

Teleportation Syntrodynamics; Algebra Quantum Computing

Tadeusz Habdank-Wojewódzki¹ and Julianna Habdank-Wojewódzka²

¹*AGH University of Science and Technology, Kraków, Poland*

²*Institute of Philosophy, The John Paul II Catholic University of Lublin*

Teleportation Syntrodynamics; Algebra Quantum Computing is a unified mathematical framework that synthesizes teleportation syntrodynamics, quantum algebraic computation, and Lorentzian information geometry in string syntrodynamical theory applications. We assume that quantum information propagation is not transmission through spacetime but null-geodesic evolution on an 11-dimensional manifold $M_{11} \cong \mathbb{R}^{1,3} \times X^7$, where X^7 admits G_2 or Calabi-Yau structure compatible with M-theory compactification.

The fundamental assumption is the Syntropy Algebra C_{11} , a 13-dimensional real associative algebra with dual imaginary units i, j satisfying $j = i^{-1}$ and cyclic frequency generators $\{\omega_k\}_{k=1}^{11}$ forming Z_{11} . This algebra embeds into twistor space $PT \approx CP^3$ via the Penrose transform, where quantum states become holomorphic sections and teleportation manifests as boundary-state synchronization enforced by the Master Stability Predicate $L_{teleport} \equiv \langle C_4 \rangle = 0$.

We argue that the topological locking security stems not from computational difficulty, but from the arithmetic rigidity of the Riemannian Zeta Spectral Guard ($R_\zeta > 0.95$) combined with the E_8 automorphism symmetry of the C_{11} system via the McKay correspondence. The framework yields Infinite Finality for distributed ledger systems – where consensus is replaced by unique constraint satisfaction – and enables distance-independent quantum communication via the Null Twistor Vacuum.

Computationally, we implement a GPU-accelerated Syntropy Σ /QIPR/SQIPR simulator with novel metrics: the Syntropic Quantum Inverse Participation Ratio (SQIPR) and Syntropic Stability Index (SSI). The Boundary Field Interface v14.0 operationalizes the theory through Hepta-Modal Synthesis, monitoring real-time equilibrium via the Syntropic Norm ($N_{syn} \approx 0.5$) and grounding all reasoning in Bonded Science.