



ICTS Synopsis Seminar

Title : Direct and indirect measurements in quantum mechanics

Speaker : Varun Dubey (ICTS -TIFR, Bengaluru)

Date : Wednesday, 17th May 2023

Time : 11:00 AM (IST)

Abstract : Measurement theory is integral to the foundations of quantum mechanics. The problem of determining the distribution of first arrival time of a quantum particle at a site requires continuous monitoring of the system state. Continuous monitoring inevitably leads to the quantum Zeno effect which can be avoided via special coupling between the detector and the system proper. We employ such coupling to study the problem of arrival times and of counting statistics of the measurement readout for several simple models which admit exact analysis. An important feature of the description of dynamics under continuous measurements is that evolution of the system is governed by non-normal operators. We further discuss the spectral properties of such operators as they are encountered in the considered models.

Venue : Online & Emmy Noether Seminar Room (ICTS)

Zoom link: <https://icts-res-in.zoom.us/j/88306628143?pwd=dVpONHVyR0NYd1hOdDhNNG1xO1dzdz09>

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