Seminar: "Geometry&Physics@DFT"

Location: seminar room DFT (IFIN-HH),
http://events.theory.nipne.ro/gap/index.php/seminar

Date: Friday, October 18, 2013, 12 am

Title: **Encoding graphs into quantum states: an axiomatic approach**

Speaker: **Dr. Radu IONICIOIU**

Abstract: "A fundamental problem in quantum information is to describe efficiently multipartite quantum states. An efficient representation in terms of graphs exists for several families of quantum states (graph, cluster, and stabilizer states), motivating us to extend this construction to other classes. We introduce an axiomatic framework for mapping graphs to quantum states of a suitable physical system. Starting from three general axioms we derived a rich structure which includes and generalizes several classes of multipartite entangled state, like graph or stabilizer states, Gaussian cluster states, quantum random networks, and projected entangled pair states. Due to its flexibility we can extend the present formalism to include directed and weighted graphs."