

# Probing the black hole mass function using LISA capture sources

- The black hole mass function is poorly constrained in the range  $10^4 M_{\odot} < M_{\bullet} < 10^7 M_{\odot}$
- LISA will detect tens to hundreds of capture events (EMRIs) in this mass range at  $z < 1$  and measure their parameters precisely.
- We discuss what constraints the set of EMRI events can place on a mass function model

$$\frac{dn}{d \log(M_{\bullet})} = A_0 \left( \frac{M_{\bullet}}{3 \times 10^6 M_{\odot}} \right)^{\alpha_0}$$



