

## SEMINARIO SISTEMAS DINÁMICOS DE SANTIAGO

**Speaker:** Renato Velozo (Sorbonne Université)

**Title:** Non-linear stability of hyperbolic collisionless many-particle systems.

**Abstract:** I will present upcoming non-linear stability results concerning the asymptotic behavior of solutions to classical models arising in kinetic theory. First, I will present an asymptotic stability result for the exterior of the Schwarzschild family of black holes as a solution to the Einstein--massless Vlasov system, assuming spherical symmetry. We exploit the normal hyperbolicity of the trapped set in the black hole exterior to obtain decay in time of the energy momentum tensor. I will also speak about an asymptotic stability result for small data solutions to the Vlasov--Poisson system with an unstable trapping potential (joint work with Anibal Velozo).

**When:** Lunes 3 de abril, 2023 / 4:30 PM - 5:30 PM

**Where:** Sala 2, Facultad de Matemáticas, Campus San Joaquín, Pontificia Universidad Católica de Chile

Para mayor información comunicarse con los siguientes e-mails: [raimundo.briceno@mat.uc.cl](mailto:raimundo.briceno@mat.uc.cl)

