Title:

The Gradient Method: Defining Hyperdimensional Distances via Temporal and Entropic Anomalies

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Abstract:

This whitepaper proposes a novel theoretical framework for detecting and measuring distances in dimensions beyond the observable three, using temporal and entropic gradients as proxies for higher-dimensional displacement. Based on the principles established in the unpublished manuscript *"Magic Theory: Information as the Fundamental Unit of Reality"*, this model interprets time and entropy not as fundamental dimensions, but as relative indicators of informational separation. By investigating critical points in physical systems--namely black hole event horizons and quantum condensate states near absolute zero--we demonstrate how observable anomalies can serve as indicators of projection stress or distortion from higher-dimensional origins. This work introduces the Veradis-Radius Method (VRM), a semi-formal equation set for describing such distances.

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1. Introduction

Conventional physics regards space and time as fundamental. However, when viewed through an information-centric ontology, time and entropy become derivative descriptors of information

distribution and accessibility. Building on this reinterpretation, we explore the possibility of triangulating higher-dimensional structures based on deviations in those secondary descriptors.

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2. Foundational Premise: Information as Reality

As proposed in the Magic Theory manuscript (Veradis, 2025 Ig Nobel submission), information is the base layer of all existence. Matter, energy, space, and time are emergent phenomena arising from structured, perceivable configurations of information.

> Time is the sequence gradient between information states.

> Entropy is the ordering gradient from an observer's frame.

Thus, anomalies in time (as delay, dilation, or discontinuity) and entropy (as ordering collapse or reversals) are interpreted as manifestations of informational distortions caused by higher-dimensional displacements.

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3. Observable Gateways: Critical Boundaries

We identify two primary observable zones in physics where dimensional projection strain manifests:

- **Event Horizons (Black Holes):** The compression of time to zero and the breakdown of information reversibility.

- **Quantum Critical States (Bose-Einstein Condensates, Superconductivity):** Anomalous entropy behavior and large-scale coherence.

Both cases occur at the edge of our current physical models and can be reframed as localized projection failure zones where 3D structures are influenced by higher-order information topology.

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4. The Veradis-Radius Method (VRM)

We propose the following semi-formal measurement construct:

$$ \Delta \Phi = f\left(\frac{dI}{dt}, \frac{dI}{dS}\right) $$

Where:

- $\Delta \Phi$: Projective angular shift (degree of extra-dimensional influence)

- I: Total accessible information of the system

- t: Temporal gradient (modulated by relativistic velocity / light-speed proximity)

- S: Entropic gradient (measured through phase coherence, thermal behavior)

This equation suggests that the deviation from expected behavior in these gradients correlates to the magnitude of higher-dimensional projection interference.

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5. Suggested Experimental Scenarios

Environment	Predicted Anomaly	Observable Variable
Simulated event horizon analogues	Temporal discontinuity / redshift shear	Light pulse delay, quantum decoherence
Near-absolute-zero condensates	Macro-entropy collapse, phase inversion	Flow asymmetry, spin alignment resonance
Cosmological magnetic poles + neutrino flow	Inverted entropy spikes	Irregular temporal jitter, decay rate skew

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6. Implications & Next Steps

If validated, the VRM offers a method to define and map hyperdimensional distances without direct traversal or exotic energy requirements. Instead, it uses native anomalies as naturally occurring measurement interfaces.

Next steps include refining the mathematical model, simulating VRM behavior in known extreme physical environments, and establishing a standardized metric for cross-anomaly correlation.

Acknowledgments

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Reference (Unpublished)

Veradis, S. (2025). *Magic Theory: Information as the Fundamental Unit of Reality*. Ig Nobel Prize Submission Draft.