## Cumulated regrets for different bandit algorithms, averaged 1000 times

 $9 \; \mathsf{arms:} \; [G(0.1, 0.05), G(0.2, 0.05), G(0.3, 0.05), G(0.4, 0.05), G(0.5, 0.05), G(0.6, 0.05), G(0.7, 0.05), G(0.8, 0.05), G(0.9, 0.05) *]$ Aggregator(N = 6) Exp4(N=6) $\mathsf{CORRAL}(N=6, \mathsf{broadcast} \mathsf{to} \mathsf{all})$ LearnExp(N=6,  $\eta=0.9$ ) 400  $\mathsf{UCB}(\alpha = 1)$ Thompson KL-UCB(Bern)  $oldsymbol{\mathbb{E}}_{1000}[r_s]$ KL-UCB(Exp) KL-UCB(Gauss) BayesUCB Lai & Robbins lower bound =  $2.72 \log(T)$ Cumulated regret  $R_{\!\scriptscriptstyle t} = t \mu$ 200 100 0 2500 5000 15000 7500 10000 20000 12500 17500 Time steps t = 1...T, horizon T = 20000