

Solution generation techniques in gravitational theories - Lecture 1

Thursday, November 25, 2021 11:00 AM (2 hours)

The construction of exact solutions in gravitational theories, from black holes to cosmological solutions, is of great interest. In these lectures, we will give an overview of the solution generation techniques in the realm of gravitational theories by focusing on two of them: the Ernst formalism and the inverse scattering method. In both cases, we will explicitly construct the integration scheme for the equations of motion and we will apply it to some relevant examples of black hole physics.

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