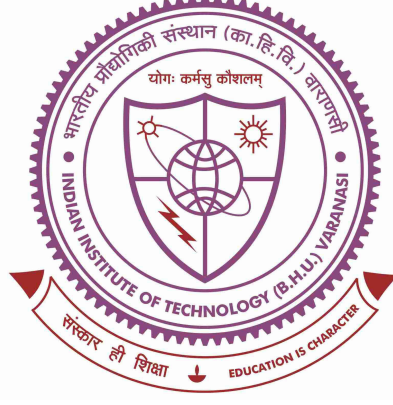


Quantum Skyrmions: Quantum Phase Transition, Entanglement Dynamics and Thermodynamics



**Thesis submitted in partial fulfillment
for the Award of
DOCTOR OF PHILOSOPHY
in
PHYSICS**

by
VIPIN V

Under the supervision of
Dr. Sunil Kumar Mishra

**DEPARTMENT OF PHYSICS
INDIAN INSTITUTE OF TECHNOLOGY
BANARAS HINDU UNIVERSITY
VARANASI - 221005**

ROLL NUMBER
18171503

YEAR OF SUBMISSION
2025