30. QUANTUM NETWORKS

31. QUANTUM CHANNELS

31.10.+l Long distance photonic channel
31.20.+t Quantum state transport in quantum chains and arrays
31.25.+d Decoherence in quantum channels
31.30.+c Characterization of quantum channels
31.35.+i Dissipative quantum channels
31.40.+d Entanglement distribution
31.50.+m Quantum channel memory
31.60.+n Non-photonic quantum channels
31.70.+g Gaussian channels
31.80.+b Bosonic channels
31.90.+e Entangled channels

32. QUANTUM REPEATERS

32.10.+c Communication over noisy channels
32.20.+m Quantum memories/storage of qubits
32.30.+s Entanglement swapping
32.40.+p Realization of purification, concentration, and distillation in physical systems
32.50.-c Quantum communication complexity
32.50.Fp Quantum fingerprinting
32.60.+s Small scale quantum processors

33. QUBIT INTERFACES

33.10.+a Cavity QED (atoms or ions)
33.20.+d Quantum dots
33.30.+s SQUIDs
33.40.+j Josephson junctions <-> ions
33.45.+u Superconducting qubits <-> spins
33.50.+n Nanomechanical resonators <-> quantum dots, superconducting qubits
33.60.+a Atomic systems <-> mesoscopic conductors
33.70.+o Optical systems <-> solid-state systems
33.80.+m Atomic-ensemble quantum memory for light
33.90.+e Entanglement between atoms and photons