**Institut Henri Poincaré**
11 rue Pierre et Marie Curie, 75231 Paris cedex 05

**String Theory in Greater Paris**

**Rencontres Théoriciennes**

**“Supergravité, théorie des cordes et théorie M”**

***Jeudi 28 Mars 2024, 11:45***

# Evgeny Skvortsov

***Mons University***

## Higher spin physics

*I will review two aspects in which higher spin fields play an important role.*

*Firstly, higher spin states seem to be inevitable in models of quantum gravity, e.g. within AdS/CFT correspondence and in string theory. One of the simplest examples relates theories with massless higher-spin fields, known as higher spin gravities, to (Chern-Simons) vector models that describe many second order phase transitions in the real world and were conjectured to exhibit a number of dualities, including the 3d bosonization duality. I will review the progress towards constructing exact models of AdS/CFT along these lines and how higher spin symmetry is manifested on the CFT side and can be used to prove the 3d bosonization duality.*

*Secondly, any massive and rotating compact object, e.g. a black hole, can be modelled by a higher spin particle. I will review the recent progress in constructing theories with massive higher spin fields with applications to the description of gravitational wave radiation from compact binaries.*

**Institut Henri Poincaré, salle 314, 3ème étage**

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