Convergence of Growth Factor in UNNS Fibonacci Dynamics

Convergence of Projective Ratio in UNNS Fibonacci Dynamics

Here we go 🚀 — the simulation shows exactly what we expected:

Results

1. **Growth factor convergence**
   - The effective growth factor ($\|v_n\|$ / $\|v_{n-1}\|$) stabilizes very quickly near the **golden ratio φ ≈ 1.618**.
   - This confirms that even under UNNS collapse + Gaussian inlaying, the long-term behavior retains Fibonacci's spectral root.

2. **Projective ratio convergence**
   - The ratio a_n/b_n approaches φ as well.
   - Early fluctuations (caused by collapse rounding) vanish in later iterations, showing that **asymptotic dynamics are stable**.

Significance for UNNS

- **Divergence vs stabilization**: Local distortions from collapse don't prevent convergence — instead they **fade into the substrate**. This supports the claim that UNNS operators preserve global attractors while suppressing noise.
- **Resonance**: The golden ratio emerges as a resonance between recursion and lattice inlaying, showing how UNNS constants are not arbitrary but forced by dynamics.
- **Knowledge added**: This goes beyond the classical Fibonacci interpretation. In UNNS we see:
  - Collapse mimics entropy (small signals suppressed).
  - Inlaying ties recurrence to discrete lattices.
  - Yet the system still "remembers" its spectral identity.

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