Young IQIS 2020 - Young Italian Quantum Information Science Conference



Contribution ID: 13

Type: Oral

## Bound states in the continuum in arrays of quantum emitters

Wednesday, 30 September 2020 14:15 (15 minutes)

Quantum emitters coupled to EM fields in waveguides provide a controllable and experimentally feasible testbed to observe interesting physical phenomena; in particular, the emergence of bound states in the continuum opens new possibilities to generate states with specific entanglement properties. We characterize analytically the bound states for any number of emitters, showing that the finite spacing between the emitters and the structure of the field dispersion relation become relevant and yield nonperturbative effects.

Presenter: LONIGRO, Davide (University of Bari & INFN)

Session Classification: Invited