Contribution ID: **90**   Type: **talk**

OGRe and OGRePy: Object-Oriented General Relativity in Mathematica and Python

Wednesday 25 September 2024 16:55 (25 minutes)

I will present a detailed introduction to my Mathematica package, OGRe: (O)bject-Oriented (G)eneral (Re)lativity, and its Python port OGRePy, both of which would be of great interest to anyone doing research in general relativity. I will demonstrate the package's usage and features, including its ability to calculate arbitrary tensor formulas involving any combination of addition, multiplication, trace, contraction, and partial and covariant derivatives, while automatically figuring out the proper index configuration and coordinate system to use for each tensor. I will discuss how this package has been used in research so far, as well as future plans.

Primary author: SHOSHANY, Barak (Brock University)

Presenter: SHOSHANY, Barak (Brock University)

Session Classification: Session VI. Information paradox and thermodynamics of gravity