Abstract
We consider string theory and its relatives – higher spins theory and gauge theories. The main aims of this study are features connected in different ways with gauge/string and AdS/CFT dualities. We propose to study universality properties of gauge/string theories, and interaction Lagrangians of higher spin theories. Among specific tasks are: universal representation of observables in Chern-Simons theory, universal quantum dimensions, q-dimensions of Kac-Moody algebras, their relations with partition functions, expansion of universal volume of groups, its relation with gauge/string duality and moduli spaces of surfaces, Y-objects, etc. Also we turn to the important task of construction of the Weyl invariant actions for higher spins in general gravitational background and to highly nontrivial task to combine these invariants in unique gauge invariant action and obtaining corresponding restriction on gravitational background. Another important task in higher spin gauge field theory is to generalize our covariant construction for cubic interaction to the case of AdS background in explicit form using bulk covariant derivatives.

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