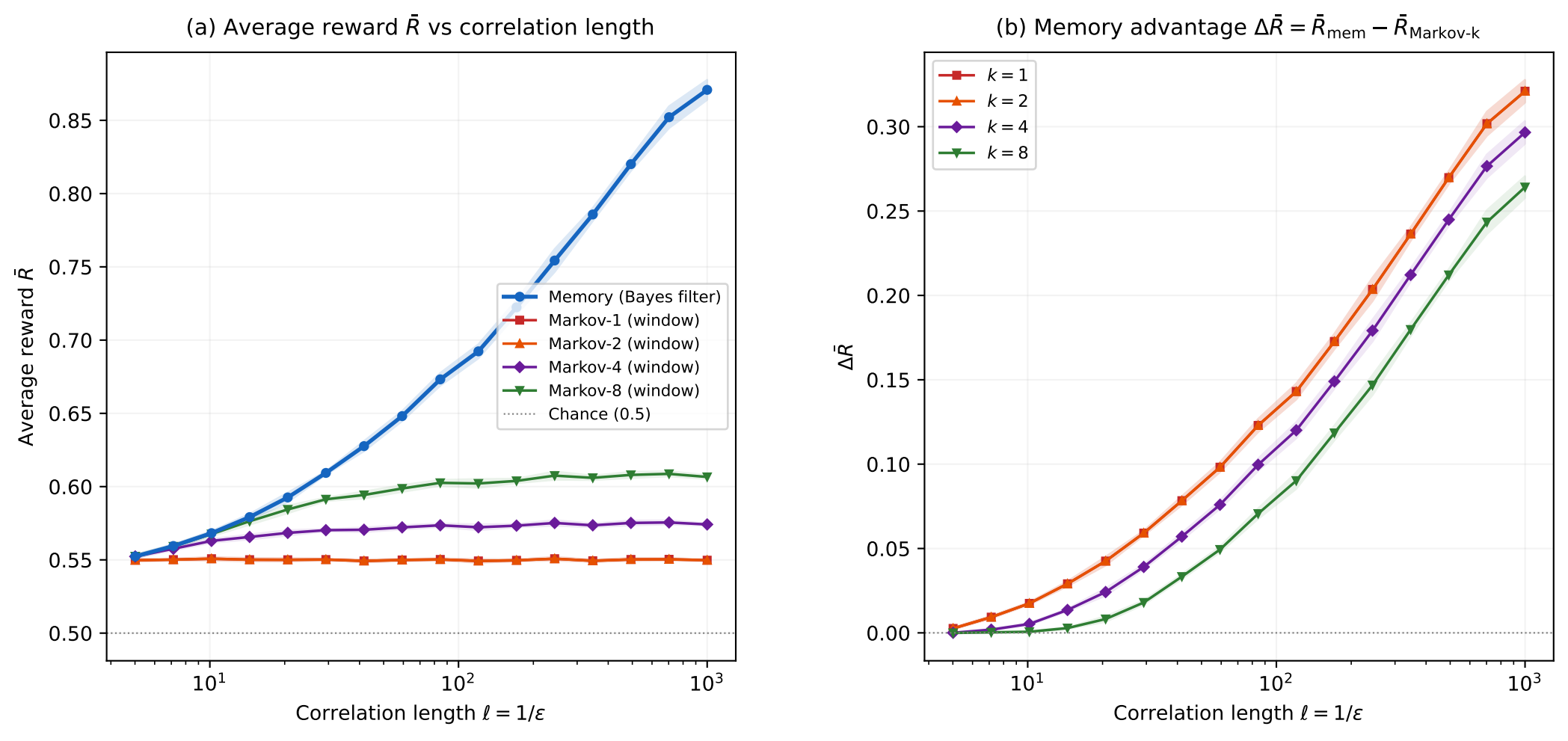
(a) Average reward $\bar{R}$ vs correlation length
Average reward $\bar{R}$
0.85
0.80
0.75
0.70
0.65
0.60
0.55
0.50
10^1
10^2
10^3
Correlation length $\ell = 1/\varepsilon$
Memory (Bayes filter)
Markov-1 (window)
Markov-2 (window)
Markov-4 (window)
Markov-8 (window)
Chance (0.5)
(b) Memory advantage $\Delta\bar{R} = \bar{R}_{\text{mem}} - \bar{R}_{\text{Markov-k}}$
$\Delta\bar{R}$
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10^1
10^2
10^3
Correlation length $\ell = 1/\varepsilon$
$k = 1$
$k = 2$
$k = 4$
$k = 8$