

## Iberian Strings 2023



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# On action and properties of 10D multiple D0-brane system

*Thursday 12 January 2023 12:50 (15 minutes)*

We present an action for the dynamical system of  $N$  nearly coincident multiple D0-branes and strings connecting these D0-branes (mD0 system) which is invariant under spacetime (type IIA target superspace) supersymmetry and the local worldline supersymmetry generalizing the kappa-symmetry of single D0-brane action (massive  $D=10$  superparticle or Dirichlet superparticle). The action includes an arbitrary nonvanishing function  $M(H)$  of the relative motion Hamiltonian  $H$ . The 10D mD0 model with a particular form of  $M(H)$  can be obtained by dimensional reduction from the action of the  $D=11$  multiple M-wave (mM0) system. This talk is based on Phys. Rev. D106 (2022) 066004 with Igor Bandos.

**Presenter:** DE MIGUEL SÁRRAGA, Unai (Department of Physics and EHU Quantum Center, University of the Basque Country UPV/EHU)

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