Extreme-Mass-Ratio binaries are systems of two compact objects orbiting around each other, such as a black hole or a neutron star, where one of the two is extremely heavier than the other.

This thesis introduces a series of orbits to study their final stage. Thanks to these it is possible to predict the gravitational waves emitted by a test body in the Schwarzschild metric of a supermassive black hole.

Furthermore a formalism handling the spin of the minor companion in the compact binary is introduced, with an application to the Schwarzschild case.