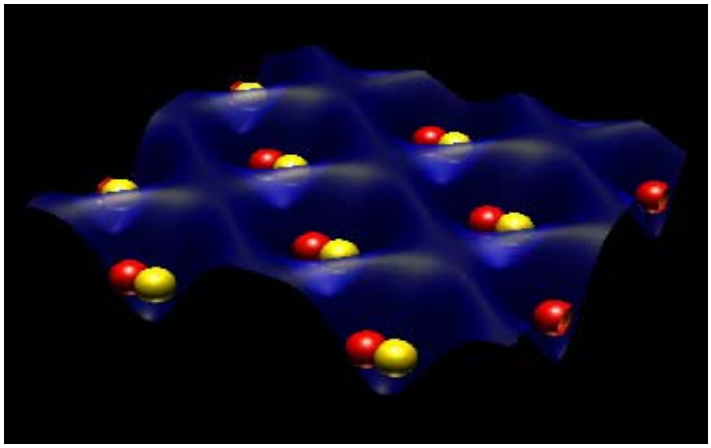
NEW YORK CITY COLLEGE OF TECHNOLOGY
Joint Physics and Mathematics Colloquium

History and the State-of-art in Quantum Computation



Presented by:

Dr. Vladimir Tsifrinovich

Physics Department
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Thursday, March 20, at 12:45 PM
Namm 804

I am going to review the history and current state of quantum computation, its basic principles, theory, possible applications and experimental implementation. My talk is supposed to cover a wide spectrum of problems: quantum algorithms, quantum logic gates, quantum bits (qubits) quantum entanglement, initialization of qubits, single-qubit measurement, decoherence, error correction codes, collective decoherence, decoherence-free subspace, gate, statistical, and adiabatic quantum computation, quantum computer implementations with ions, atoms, electrons, photons, electron spins, nuclear spins and superconducting circuits.

Light refreshment will be served