Chronotension Field Theory (CFT) — Abstract

Chronotension Field Theory (CFT) is a novel continuum-based framework unifying time and gravity as manifestations of a single viscous substrate. In this theory, time is modeled as a flowing field, and gravity arises from resistance to that flow — represented by a spatially-varying viscosity field $\eta(x, t)$. CFT challenges the geometric paradigm of General Relativity by introducing a field-theoretic basis for gravitational phenomena, cosmic expansion, and structure formation. The theory successfully reproduces major cosmological observables: A near-exact SN1a luminosity distance fit (RMSE $\approx$ 17.5) Alignment with CMB multipole data via interference echoes Baryon Acoustic Oscillation peaks from harmonic field collapse, not plasma oscillations Gravitational lensing and large-scale structure encoded via viscosity gradients CFT further extends into the quantum domain through Chronodes — localized, soliton-like concentrations of compressed time. These form the basis of Quantum CFT (QCFT), which introduces a gradient-dependent uncertainty principle and reinterprets quantization via nonlocal tension dynamics. This repository includes all derivations, data comparisons, quantum extensions, and a glossary of terms. CFT is falsifiable, self-contained, and actively tested against cosmological data.