Factor Orderings, Vacuum Energy, and Topology in 2-D Quantum Gravity DHRUV PATEL, Wentworth Institute Technology — The Polyakov action is a generalization of the arc length problem for the motion of free particles along length-minimizing curves. It uses the idea of embedded minimal surfaces to construct a completely geometric model of 2-D gravity. The Polyakov action can be reduced to a quantum mechanics problem by imposing proper time gauge. In this talk, I will construct a propagator for the 2-D gravity quantum mechanical Hamiltonian considering factor ordering ambiguity. I will also discuss some topological issues related to the reduction of the Polyakov action to a finite dimensional action.

Dhruv Patel
Wentworth Institute Technology