



Contribution ID: 74

Type: **not specified**

## Observational constrained $F(R,G)$ gravity cosmological model and the dynamical system analysis

*Thursday 31 August 2023 22:05 (5 minutes)*

The geometrical and dynamical parameters of the  $F(R,G)$  gravity cosmological model is constrained through the cosmological data sets. The functional form of  $F(R,G)$  involves the square Ricci scalar and the higher power of the Gauss-Bonnet invariant. The observed value of the free parameters in the expression of  $H(z)$ , the Hubble parameter, indicates a different phase of the evolution of the Universe. In all the data sets, the early deceleration and late time acceleration behavior of the Universe has been observed. We develop a set of dynamical equations for a given physical system and find the numerical solutions, along with phase-space solutions, and the stability of individual critical points. We also discuss the asymptotic behavior of the critical points of the system.

**Presenter:** LOHAKARE, Santosh (BITS-Pilani, Hyderabad Campus, India)

**Session Classification:** Posters of thursday (ignore time)