



# QuanTalks

IISc Quantum Technologies Initiative (IQTI) Seminar Series



**Title:** Partial coherence Applications in quantum state measurement, imaging and communication

**Speaker:** Dr. Anand K. Jha

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**Abstract:** Fields with quantum correlations are resources to several quantum-information applications as they could be exploited for performing tasks that would otherwise be impossible. One of the major challenges faced in the implementation of many quantum-information protocols is the efficient measurement of quantum states and quantum correlations, especially the high-dimensional quantum states. In this talk, I will present how partial coherence properties could be utilized for efficient measurements of high-dimensional quantum states and correlations. I will also present some of our works on the applications of partially coherent light fields for imaging and communication.

**Biography:** Dr. Anand Kumar Jha obtained his 5 years' integrated MSc in Physics from IIT Kharagpur in 2002 and his PhD from the University of Rochester in 2009. After doing a postdoc for about a year at the University of Rochester, Dr. Jha worked with Intel corporation for about two years and then joined IIT Kanpur as an assistant professor of Physics in 2013. Since 2018 he has been an associate professor of Physics at IIT Kanpur. Dr. Jha has set up a "quantum optics and entanglement" laboratory at IIT Kanpur and carries out experimental and theoretical research works in the broad areas of classical & quantum coherence, quantum entanglement, and quantum metrology.

**Date & Time**  
**Wednesday,**  
**28th September 2022,**  
**5 PM (IST)**



**Meeting Link:** [Click here to join the Webinar](#)

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