Chayut Universe Wave Function

Paper C-6: PDE Dynamics of the Entropic Manifold

From Geometric Structure to Executable Collapse Evolution

Title: Chayut Universe Wave Function (CUWF) Paper C-6: PDE Dynamics of the Entropic Manifold : From Geometric Structure to Executable Collapse Evolution

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Abstract

This paper formalizes the collapse dynamics of the Chayut Universe Wave Function (CUWF) as a full multi-scale PDE engine evolving on the entropic manifold $\mathcal{M}^{E}$. The formulation integrates geometry (g, $\mathcal{R}$), collapse fields (X, ψ), stability tensors (T), entanglement structure (Ξ), and entropic potential Φ into a coupled dynamical system capable of basin formation, soft-mode bifurcation, wormhole connectivity, and curvature-breathing cosmology.

The work defines topology-change conditions, including basin birth, conifold pinch, wormhole threshold, soft-mode bifurcation, and curvature-flow transitions. It also formalizes renormalization-flow scaling, nonlocal coupling kernels, numerical randomness metrics, model-scenario design, and implementation strategies suitable for the C-7 computational solver.

C-6 completes the operational core of the CUWF C-Series. C-4 built tensor objects. C-5 built the entropic manifold geometry. C-6 now converts that geometry into an executable collapse-evolution engine. C-7 will turn this engine into simulation.

Keywords

CUWF, collapse PDE, entropic manifold $\mathcal{M}^E$, PDE dynamics, stability tensor T^{IJ}, entanglement tensor Ξ^{IJ}, curvature tensor $\mathcal{R}^I{}_{jKL}$, soft-mode branching, nonlocal wormhole coupling, conifold topology, Ricci-type flow, renormalization flow, quantum randomness metrics, cosmological curvature breathing, basin dynamics, PDE solver design, manifold computation, emergent physical law

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