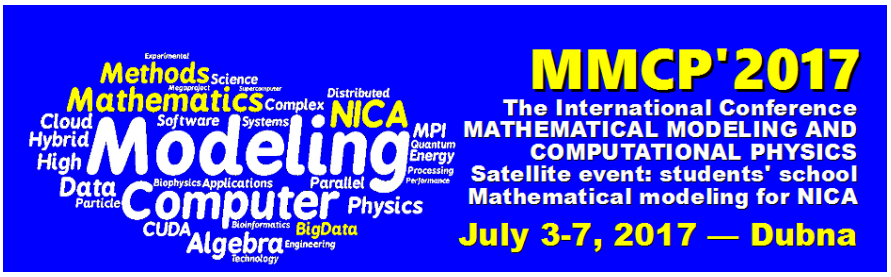

Contribution ID: **78** Type: **not specified**

On stratifications of X-state space of two qubits

Thursday, 6 July 2017 15:45 (15 minutes)

We are considering the state space of two qubits formed from the X-states. Its decompositions with respect to two groups actions are studied. The first decomposition is constructed in accordance with the types of orbits of the invariance group G_X of X-state space. The second decomposition arises considering the action of the subgroup LG_X of invariance group G_X, the so-called "local group of invariance"of X-states, every element of which is given by the tensor product of mutually independent unitary transformations acting on each qubit. The equations and inequalities, determining all components of both stratifications, are given in terms of the corresponding group invariants.
The primary stratification classifies the X-state space in accordance with the properties of two-qubit system as a whole, while the secondary stratification provides complete information on non-local characteristics of the given composite system.

Primary author: Dr KHVEDELIDZE, Arsen (Joint Institute for Nuclear Research)

Co-author: Ms TOROSYAN, Astghik (LTP)

Presenter: Ms TOROSYAN, Astghik (LTP)

Session Classification: Computer Algebra and Quantum Computing with Applications (I)