**Seminarium Astrofizyczne**

wtorek 28.03.2023 godz. 12:30

ul. Pasteura 7, sala 404

https://www.gotomeet.me/NCBJmeetings/seminarium-astrofizyczne

ID 349-387-373 Password: AstroSemi

**David F. Mota**

(Institute of Theoretical Astrophysics, University of Oslo)

**Nonlinear Cosmological probes of gravity theories beyond General Relativity**

Several modifications to general relativity have been proposed with the aim to explain the nature of dark energy and the accelerated expansion of the Universe. In this talk I will review the present status of modified theories of gravity in the light of astrophysical probes of gravity in the weak-field regime, ranging from stars to cosmological scales.  I begin by setting the scene for how theories beyond General Relativity are expected to behave in the different astrophysical systems, as well as their cosmological signatures. With these in hand, I present a range of observational tests with an eye to using the current and next generation of observations for tests of gravity. In particular, I will show how physical observables of the non-linear regime of structure formation are promising probes to constraining theoretical models in the nonlinear dynamics of stars, galaxies, clusters and large scale structure.

Serdecznie zapraszam,

Agnieszka Majczyna