



NARODOWA AGENCJA
WYMIANY AKADEMICKIEJ



Mini Symposium Alternative Theories of Gravity

SPOTLIGHT TALKS NAWA-STER

Internationalisation of Doctoral Schools

11:00 - 11:15	Informal interaction between the speakers and students
11:15 - 12:00	Talk “ f(R) gravity: a robust approach ” by dr Luisa Jaime
12:00 - 12:15	Q & A
12:15 - 12:30	Coffee break with traditional Mexican treats
12:30 - 13:15	Talk “ Foundations of Einsteinian higher-curvature gravity ” by dr Gustavo Arciniega
13:15 - 13:30	Q & A
13:30 - 14:30	Informal discussion and food at room 314 of CFT



WEBSITE



Date: 12.12.2024




Location: Sala 203, IF-PAN, al. Lotników 32/46, Warsaw, PL

SPOTLIGHT TALK – NAWA STER



Dr Luisa Jaime

National Autonomous University of Mexico

 **Attention PhD Students and Researchers in Cosmology, Relativity and Theoretical Physics!**

Curious about navigating the complexities of modified gravity? Join us for an insightful talk on ***“f(R)-Gravity: A robust approach”***.

f(R) gravity stands as one of the most prominent modifications of gravity in cosmology and is gaining traction in various astrophysical applications. However, with its fourth-order field equations, f(R) gravity introduces unique challenges that have often led to misinterpretations, particularly with its equivalence to scalar-tensor theories. This talk will clarify these nuances, guiding you through **(1)** deriving the field equations **(2)** avoiding common scalar-tensor mapping pitfalls and **(3)** applying f(R)-gravity to compact objects and cosmology.

Don't miss this opportunity to learn everything you need to know about one of the most popular extensions to General Relativity, and interact with the speaker after the talk for more informal questions and discussion and taste some Mexican treats.



Date: 12.12.2024



Location: Sala 203, IF-PAN, al. Lotników 32/46, Warsaw, PL



Time: 11:00 hrs



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SPOTLIGHT TALK - NAWA STER

Have you wondered how to create an alternative theory of gravity that passes all the essential sanity checks?

Join us for a lecture on “**Theoretical foundations of Einsteinian higher-curvature gravity**” and learn the key steps to constructing a modified gravity theory that remains consistent with General Relativity (GR) while addressing cosmology’s biggest challenges.

Using the **Cosmological Generalized Quasitopological Gravity (CGQTG)** as example, we will cover how this theory (1) Smoothly transitions back to GR when modifications are off, (2) Propagates only the standard graviton, avoiding unwanted modes, (3) Maintains second-order equations for black holes and FLRW cosmology, (4) Achieves early and late-time acceleration naturally, without an inflation field or cosmological constant and (5) Solves the graceful exit problem by transitioning seamlessly to the GR regime.

Get hands-on insights into the rigorous “sanity checks” needed to ensure new theories stand up to observational and experimental scrutiny, and don’t miss out the opportunity to interact with the speaker for informal discussions and some Mexican treats.



Date: 12.12.2024



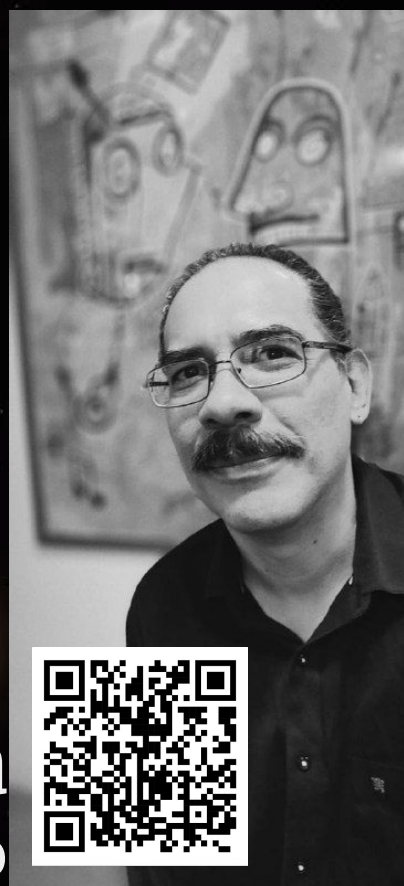
Location: Sala 203, IF-PAN, al. Lotników 32/46, Warsaw, PL



Time: 12:15 hrs



Dr Gustavo Arciniega
National Autonomous University of Mexico



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