

# Quantizing the Bosonic String on a Loop Quantum Gravity Background

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We write down an action for a bosonic string propagating in a bulk background whose geometry is specified in terms of connection and tetrad (or “vierbein”) variables

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## I. INTRODUCTION

“Quantum gravity” refers to the broad enterprise dedicated to finding a complete, consistent theory in which quantum mechanics coexists peacefully with general relativity.

## II. MODIFIED POLYAKOV ACTION

## III. EQUATIONS OF MOTION

## IV. PHYSICAL IMPLICATIONS

## V. DISCUSSION

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## Appendix A

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