# RAMMOHAN COLLEGE
## FACULTY ACADEMIC PROFILE

Name: Ranajit Mandal

Department: Physics

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Academic background: M.Sc

Positions: Assistant Professor

Research interest: Quantum Cosmology, Canonical formulation of Higher Order Theory of Gravity

Project: -

Research guidance: -

Research publications:

**1. Resolving the issue of branched Hamiltonian in modified Lanczos-Lovelock gravity**

**S. N. Ruz, R. Mandal, S. Debnath and A. K. Sanyal, Gen. Relativ. Gravit. 48, 86 (2016).**

**2. Canonical formulation of Pais-Uhlenbeck action and resolving the issue of branched Hamiltonian**

**K. Sarkar, N. Sk, R. Mandal and A. K. Sanyal, Int. J. Geom. Meth. Mod. Phys. 14, 1750038 (2017).**

**3. History of cosmic evolution with Gauss-Bonnet-dilatonic coupled term**

S. Debnath, A. K. Sanyal, S. N. Ruz and R. Mandal, Eur. Phys. J. C 77, 318 (2017).

4. **Equivalent and inequivalent canonical structures of higher order theories of gravity**

R. Mandal and A. K. Sanyal, Phys. Rev. D 96, 084025 (2017).

5. **Early universe with modified scalar-tensor theory of gravity**

R. Mandal, C. Sarkar and A. K. Sanyal, J. High Energy Phys. 05, 078 (2018).

6. **Cosmological Lorentzian wormholes via Noether symmetry approach**

A. K. Sanyal and R. Mandal, Phys Astron. Int. J. 2, 498-506 (2018).

7. **Probing early universe with a generalized action**

R. Mandal, D. Saha, M. Alam, A. K. Sanyal, Annals of Physics 422, 168317 (2020).

8. **Early Universe in view of a modified theory of gravity**

R. Mandal, D. Saha, M. Alam, A. K. Sanyal, Class. Quantum Grav. 38, 025001 (2021).