



Contribution ID: 887

Type: **Talk in the parallel session**

## **Analytic infinite derivative gravity as the quantum gravity probe**

*Monday, 5 July 2021 17:45 (30 minutes)*

I will discuss the general aspects of the Analytic Infinite Derivative (AID) gravity theories. It will be shown in details why an infinite number of derivatives is required to eradicate ghosts. Explicit ghost-free construction will be presented. Then it will be explained how unitarity is maintained in this non-local setup upon accounting loop corrections. Observational aspects will be briefly touched.

**Primary author:** KOSHELEV, alexey (universidade da beira interior)

**Presenter:** KOSHELEV, alexey (universidade da beira interior)

**Session Classification:** Ghost-Free Models of Modified Gravity: Massive Gravity, Horndeski and DHOST Theories, Other Related Models; Their Properties and Solutions.

**Track Classification:** Alternative Theories: Ghost-free models of modified gravity: massive gravity, Horndeski and DHOST theories, other related models; their properties and solutions.