Summaray of Master's Thesis

Aspects of Low-dimensional Quantum Gravity

Hossein Mohammadi[a]

[a] *Department of Physics, Sharif University of Technology, P.O. Box 11155-9161, Tehran, Iran*

[b] *School of Particles and Accelerators, Institute for Research in Fundamental Sciences (IPM), P.O. Box 19395-5531, Tehran, Iran*

E-mail: hossein.mohammadi.00427@gmail.ir

Abstract: This is an insightful summary of my master's thesis on quantum gravity in two and three dimensions, in which I tour its developments. I start with JT gravity at both classical and quantum levels, then continue with 3D gravity, particularly focusing on the asymptotic symmetries. Finally, we review the partition function of 3D gravity in detail and discuss its issues. This summary is in progress and updates continuously.

Contents