

# TU-GUT-SYSY v24

Topological Entanglement Theory –  
A Human-Led Candidate for Quantum Gravity

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**Human-led research with AI assistance by Grok 4 (xAI)**

All conception, direction, validation and responsibility reside exclusively with the human author.

10 December 2025

# Authorship Priority Declaration

(valid for any international prize including the Nobel Prize in Physics)

This work is conceived, developed and entirely directed by the human researcher **Simon Solomon**. AI tools have been used only as computational assistants. AI systems do **not** qualify for co-authorship or prize attribution.

**Public permanent archive:**

<https://github.com/TETcollective/TETcollective-public>

## Abstract

Version 24 (10 December 2025) of the Topological Entanglement Theory (TET) — a human-led iterative framework proposing that spacetime curvature and quantum statistics emerge from the saturation of topological entanglement networks.

Core public claims (fully falsifiable 2026–2030):

- Gravity as emergent phenomenon from saturated quantum entanglement on topological lattices
- Spin-1/2 statistics from purely bosonic topological degrees of freedom
- Finite vacuum quantum stress with detectable gravitational signatures
- Spacetime connectivity consistent with the ER=EPR paradigm
- Natural UV completion of quantum gravity without extra dimensions or supersymmetry
- Cosmological constant  $\Lambda$  from vacuum entanglement saturation

All quantitative bounds and detailed protocols reserved for protected publications.

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