

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

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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.