Tata Institute of Fundamental Research

INFOSYS PUBLIC LECTURE

2016 Nobel Laureate

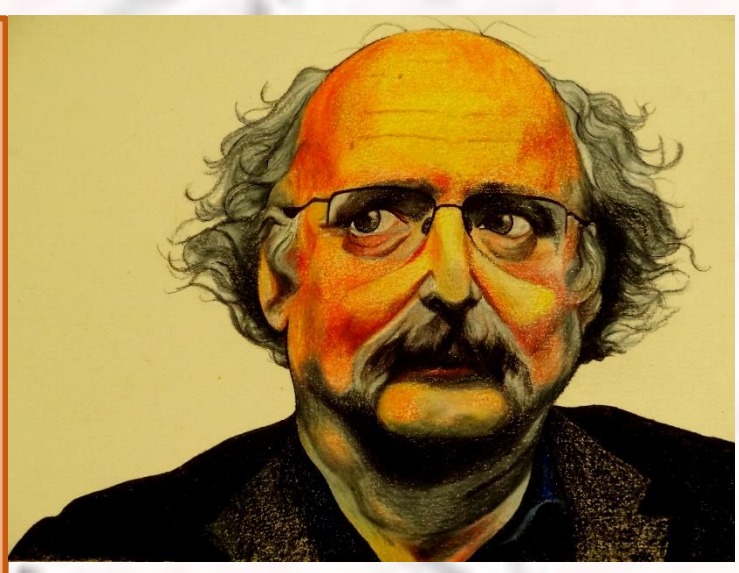
F. Duncan M. Haldane

Princeton University

New Developments in Quantum Mechanics: Entanglement and the dream of quantum information processing

A series of unexpected discoveries have led to new ways to think about quantum materials. In a sense, this constitutes a second quantum revolution, which brings together Quantum Entanglement, which Einstein famously called 'spooky action at a distance', and Topology. These developments have led to the discovery of topological phases of quantum matter which could be the key to build a Quantum Computer protected from errors by the topological properties of these phases.

Duncan Haldane received his PhD in 1978 from Cambridge University. He has worked at Institut Laue–Langevin in Grenoble, France, the University of Southern California, Los Angeles, Bell Laboratories, Murray Hill, New Jersey, the University of California, San Diego, and, since 1990, at Princeton University, New Jersey. In 2016, he received Nobel Prize in Physics "for theoretical discoveries of topological phase transitions and topological phases of matter."



Artwork: Sumeru Hazra, QuMaC Lab, TIFR

6:30 pm, Wednesday, January 9, 2019

Homi Bhabha Auditorium,TIFR, Colaba, Mumbai

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