



Prof. Wompherdeiki Khyllep

Educational Qualification:

MSc

National Eligibility Test

Research Interest: Gravitational theories, Cosmology, Dynamical systems.

Publications:

1. Jibitesh Dutta, Wompherdeiki Khyllep and Hmar Zonunmawia, *Cosmological dynamics of the general non-canonical scalar field models*, Eur. Phys. J. C, **79** 359 (2019)
2. Hmar Zonunmawia, Wompherdeiki Khyllep, Jibitesh Dutta and Laur Järv, *Cosmological dynamics of brane gravity: A global dynamical system perspective*, Phys. Rev. D **98**, 083532 (2018)
3. Jibitesh Dutta, Wompherdeiki Khyllep, Emmanuel N. Saridakis, Nicola Tamanini and Sunny Vagnozzi, *Cosmological dynamics of mimetic gravity*, J. Cosmol. Astropart. Phys. **02**, 041 (2018)
4. Jibitesh Dutta, Wompherdeiki Khyllep and Nicola Tamanini, *Dark energy with a gradient coupling to the dark matter fluid: cosmological dynamics and structure formation*, J. Cosmol. Astropart. Phys. **01**, 038 (2018)
5. Hmar Zonunmawia, Wompherdeiki Khyllep, Nandan Roy, Jibitesh Dutta and Nicola Tamanini, *Extended Phase Space Analysis of Interacting Dark Energy Models in Loop Quantum Cosmology*, Phys. Rev. D **96**, 083527 (2017)
6. Jibitesh Dutta, Wompherdeiki Khyllep and Nicola Tamanini, *Scalar-Fluid interacting dark energy: cosmological dynamics beyond the exponential potential*, Phys. Rev. D **95**, 023515 (2017)
7. Sujay Kr Biswas, Wompherdeiki Khyllep, Jibitesh Dutta and Subenoy Chakraborty, *Dynamical analysis of an interacting dark energy model in the framework of a particle creation mechanism*, Phys. Rev. D **95**, 103009 (2017).

8. Jibitesh Dutta, Wompherdeiki Khylllep and Nicola Tamanini, *Cosmological dynamics of scalar fields with kinetic corrections: Beyond the exponential*, Phys. Rev. D **93**, 063004 (2016)
9. Jibitesh Dutta, Wompherdeiki Khylllep and Erickson Syiemlieh, *Late time accelerated scaling attractors in DGP braneworld*, Eur. Phys. J. Plus **131**, 33 (2016).

Conferences and seminars attended (2014-2018)

1. UGC SAP NEHU Workshop and National Conference on “Contemporary Topics in Mathematics” on the 16th-17th December 2014
2. Workshop on “Mathematical Modelling and its Applications” organised by the Department of Mathematics, NIT Meghalaya, on 19-20 August, 2016
3. Global Initiative For Academic Networks (GIAN) course on “Introduction to Cosmological Perturbation Theory” organised by the Department of Physics Jamia Millia Islamia, New Delhi on the 16th -23rd December, 2016
4. National Conference on Mathematics and its applications-2016 at Cotton College jointly organised by the Department Mathematics, Cotton College State University, Guwahati and Department Mathematics, Cotton College, Guwahati on the 21-22 October, 2016
5. Science Academies’ Lecture Workshop on “Hyperbolic Partial Differential Equation and Its Conservation Laws” organised by the Department of Basic Sciences and Social Sciences and Department of Mathematics, North Eastern Hill University, Shillong on the 22nd-25th February 2017
6. UGC-SAP sponsored National seminar on “Current Trends in Mathematics” organised by the Department of Mathematics, North Eastern Hill University, Shillong on the 14th -16th March 2017
7. UGC-SAP sponsored National seminar on “Topology & Algebra” organised by the Department of Mathematics, North Eastern Hill University, Shillong on the 13th -14th March 2019