Executive Summary: Affine Quantum Deformation and the Geometry of Awareness

Flyxion

The Affine Quantum Deformation Principle (AQDP) identifies a fundamental feature of quantum spacetime: the averaged affine connection differs from the Levi–Civita connection of the averaged metric. This difference is encoded in the Quantum Affine Shift Tensor $\mathcal{A}$, derived from the covariance of the metric operator. The resulting deformed Einstein equations, geodesic flow, and Raychaudhuri evolution describe how quantum uncertainty reshapes the causal structure of spacetime.

The Relativistic Scalar–Vector Plenum (RSVP) theory extends this geometric framework to cognition. Semantic content is modeled by Φ, cognitive flow by $\mathbf{v}$, and uncertainty by S, together inducing a semantic metric whose geometry is deformed under uncertainty. Awareness is formulated as the preservation of both metric and spectral invariants under the RSVP flow. This definition is mathematically equivalent to Markov boundary maintenance, a key construct in generative modeling and neuroscience.

A single variational principle produces both AQDP and RSVP dynamics, revealing a shared origin for geometric deformation and semantic coherence. Coherence and awareness arise as invariants of a system navigating intrinsic uncertainty, whether physical or cognitive.