Fakultät für Physik
Gravitationsphysik
1090 Wien, Boltzmanngasse 5

universität wien

E I N L A D U N G

im Rahmen des Literaturseminars

zum Vortrag von

Marius Oancea
(University of Vienna)

über

"Gravitational memory effects for particles and wave packets"

Abstract:

Gravitational waves can generally influence the dynamics of test objects with which they interact. Changes in the relative dynamics of test objects can persist even after the gravitational wave has passed and spacetime is again flat. These are generally referred to as gravitational memory effects, since the properties of the passing gravitational wave remain encoded in the relative dynamics of test objects. In this talk, I will discuss gravitational memory effects in plane wave spacetimes for different classes of test objects: particles following geodesics, spinning particles with non-geodesic motion, and test scalar fields. For all these objects, memory effects are encoded into a set of four memory tensors that depend on the gravitational wave profile.
Joint work with Abraham Harte, Thomas Mieling, and Florian Steininger.

Zeit: Mittwoch, 20.3.2024, 14:15h

Ort: Seminarraum A, Währinger Straße 17, 2. Stock

https://univienna.zoom.us/j/6540036841?pwd=SytyVkZJZzNyRG9lMm13ejlHeHRRUT09

gez.: P. Chrusciel, D. Fajman