

SDG (Synthetic differential geometry)

201210794 江草諒

homotopy type theory

実数には階層がある。

- Set 0
- 命題 -1
- " -2

\mathbb{R} set
D

predicate

M : microlinear $\|M\|_0$

$x=y$ を成立させるのが道の全体

D quasi-colimit diagram

D quasi-colimit diagram $\mathbb{D} \rightarrow \|M\|_0 \quad \|M\|_0^{\mathbb{D}}$

Axiom 1 \mathbb{R} \mathbb{Q} -algebra
Homotopical

Axiom 2 Generalized Kock-Lawvere Axiom
 $W \cong \text{Spec } \mathbb{R} W$

$W \rightarrow \lambda_{x \in W} \lambda_f \quad \lambda_f = \text{spec } \mathbb{R} W f(x) \quad \text{homorphism equivalence}$

Prop. 28

1. A type M is microlinear $\Leftrightarrow \|M\|_0$ is microlinear
2. \mathbb{R} : microlinear
3. M : microlinear set, X ; arbitrary type $\Rightarrow X \Rightarrow M$ microlinear set
4. M is the limit of a diagram μ of ~~micro~~ microlinear sets, then M is a microlinear Set.