Measurable spaces

$f : \mathbb{I}^2 \rightarrow X$ measurable:



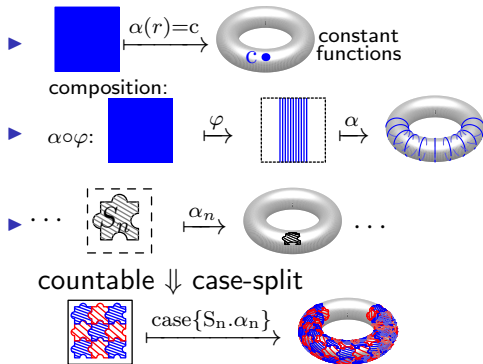
Example results



Distributions on functions
(Bayesian regression)

Quasi-Borel spaces $\langle X, M \rangle$

$(\alpha : \mathbb{I}^2 \rightarrow X) \in M$: **random element**



Grothendieck
quasi-topos

Higher-order inference