Contribution ID: **17** Type: **Talk in the parallel session**

Hydrodynamic representation for fermion particles in curved space-times.

Monday, 5 July 2021 16:50 (20 minutes)

We study the hydrodynamic representation of the Dirac equation in arbitrary curved space-times coupled to an electromagnetic field. Using a generalized Madelung transformation we derive an integral of the corresponding Bernoulli equation for ferminos and show the corresponding Bernoulli equation. Using the comparison of the Dirac and the Klein-Gordon equations we derive the balance equations for fermion particles.

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