VII International Conference "Models in Quantum Field Theory" (MQFT-2022)



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Supersymmetric Higher Spins from Harmonic Superspace

Tuesday 11 October 2022 16:45 (25 minutes)

We present an off-shell formulation of calN=2 higher spin supermultiplets within the harmonic superspace approach. Each supermultiplet is described by a triple of unconstrained harmonic analytic gauge superfields, with the linearized action of some universal form. To the first order in gauge superfields, we give their off-shell cubic couplings to calN=2 matter hypermultiplets and define the higher-spin gauge transformations of the latter. Some further prospects of this new direction of applications of the harmonic superspace approach are discussed in brief.

The talk is based on two recent works with Ioseph Buchbinder and Nikita Zaigraev, JHEP 2021, 2022.

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