

ABSTRACT

We introduce the Theory of General Relationality (TRG), modeled as Emergent Local Dimensionality (ELD), asserting that spacetime is not a fundamental background but an emergent effect of relational correlations between particles.

Each particle carries an internal Dimensional Vector (\vec{D}_i) which defines its existence.

TRG resolves key issues by:

1 Gravity: Defining gravitational force as the gradient of local relational density ($\nabla \rho_R$).

2 Massa/Higgs: Interpreting the Higgs Field as the Universal Relational Density (ρ_R^H), where mass (m_i) is the particle's resistance (projection) to disalign from this field.

3 Singularity: Postulating that inside a Black Hole, the Relational Higgs Field collapses to zero ($\rho_R^H \approx 0$), resulting in a singularity of zero inertial mass instead of infinite density.

4 Unification: Integrating String Theory by hypothesizing the \vec{D}_i vector embodies the particle's internal Calabi-Yau geometry.

The model predicts that existence requires relational motion (Absolute Zero is unattainable) and that c and m are locally variant. This offers an intrinsically finite, background-free path to quantum gravity

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