

# THEORETICAL AND CONCEPTUAL FUNDAMENTALS OF SYSTEM COMPUTING – QUANTUM OSCILLATORY TQC/NMSI

Sergiu Vasili Lazarev

Researcher in Theoretical Physics and Cosmology, Bucharest, Romania

## ABSTRACT

*This article introduces the theoretical and conceptual foundations of the TQC/NMSI system—a novel architecture based on subquantum oscillatory logic, integrating the New Infobitic Subquantum Mechanics (NMSI) framework. Within this paradigm, information forms the fundamental substrate of reality, and “infobits” represent the essential units composing the subquantum vacuum. Quantum entanglement, nonlocality, and coherence emerge as manifestations of deeper, synchronized patterns within this infobitic field. The TQC/NMSI system utilizes entangled oscillatory qubits, stabilized by infobitic correlations, for ultra-sensitive detection of resonance phenomena. The system is designed as an oscillatory quantum network capable of detecting gravitational, electromagnetic, and geophysical anomalies through resonance node amplification. The paper extends the notion of resonance nodes to planetary-scale interactions, where celestial alignments form critical configurations that modulate Earth’s geophysical vulnerabilities. The work establishes the theoretical groundwork for a new generation of predictive systems—GeoPredict— capable of early warning of earthquakes and other large-scale geophysical processes. By combining quantum entanglement with subquantum synchronization and planetary oscillatory patterns, this model offers a scientifically plausible path to real-time, high-fidelity monitoring of Earth’s dynamic equilibrium.*

## KEYWORDS

*subquantum mechanics, infobitic logic, oscillatory quantum computing, entanglement, resonance nodes, planetary alignments, geophysical vulnerability, GeoPredict, TQC/NMSI.*

## 1. INTRODUCTION

The TQC/NMSI (Twin Quantum Computing – New Subquantum InfoBitic Mechanics) framework arises as a response to fundamental limitations within the Standard Model and classical interpretations of space, time, and quantum behavior. While mainstream quantum mechanics deals with probabilistic wavefunctions and decoherence, it lacks a unifying substrate that could explain coherence, entanglement, and gravity in a single framework. TQC/NMSI proposes such a substrate—based not on particles or fields alone, but on synchronized oscillatory logic and subquantum ‘infobits’ forming an informational vacuum.

This subquantum informational field governs all known interactions, not as isolated effects but as oscillatory responses to changes in systemic phase equilibrium. Coherence is no longer a mysterious consequence of quantum isolation, but rather a manifestation of rhythmic, resonant alignment between oscillatory systems embedded in a logic-based vacuum. This article outlines the conceptual foundations for this approach and proposes an architecture of computation and planetary feedback based on oscillatory entanglement and logical resonance.

## **2. RELATED WORK**

The exploration of subquantum dynamics has remained largely speculative in mainstream physics, with notable exceptions such as David Bohm's pilot-wave theory, which introduced a non-local hidden variable model to explain quantum coherence. Similarly, stochastic electrodynamics and certain approaches in quantum gravity have postulated a more fundamental substructure underlying quantum phenomena, yet none has successfully unified the quantum, relativistic, and informational frameworks into a coherent system.

In the realm of quantum computing, conventional architectures rely heavily on qubit superposition and fragile entanglement that are sensitive to decoherence. Recent proposals involving topological qubits, quantum error correction, and time crystals reflect the growing awareness that oscillatory coherence may be essential for robust quantum computation. However, these innovations do not address the foundational informational substrate from which coherence emerges.

TQC/NMSI distinguishes itself by grounding coherence, entanglement, and nonlocality in a structured oscillatory logic layer beneath standard quantum mechanics. This perspective finds indirect support in biological oscillatory systems, coherent vibrational modes in condensed matter, and the phase synchronization observed in astrophysical plasmas and atmospheric dynamics.

No existing paradigm has yet unified planetary-scale oscillations with subquantum logic as a computational mechanism. This paper builds upon a variety of such phenomena—meteorological, geophysical, and cosmological—to construct a theory of natural system computing driven by resonance and logic, not brute-force computation. The work extends these insights to propose that tornadoes, magnetic storms, planetary alignments, and quantum entanglement may all be emergent manifestations of the same underlying informational oscillatory field.

## **3. THEORY / PROPOSED MODEL**

The TQC/NMSI architecture (Twin Quantum Computing / New Subquantum InfoBitic Mechanics) proposes that the universe operates as an integrated computational system, based not on classical logic gates or probabilistic quantum states, but on coherent oscillatory nodes—termed CLOs (Coherent Logical Oscillators)—that resonate within an infobitic subquantum field.

This field, composed of infobits, is not energetic in nature but logical-oscillatory, governed by synchronization, phase alignment, and harmonic coherence. Information is not transmitted by carriers but emerges from local oscillatory entanglement patterns, analogous to standing waves in a resonance chamber.

### **3.1. CLO Units and Logical Structures**

Each CLO is an autonomous node capable of both computation and phase synchronization with neighboring nodes. The state of a CLO is determined by its oscillatory phase, amplitude, and modulation pattern. In clusters, CLOs form resonant computation networks, capable of logic synthesis and systemic feedback.

These networks can naturally align with environmental patterns—geological formations, biological structures, planetary fields—resulting in hybrid computational phenomena, where logic and matter co-evolve.

### 3.2. Oscillatory Logic Instead of Binary Gates

Unlike classical Turing logic, which encodes information as discrete bits (0 or 1), oscillatory logic encodes states in phase, frequency, and resonance relations. The result is a system capable of analog-digital hybrid computation, resilient to perturbation due to its harmonized structure.

This model allows parallel computation across spatially separated CLOs, mimicking quantum non-locality but with stable oscillatory coherence, not probabilistic collapse.

### 3.3. Planetary Oscillatory Computing and Logical Network

At the planetary scale, the TQC/NMSI model postulates that Earth itself acts as a coherent oscillatory processor, embedded within a hierarchical structure of logical resonance. Localized nodes of coherence, termed **Coherent Logical Oscillators (CLOs)**, appear in various atmospheric, geophysical, or constructed forms—ranging from tornado vortices to ancient stone complexes and modern resonant architecture.

In this context, tornadoes are interpreted as **temporary, mobile CLOs** formed in regions lacking stable geographical resonance points such as mountain peaks. Their emergence serves a computational and diagnostic function: they probe environmental parameters and transmit data to the planetary oscillatory core through subquantum phase alignment.

These nodes are not chaotic byproducts of thermodynamic instability, but instead structured, goal-oriented phenomena within a broader logic system.

The Earth's resonant shell, composed of permanent and temporary CLOs, creates a **planetary computation network** where synchronization, not centralization, governs logical operations. Each CLO resonates with specific frequencies based on its composition, altitude, geometry, and interaction with solar, lunar, and cosmic oscillators.

Evidence for such coordination emerges from the geometric regularity of supercell formations, lenticular clouds, aligned seismic responses, and the harmonic recurrence of extreme weather in predictable nodal paths. Furthermore, ancient megalithic structures appear to be intentionally aligned with planetary energetic lines—possibly to maintain or stabilize regional resonance for climate or communication coherence.

Thus, planetary oscillatory computing emerges as an **intentional subsystem of a broader cosmological logic field**, one that continuously interacts with solar, galactic, and even inter-universal inputs through frequency-phase matching, not energy exchange.

### 3.4. Temporal Relativity and Oscillatory Frequency

Within the TQC/NMSI framework, **time is not an absolute linear dimension**, nor merely a relativistic function of speed and gravity as in Einsteinian theory, but a **function of oscillatory frequency** within a given subquantum system. The rate at which a CLO or ensemble of CLOs oscillates defines its **subjective temporal flow**.

This interpretation introduces the concept of **programmable time**—an entity’s perceived duration and internal causality sequence depend on the frequency at which it resonates in the subquantum field. Higher-frequency systems experience **compressed or accelerated time**, while lower-frequency systems unfold **subjective time more slowly**, even if both are synchronized by a global logic rhythm.

This insight explains:

- Why **subatomic particles** decay at different rates in different environments.
- Why **gravitational anomalies** alter subjective time without changing the nature of physical events.
- Why biological processes (aging, memory formation, dream-state duration) **vary disproportionately** under different electromagnetic or geophysical resonance conditions.

In planetary computing, **tornadoes**, being high-frequency dynamic CLOs, may operate at compressed subjective time rates, performing **rapid environmental assessments** and transmitting massive volumes of structured data over short durations.

Furthermore, the **Sun itself**—as shown in solar imaging time-lapses—manifests oscillatory plasma loops and pulsing activity resembling **biological cycles**, suggesting that **stars may experience and modulate time as a function of their oscillatory core dynamics**, not purely as thermonuclear clocks.

Thus, temporal relativity in the TQC/NMSI model is inherently **oscillatory, local, and programmable**, opening possibilities for artificial systems to experience or manipulate time by tuning their subquantum resonance.

## 4. RESULTS / IMPLICATIONS / APPLICATIONS

The TQC/NMSI framework yields a rich spectrum of conceptual and technological implications across multiple scientific domains, many of which redefine traditional boundaries between physics, computing, and planetary science.

### 4.1. Earth as a Logical Processor

The model implies that Earth is not a passive object within gravitational equilibrium, but an **active computational entity**, maintaining dynamic systemic resonance through distributed CLOs. This computational capacity enables:

- Global coherence in climate patterns,
- Synchronization of biospheric cycles,
- Natural detection and **anticipation of geophysical anomalies**, such as earthquakes.

Systems like **GeoPredict**, built on TQC/NMSI, could detect pre-seismic resonance phase shifts before traditional mechanical or electromagnetic signals are measurable.

## 4.2. Atmospheric Structures as Logical Nodes

Phenomena like **tornadoes, lenticular clouds, and supercells** are reinterpreted as transient, intelligent data-gathering processes. These formations emerge when stable nodes are lacking, particularly in flat regions where **natural resonance geometry** is weak.

Such CLOs serve:

- As diagnostic oscillators,
- As communication interfaces between Earth and solar-logical cycles
- To reconfigure regional atmospheric equilibrium after high entropy events.

## 4.3. Artificial CLOs in Architecture and Technology

Ancient sites (e.g., pyramids, Stonehenge, Tibetan stupas) and some modern architectural complexes inadvertently or intentionally act as **amplifiers of resonance**. Understanding this principle could inspire **conscious architectural design**, with buildings as **integrated oscillatory modules**, enhancing:

- Environmental feedback,
- Biologic synchronization (e.g., hospitals),
- Communication with planetary rhythms.

## 4.4. Next-Generation Computing

TQC/NMSI opens a path to **ternary quantum computing** via entangled oscillators embedded in structured materials like **endohedral metallo-fullerenes (EMFs)**. These systems:

- Do not require cryogenics,
- Do not collapse probabilistically,
- Operate continuously via **subquantum harmonic resonance**.

Their architecture enables **instantaneous data transfer** through oscillatory synchronization, offering a paradigm shift in communication speed and scale—**beyond light speed** as a limiting metric, since **no physical transfer** occurs.

## 5. CONCLUSION AND FUTURE WORK

This work introduces the **TQC/NMSI paradigmas** a unifying theory that reinterprets fundamental principles of physics, computation, and planetary behavior through the lens of **subquantum oscillatory logic**. The model challenges conventional frameworks by proposing that:

- **Information precedes energy**, and that reality is structured around **coherent infobitic oscillations**.
- **Time is programmable**, determined by resonance frequency and not fixed by mass or velocity.
- **Natural phenomena such as tornadoes or solar activity** are not chaotic side effects but **logical responses** in a planetary-scale computational framework.
- **Biological and non-biological life** are both emergent properties of synchronized oscillatory systems, suggesting a broader definition of consciousness and coherence in the universe.

The theory also reframes computing: not as manipulation of symbols by deterministic logic, but as **emergent behavior in harmonic systems**, offering a viable blueprint for **Twin Quantum Computing (TQC)**—robust, scalable, and capable of interacting with planetary and cosmic information flows.

### 5.1. Future Directions

To validate and develop the TQC/NMSI system further, several experimental and engineering paths are proposed:

- Constructing controlled arrays of artificial CLOs using **resonant architectural structures**.
- Monitoring geophysical oscillations with subquantum sensitivity via distributed sensor networks aligned with planetary resonance paths.
- Exploring advanced materials such as **EMF-based logical molecules** for information processing without collapse.
- Implementing **real-time planetary feedback systems (GeoPredict)** for early-warning detection based on CLO oscillatory phase shifts.

Ultimately, the TQC/NMSI framework aspires not only to expand scientific horizons but to offer **a harmonious integration between human intelligence and planetary logic**— a bridge between conscious computation and the living universe.

### ACKNOWLEDGMENTS

The author would like to thank all contributors to the early conceptual development of TQC/NMSI theory, as well as the editors and reviewers of previous articles whose feedback helped shape the direction of this research. Special recognition goes to the open-source and academic communities whose dialogue and data sharing have made such cross-disciplinary innovation possible.

This work received **no specific funding** from any public, commercial, or not-for-profit funding agency.

### REFERENCES

- [1] Lazarev, S. V. (2025). *Life and Consciousness in the TQC\_NMSI Architecture*.
- [2] General Science Journal. <https://www.gsjournal.net/Science-Journals/Research%20Papers/View/10145>
- [3] Lazarev, S. V. (2025). *Tornado as a Cosmic Message: Logical Epilogue in the Planetary TQC Network*. General Science Journal. <https://www.gsjournal.net/Science-Journals/Research%20Papers/View/101423>. Bohm, D. (1952). *A Suggested Interpretation of the Quantum Theory in Terms of "Hidden" Variables. I & II*. Physical Review, 85(2), 166–193.
- [4] Penrose, R. (1994). *Shadows of the Mind: A Search for the Missing Science of Consciousness*. Oxford University Press.
- [5] Hameroff, S., & Penrose, R. (2014). *Consciousness in the universe: A review of the 'Orch OR' theory*. Physics of Life Reviews, 11(1), 39–78.
- [6] Fröhlich, H. (1968). *Long-range coherence and energy storage in biological systems*. International Journal of Quantum Chemistry, 2(5), 641–649.
- [7] Montagnier, L., et al. (2011). *DNA waves and water*. Journal of Physics: Conference Series, 306(1), 012007.