

Quantum shockwave and its channel capacities

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Abstract

In this talk, we present a scheme to produce shockwaves in quantum fields by means of pre-timed emitters. We show how large amplitudes in a shockwave can be used for communication and how by suitably pre-entangling the emitters one can enhance the classical channel capacity and modulate the flow of information. Furthermore, we present the lower bound on quantum channel capacity in a massless field in pursue of determining quantum channel capacity for quantum shockwaves.