GW190521 is the most massive binary black hole observed to date. The merger of its two components, with mass ~85 $M_\odot$ and ~66 $M_\odot$, gave birth to a ~142 $M_\odot$ black hole becoming the first intermediate-mass black hole candidate detected with gravitational waves [1,2].

Observations show an effective spin parameter of $\chi_{\text{eff}} \sim 0.08$ and a precession spin parameter of $\chi_p \sim 0.68$. This favors a precessing binary model with in-plane spin components and high spin magnitudes for both the black holes [1,2].

My simulations include:

- Post-Newtonian parameters up to 2.5 order [4]
- Relativistic Kick prescription for mergers [5]

The initial conditions are set up to reproduce the young star clusters of Di Carlo et al. 2019 [6], which include a black hole population in the pair-instability mass gap and in the intermediate-mass range formed via repeated stellar mergers.