

## VII Leopoldo García-Colín Mexican Meeting on Mathematical and Experimental Physics



Contribution ID: 18

Type: **not specified**

### **YURI BONDER: Symmetries in theories with nondynamical fields**

*Thursday, 20 February 2020 16:30 (30 minutes)*

I will first present a formalism to study symmetries in the context of diffeomorphism-invariant gauge theories. With it, I will show a universal symmetry algebra that contains the gauge symmetry and a covariant version of the diffeomorphisms. Then, I will include nondynamical fields that are supposed to describe effects associated with more fundamental degrees of freedom. Typically, these objects reduce/break the symmetries of the theory, and I will present a method to find the residual symmetries. I will present some results obtained with this method in theories with explicit Lorentz invariance and for the Unimodular Theory of Gravity, which is only invariant under a subgroup of diffeomorphisms.

**Session Classification:** SHORT TALKS

**Track Classification:** SYMPOSIUM ON BLACK HOLES AND GRAVITATIONAL WAVES