SOLUTION GROUP REPRESENTATIONS AS QUANTUM SYMMETRIES OF GRAPHS

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Abstract:
This talk concerns quantum automorphism groups of graphs, a generalization of automorphism groups of graphs in the framework of compact matrix quantum groups. We will focus on certain colored graphs constructed from linear constraint systems. In particular, we will give an explicit connection of the solution group of the linear constraint system and the quantum automorphism group of the corresponding colored graph. Using this connection and a decoloring procedure, we will present an example of a graph with quantum symmetry and finite quantum automorphism group. This talk is based on joint work with David Roberson.