



# Chayut Universe Wave Function

Paper C-5: Entropic Manifold Geometry of CUWF

The Differential-Geometric Foundation of Collapse Physics

**Title:** C-5: Chayut Universe Wave Function ( CUWF ) Paper C-5 Entropic Manifold Geometry of CUWF : *The Differential-Geometric Foundation of Collapse Physics*

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## Abstract

This paper introduces the Entropic Manifold  $\mathcal{M}^E$  as the geometric substrate in which the CUWF universe evolves. Unlike conventional physical frameworks, where spacetime is assumed first and fields are then placed inside it, CUWF reverses the hierarchy: collapse structure generates geometry. The metric arises from the Stability Tensor  $T^{IJ}$ , representing the entropic cost of deformation. The Entanglement Tensor  $\Xi^{IJ}$  becomes the connection, prescribing transport, geodesics, and nonlocal adjacency. The Curvature Tensor  $\mathcal{R}^I{}_{jKL}$  then emerges as the deflection of collapse under entanglement-weighted transport.

Within this manifold, topology is dynamic rather than fixed. Basins, separatrices, funnels, tori, and conifold singularities form a living architecture through which collapse trajectories navigate. Ricci-type curvature flow reshapes the manifold continuously, shifting attractors, splitting basins, fusing branches, and opening wormhole-like transitions between configurations that are distant in metric space but connected through entanglement.

The result is a predictive geometric engine. Collapse geodesics can be integrated forward to forecast basin capture, bifurcation, conifold transition, or topology rewrite. Stability becomes distance.

Entanglement becomes transport. Curvature becomes destiny.

The universe is not embedded in geometry. It is geometry, and collapse is its motion.

## Keywords

CUWF; Entropic Manifold  $\mathcal{M}^E$ ; Stability Tensor  $T^{IJ}$ ; Entanglement Tensor  $\Xi^{IJ}$ ; Curvature Tensor  $\mathcal{R}_j^{IKL}$ ; Ricci Flow; Conifold Singularities; Collapse Geodesics; Basin Topology; Nonlocal Geometry; Quantum-Classical Transition; Entropy-Driven Physics

## Overview of Series Position

Paper C-5 occupies the geometric middle point of the CUWF C-line. C-3 developed the algebraic and operator-side treatment of entanglement and stability. C-4 promoted the central objects of collapse physics into tensor form:  $T^{IJ}$ ,  $\Xi^{IJ}$ , and  $\mathcal{R}_j^{IKL}$ . C-5 now gives those objects a space to inhabit by constructing the Entropic Manifold  $\mathcal{M}^E$ .

The guiding transition is therefore: C-4 gave tensor objects; C-5 gives the manifold those objects generate. Once  $\mathcal{M}^E$  is defined, distance, transport, curvature, topology, singularity, and prediction can be written as geometric consequences of collapse dynamics rather than as independent assumptions.

This paper prepares the ground for C-6, where the geometry of C-5 will be converted into PDE-driven evolution, numerical geodesic simulation, and multi-scale dynamical structure.

## Table of Contents

### Introduction

#### 1. Purpose & Position of C-5

#### 2. Defining the Entropic Manifold $\mathcal{M}^E$

2.1 Configuration Space of Collapse Modes

2.2 Coordinates  $X^I$  and Dimensional Degrees of Freedom

2.3 Charts, Patches, and Atlas Structure

2.4 Tangent Bundle  $T\mathcal{M}^E$  and Admissible Directions of Motion

2.5 Entropic Measure & Volume Element  $\sqrt{\det(g)}d^nX$

#### 3. Metric Structure from Stability Tensor $T^{IJ}$

3.1  $T^{IJ}$  as the Hessian of  $E(X)$

3.2 When  $T \rightarrow g^{IJ}$  (Metric Construction Rule)

3.3 Eigen-spectrum: Stiff vs. Soft Directions

3.4 Degenerate Metric Surfaces

3.5 Signature Transitions and Physical Meaning

#### 4. Entanglement Tensor $\Xi^{IJ}$ as Connection / Nonlocal Geometry

4.1  $\Xi^{IJ}$  as the Generator of DOF Coupling

4.2 Natural Connection  $\Gamma^I_j{}^K$  Derived from  $\Xi$

4.3 Parallel Transport & Entropic Geodesics

4.4 Nonlocal Adjacency: Geometry Beyond Distance

4.5 Gauge-Like Interpretation

#### 5. Curvature Tensor $\mathcal{R}^I{}^j{}_{KL}$ & Sectional Curvature

5.1 Curvature from the Entanglement Connection

5.2 Sectional Curvature  $K(e_a, e_b)$

5.3 Ricci & Scalar Curvature — Global Summary Measures

5.4 Curvature Classes in CUWF

5.5 Curvature as Dynamic Structure — Not Static Geometry

## 6. DOF Topology & Basin Architecture

6.1 Basins, Separatrices & Collapse Landscapes

6.2 Convergence Surfaces & Entropic Funnels

6.3 Closed Cycles, Limit Tori & Recurrence Structures

6.4 Topological Phase Transitions

6.5 Entropic Genus & DOF Connectivity

## 7. Conifold Singularities & Pinch Geometry

7.1 What Is a Conifold in an Entropic Manifold?

7.2 When a Basin Pinches — Neck Formation

7.3 Conifold Resolution ( $\Sigma \rightarrow \tilde{\Sigma}$ ) — Two Branch Outcomes

7.4 Wormhole Transition ( $\Sigma \rightarrow \tilde{\Sigma}W$ ) — Entanglement-Maintained Passage

Summary of Resolution Types

7.5 Conifold Rules in CUWF

7.6 Singularity = Possibility, Not Failure

## 8. Curvature Flow & Topological Evolution

8.1 Ricci Flow on the Entropic Manifold

8.2 Basin Drift & Attractor Migration

8.3 Bifurcation Under Flow — Birth & Death of Basins

8.4 Conifold Motion — Pinch Neck Translation

8.5 Curvature Flow Preserves Entropy Minimum But Not Path

8.6 Geometric Breathing — Expansion & Collapse Cycling

## 9. Collapse Geodesics & Predictive Evolution Paths

9.1 Entropic Geodesic Equation

9.2 Predictive Evolution — Algorithmic Summary

9.3 Collapse Convergence Criterion

9.4 Predicting Bifurcation Outcomes

9.5 Evolution Through Conifold Gates

9.6 Long-Horizon Prediction & Geometric Stability Forecasting

## 10. Model Systems in the Entropic Manifold $\mathcal{M}^E$

10.1 Single-Basin Stable Manifold

10.2 Symmetric Bifurcation Manifold

10.3 Conifold-Linked Multi-Basin System

Conclusion

References