

The Kat Bomb Field Guide

A Bestiary of Accidental Mathematical Monsters

(This is a plain-text PDF version; for full formatting, see the markdown on the site.)

1. The Spectral Spiral Beast

Notable Quote:

“Spiral fractal da living shit outta it till it echoes its own manifold!”

Habitat: The critical strip of the complex plane, usually near nontrivial zeros.

Behaviour: Coils around zeros, emits oscillatory resonance, hums the Music of the Primes.

Scientific Interpretation: Represents the argument spirals and phase flow of the Riemann zeta function.

2. The Morphism Gremlin (Baby Functor)

Notable Quote:

“Operator iz jus shape of mechanism wot mapz da domains innit?”

Habitat: Between any two mathematical structures foolish enough to stand too close together.

Behaviour: Steals identity morphisms, rearranges arrows in diagrams.

Scientific Interpretation: An intuitive model of a morphism in category theory.

3. The Fractal Turtle Stack

Notable Quote:

“Iz turtles wid geometry hats all da way down.”

Habitat: Infinity-categories, moduli spaces, geometric towers.

Behaviour: Infinitely recursive; no two turtles have the same curvature.

Scientific Interpretation: Higher-order operators and recursive geometric frameworks.

4. The Deterministic Chaos Snake

Notable Quote:

“Random numbers iz no b random in the right geometry...”

Habitat: Logistic maps, strange attractors, ergodic systems.

Behaviour: Looks random until rotated; becomes tame in phase space.

Scientific Interpretation: Deterministic chaos, conjugacy, and ergodicity.

5. The Multiverse Generator

Notable Quote:

“Found da multiverse... didn’t find da generator...”

Habitat: The category of topoi.

Behaviour: Creates universes, links them with functorial pathways.

Scientific Interpretation: Endofunctors on the category of topoi.

6. The Crinkly Operator

Notable Quote:

“Crinkly operator generators...”

Habitat: Renormalisation flows, fractal embeddings.

Behaviour: Folds functions, unfolds manifolds.

Scientific Interpretation: Multi-scale operators and fractal-like transforms.

7. The Cognitive Functor

Notable Quote:

“Cognition iz da operator between universes.”

Habitat: Cognitive science, category theory, deep learning theory.

Behaviour: Maps one worldview into another, preserves some structure while changing others.

Scientific Interpretation: Cognition as a functorial, structure-preserving transformation.

8. The Chirality Twister

Notable Quote:

“Chirality of reality iz important, innit.”

Habitat: Symmetry groups, molecular geometry, Riemann functional equations.

Behaviour: Twists left and right, refuses to match its mirror.

Scientific Interpretation: Parity, symmetry breaking, and reflection structures.