

## NEW GEOMETRIC STRUCTURES FROM STRING THEORY

Double Field Theory (DFT) is a T-duality covariant extension of string theory, in which the string fields depend also on dual coordinates associated with winding excitations of strings, as well as the standard space-time coordinates. This formulation gives rise to new geometric structures associated with Hitchin's generalized geometry program. Also, the doubling of the coordinates makes the T-duality group  $\text{Spin}(d,d)$  manifest. This large duality group gives rise to a rich possibility of duality twisted reductions of DFT. This talk, which is based on the two papers below, is about the new geometric structures arising from DFT and the duality twisted reductions of DFT.

- “Duality Twisted Reductions of Double Field Theory of Type II Strings”;  
JHEP 1709 (2017) 044 arXiv: 1705.08181
- “Massive Deformations of Type IIA String Theory within Double Field Theory”;  
arXiv: 1706.08883