General Relativity (I)

homework for week 14

due: week 16

1. [Gravitational wave detector] 30%
Find information for one of the **future** gravitational wave detectors (e.g. LIGO-India, Einstein Telescope, Cosmic Explorer, LISA, TainQin, Taiji, DECIGO etc.), and briefly report
(1) the planned launch/operation year
(2) the observational frequency
(3) the instrument design.

2. [modelling gravitational wave source] 70%
The theoretical gravitational signal can be approximately computed by different methods (see **Fig. 1**). Select one of the lecture videos (each of them is about one hour) from the 2018 Dublin School on Gravitational Wave Source Modelling website, write down
(1) the link to the your selected video, and
(2) summarize what you learned from that video.

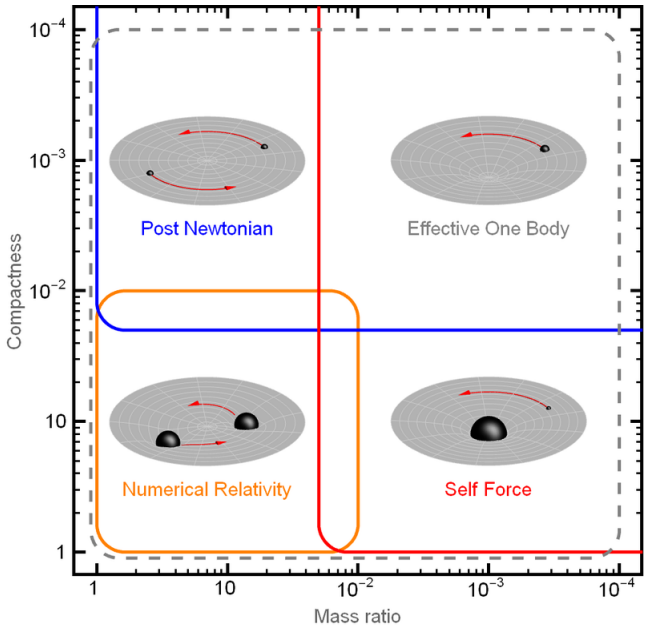

Figure 1: Various approximation schemes for modeling gravitational wave signal. Figure adopted from the wikipedia.