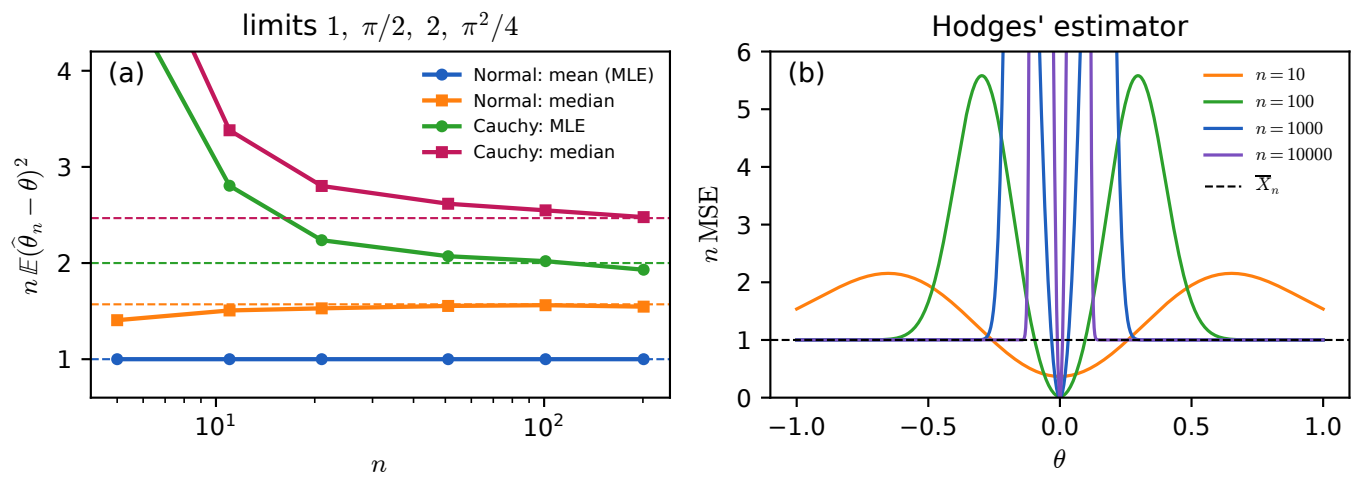

limits $1,\ \pi/2,\ 2,\ \pi^2/4$
(a)
Normal: mean (MLE)
Normal: median
Cauchy: MLE
Cauchy: median
$n\,\mathbb{E}(\hat{\theta}_n-\theta)^2$
n
Hodges' estimator
(b)
$n=10$
$n=100$
$n=1000$
$n=10000$
$\overline{X}_n$
$n\,\mathrm{MSE}$
θ