



**Fig. 3** Monotone function estimation using model (5) with three different approaches. Top: the proposed LS-ESS approach with  $N = 27$  (left) and  $N = 100$  (right). Middle: the FFT-WC ESS approach with  $N = 27$  and  $N = 100$  (right). Bottom: the HMC sampler with  $N = 27$  (left) and  $N = 100$  (right). The computation time (in second) of running the MCMC sampler for 6,000 iterations is displayed at the main part of each panel, where the first 1,000 iterations are discarded as burn-in.