
PostScript™? □

Geometric Writing As Performance

blurb

- In this talk I am going to consider geometrical writing as a technology of performance.
- Of course, I'll say something about what I mean by geometry, writing, performance and technology.
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- In differential geometry, computer visualization technology has typically been designed and used as representation and illustration, in other words, recordings or traces of extinct mathematical process.
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- But computers have been scandalously unhelpful in the fine-scale doing of mathematics. Why is this the case? I'll treat visualization technology in a larger context of technology with which we can perform geometry. But this requires us to enlarge the notion of the modes in which creative gesture can occur.
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- So here are some field notes in which I draw your attention to some phenomena of geometric experience.

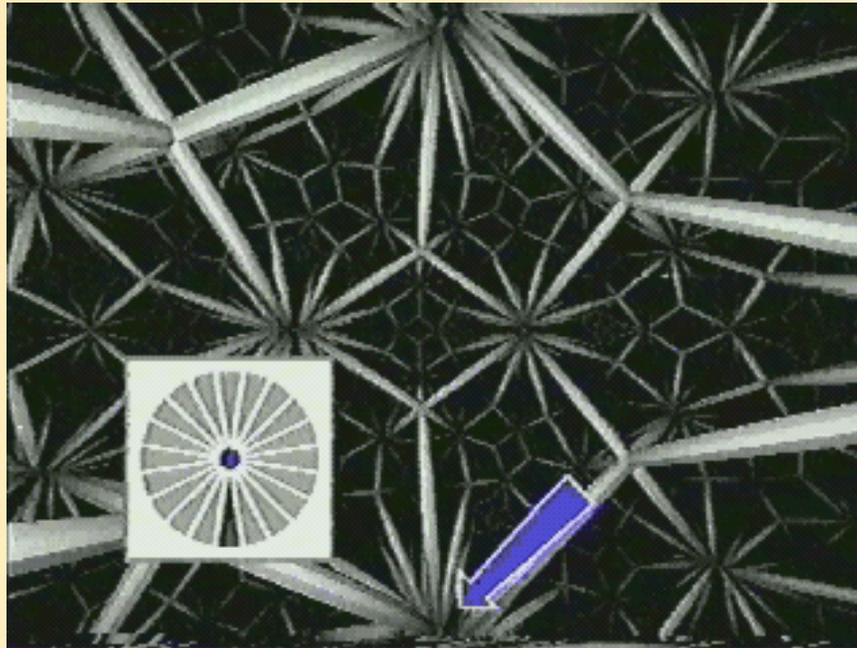
This Is Not A Proof

The eversion of a sphere.



Hyperreality

NotKnot, Hyperbolic Three-Manifolds

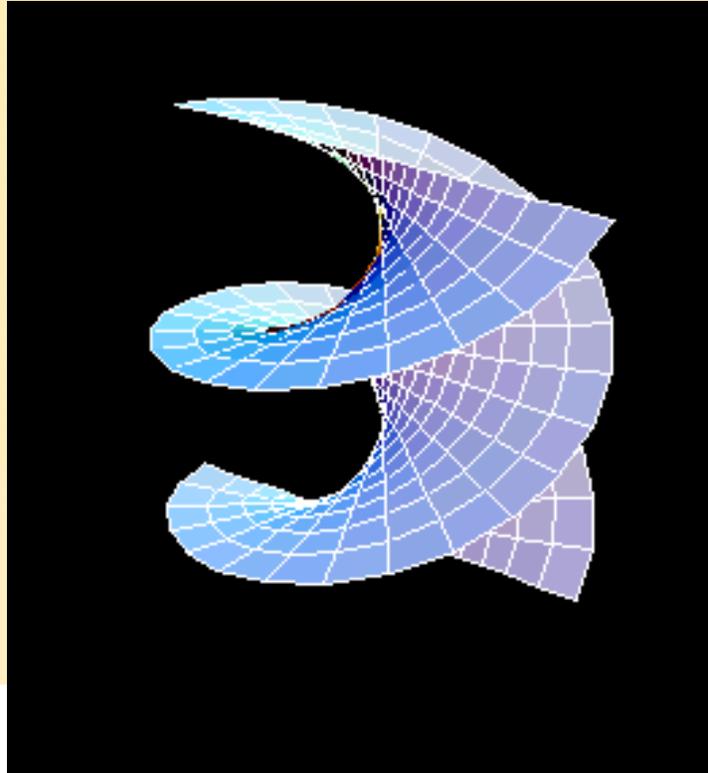


homological diagram

$$\begin{array}{ccccccc}
 X^{P-1} & \xrightarrow{\zeta^P} & X^P & \xrightarrow{\gamma^P} & X & \xrightarrow{\eta^P} & X_P & \xrightarrow{\xi^P} & X_{P+1} \\
 \downarrow \kappa^{P-1} & & \downarrow \kappa^P & & \downarrow \kappa & & \parallel & & \parallel \\
 X_{-}^{P-1} & \longrightarrow & X_{-}^P & \xrightarrow{\gamma_{-}^P} & X_{-} & \xrightarrow{\eta_{-}^P} & X_P & \xrightarrow{\xi^P} & X_{P+1} \\
 \parallel & & \parallel & & \uparrow \bar{\lambda} & & \uparrow \lambda_P & & \uparrow \lambda_{P+1} \\
 X_{-}^{P-1} & \xrightarrow{\zeta_{-}^P} & X_{-}^P & \xrightarrow{\gamma_{-}^P} & (X_{-})^{\#} & \xrightarrow{\eta_{-}^P} & X_P^{\#} & \xrightarrow{\xi_P^{\#}} & X_{P+1}^{\#}
 \end{array}$$

Weierstrass Representation

a one-parameter family of isometries



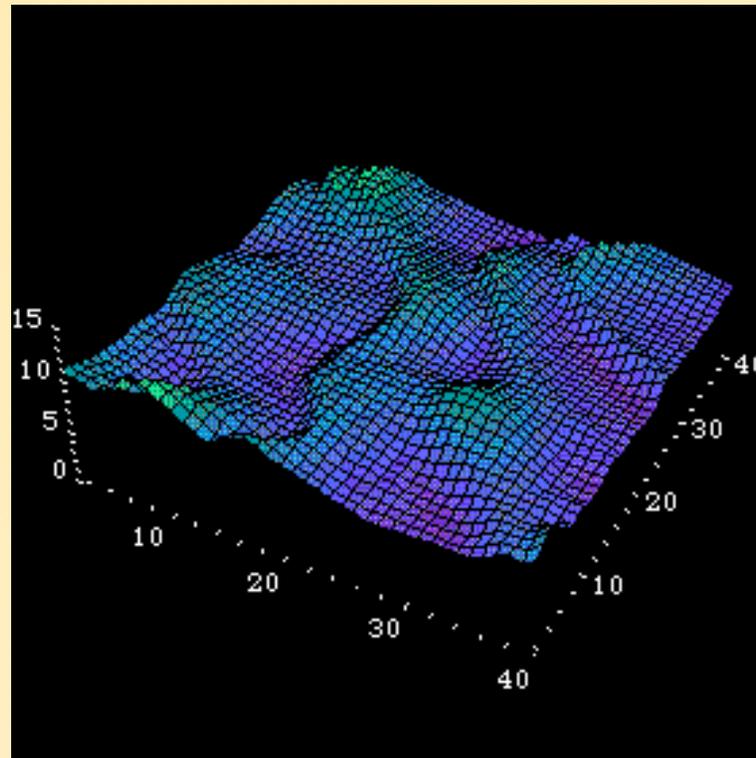
$$\Phi: \mathbb{C} \rightarrow \mathbb{R}^3;$$

$$\Phi: w \mapsto$$

$$\operatorname{Re} \left[\int_0^w \left\{ \frac{1}{2} f[z] (1 - g[z]^2), \frac{i}{2} f[z] (1 + g[z]^2), f[z] g[z] \right\} dz \right]$$

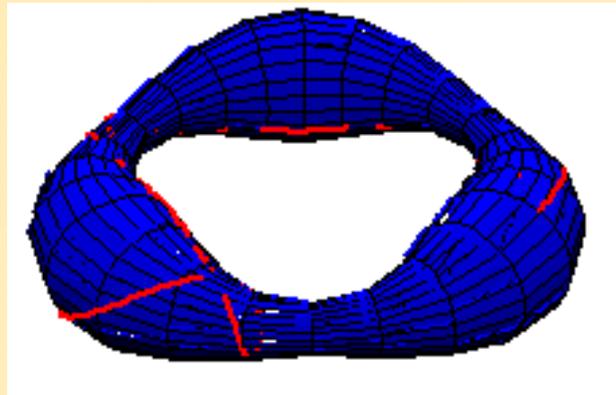
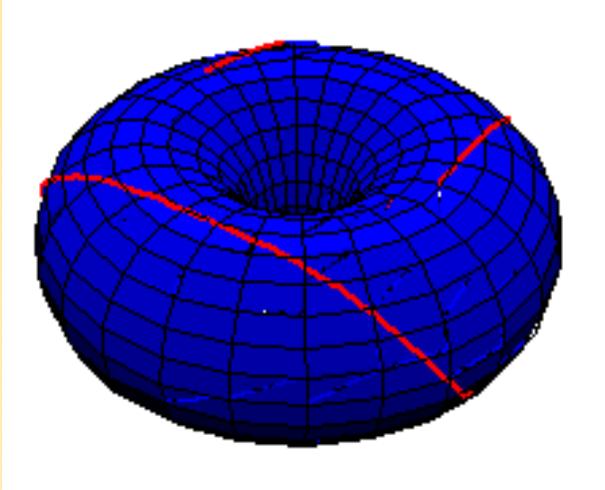
Displacing Worlds

simulation of quantum-inflationary universe



Steerable Computation

geodesics



Polthier discrete geodesics on genus 2

pinch