The EinsteinPy Project

The EinsteinPy Project is a community effort to develop a single core python package for all the basic to advanced level general relativity research / related tasks and to provide a framework which is complete and very easy to use. The library solves various complex equations

The EinsteinPy core package is an Astropy Affiliated Package and maintains high standards in code quality and testing. The precision levels and simulations allow high quality research using the package.

einsteinpy.org | **github.com/einsteinpy** | **docs.einsteinpy.org**

SUMMARY OF FEATURES

EinsteinPy has following modules:
* Coordinates (Supports BoyerLindquist conversion)
* Metric : (Schwarzschild, Kerr, KerrNewman) solving Vacuum Solutions of Einstein's Field Equations
* High level visualisation API - (Backend aware)
* Symbolic : Supports fast tensor algebra - Symbolic tensor creation and calculation
* Hypersurface: Modelling space like hypersurfaces for any space-time geometry

conda install -c conda-forge einsteinpy
-OR-
pip install einsteinpy

FUTURE/PLANNED FEATURES

- Bi-metric General Relativity Support
- Null Geodesics
- Extending Symbolic Support for numerical calculations
- Adaptive Mesh Refinement in Python
- Solving non-vacuum solutions

HOW TO GET INVOLVED

EinsteinPy is a rich community of over 200+ members and strict community guidelines
Contribute: https://contributing.einsteinpy.org
Ask: https://chat.einsteinpy.org

HOW TO CITE

If you use EinsteinPy for work/research presented in a publication, please cite the EinsteinPy Paper:
The EinsteinPy Project: Python for General Relativity, Shreyas Bapat, Bhavya Bhatt, Ritwik Saha, Priyanshu Khandelwal, Shilpi Jain 2019

CORE TEAM AND INVOLVED PEOPLE

Maintainers: Shreyas Bapat, Ritwik Saha
Coordination Committee: Bhavya Bhatt, Priyanshu Khandelwal
Documentation and Writing Committee: Shilpi Jain, Akshita Jain
Summer of Code Students: Sofia Ortin Vela, Varun Singh, Jyotirmaya Shivottam
Organization Members: Rishi Sharma

Includes sponsored work from

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Google Summer of Code

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