Abstract Submitted
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Foundations for a New Quantum Theory of Gravity TRAVIS ROGOWSKI, Hunter College/CUNY Graduate Center — Postulating that a Quantum Theory of Gravity ought to have a quantized spacetime, a Euclidean spacetime is built, by simply reorganizing the metric, $dt^2 = d\tau^2 + d\vec{x}^2$, that preserves fundamental principles of Special Relativity. Motion through a discrete Eucl. s.t must be probabilistic, for a point particle cannot move in between position sites, but only move one or none in a given direction. Requiring this motion to be inherently uncertain, along with a rule for determining the probability of moving one site, naturally produces Quantum Mechanics as is traditionally understood. Piecing things to together here, QM and SR are fundamentally the same process of inherently uncertain and probabilistic motion in discrete Eucl. s.t. QFT uses a Eucl. s.t, but only as a mathematical trick. Here, it's taken to be the actual fabric of the Universe, and , especially being discrete, an Absolute spacetime, and thus, answers the Time Problem. Where dt is absolute time, and $d\tau$ is the relative experience of time. It's clear to see that QFT cannot be quantized for gravity because it's an improper union of SR and QM. Heisnberg's U.R. predicting 'lattice' spacing, double slit results, emergent wave nature, and the building blocks for incorporating gravity will also discussed.

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