Quantum Information Group Seminars

Speaker: Nerses Ananikian
(Yerevan Physics Institute, Yerevan, Armenia)

TITLE: Thermal entanglement in low dimensional systems

ABSTRACT:
My talk will be devoted to magnetization plateaus and thermal entanglement for antiferromagnetic and ferromagnetic exchanges at low dimensional systems. In the first part of my talk I consider the magnetization plateaus and thermal concurrence as exactly solvable Ising-Heisenberg models on a diamond chains and double sawtooth spin ladder with multiple-spin interaction exchanges. I calculate magnetic plateau, specific heat and quantum entanglement properties of the distorted diamond chain model for azurite by means of variational mean-field like treatment based on Gibbs-Bogoliubov inequality. The magnetization plateaus, magnetic susceptibility and thermal negativity of Ni-containing for the spin 1 materials on a diamond chain and polymers there will be the representation of the second part. The last part of my talk will be dedicated to using the parallel computing in ALPS ((Algorithms and Libraries for Physics Simulations) project and Wolfram Mathematica Language of the pure Heisenberg models.

Place: The department council room (5th floor)
Date: Tuesday 21th of Azar, 3:00 pm.