Figure 5: “Couette-Graetz” conduction-convection problem: relative errors \( \max_{\mu \in \Xi_{\text{train}}} (\Delta_{N_{\text{pr}}} (\mu) / \|u^N_{N_{\text{pr}}} (\mu)\|_X) \) and \( \max_{\mu \in \Xi_{\text{train}}} (\Delta_{N_{\text{du}}} (\mu) / \|\psi^N_{N_{\text{du}}} (\mu)\|_X) \) as a function of \( N_{\text{pr}} \) and \( N_{\text{du}} \) for the RB approximations computed during the greedy procedure, for the primal (left) and the dual (right) problem, respectively. Here \( \Xi_{\text{train}} \) is a uniform random sample of size \( n_{\text{train}} = 1000 \) and the RB tolerance is \( \epsilon_{\text{tol}}^* = 10^{-2} \).

Figure 6: “Couette-Graetz” conduction-convection problem: selected parameter values \( S_{N_{\text{pr}}} \) for the primal (left) and \( S_{N_{\text{du}}} \) for the dual (right) in the parameter space.