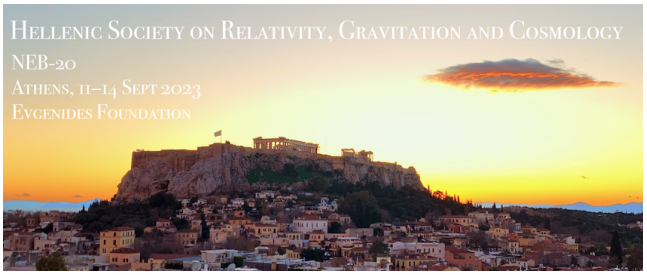

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Hidden symmetries from distortions of the conformal structure

Wednesday, 13 September 2023 15:00 (30 minutes)

In this work we explore the motion of massive particles in curved backgrounds. We demonstrate how new symmetries emerge by distorting the conformal vectors of the spacetime metric and how they lead to additional conserved quantities. Beside (pseudo-)Riemannian geometry, we also apply this scheme to certain Finslerian extensions. Finally, we explain how the emergence of these symmetries is inherently linked to a process of an explicit symmetry breaking.

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