



Contribution ID: 1026

Type: Talk in the parallel session

## Symmetries and geometric spacetime: towards a new paradigm

*Wednesday, 7 July 2021 09:20 (10 minutes)*

In this talk the geometrical methods and symmetry principles in gravitation are explored motivating a new perspective into the spacetime paradigm. The effects of post-Riemann spacetime geometries with torsion are briefly studied in applications to fundamental fermionic and bosonic fields, cosmology, astrophysics and gravitational waves. The physical implications and related phenomenological considerations are addressed, and the fundamental ideas related to spacetime physics, motivated by geometrical methods and symmetry principles, are also discussed in the context of the possible routes towards a new spacetime paradigm in gravitation and unified field theories.

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**Session Classification:** Wormholes, Energy Conditions and Time Machines

**Track Classification:** Alternative Theories: Wormholes, Energy Conditions and Time Machines