



Indian Institute of Space Science and Technology
Valiamala, Thiruvananthapuram - 695 547, Kerala

ANYONS AND TOPOLOGICAL QUANTUM COMPUTATION

Prof. Sumathi Rao

ICTS endowed Senior Professor at ICTS-TIFR, Bengaluru



14:00
15:00

TO



07
MARCH **2025**



C-109

Interdisciplinary Block (D1)

The talk will give an introduction to anyons and explain why there is so much interest in anyons in recent times. We will discuss the 1 D Kitaev model as an explicit model for Majorana modes, describe the current experimental scenario and briefly touch upon its extension to other non-abelian anyons like parafermions. Finally, we will discuss how non-abelian anyons can be used in topological quantum computing.



Prof. Sumathi Rao began her research career in elementary particle physics before shifting her focus to condensed matter physics. Her significant contributions include work on quantum wires, quantum dots, and mesoscopic physics in low dimensions. Currently, her research interests lie in the area of topological quantum matter. Prof. Rao is a Fellow of the National Academy of Sciences, India, the Indian Academy of Sciences, and the American Physical Society.



Live Stream: <https://tinyurl.com/2p8c4wmx>