

Gravitational Radiation at Conformal Infinity

Kaushal Jaikumar Pillay

Department of Mathematics and Statistics,
University of Otago,
New Zealand.
`pilka473@student.otago.ac.nz`

In an ongoing project, we are analysing the response of a static black hole to (non-linear) perturbations by gravitational waves in the asymptotic regime. We now look to analyze what happens when the ingoing gravitational wave carries linear momentum and to compute the linear Bondi-Sachs momentum in the emitted radiation. In this talk, we will discuss some of the numerical set-up, and our approach towards computing the cross-section of the scattering process.

References

- [1] Camden, B., Frauendiener, J., Galinski, J. *et al.* A numerical framework for studying asymptotic quantities. *Gen Relativ Gravit*, **57**, 64 (2025).
- [2] Frauendiener, J. and Stevens, C. A new look at the Bondi–Sachs energy–momentum. *Class. Quantum Grav.* **39** 025007 (2022).