

Best-Response problem in sequence form The best-response problem of player i against strategy r_{adv} of the adversarial player in sequence form is formulated as:

$$\max_{r_1} \sum_{q_1 \in Q_1} \sum_{q_{adv} \in Q_{adv}} r_1^T(q_1) U_1(q_1, q_{adv}) r_{adv}^T(q_{adv}) \quad (1)$$

Algorithm 1 Upper Bound

```

function UB( $\Gamma, h, \pi^{adv}, \pi^1$ )
  if  $h \in Z$  then
    return  $u(h)$ 
   $v(h) \leftarrow -\infty$ 
  if ( $h \in I | P(I) = 1$ ) then
    for  $a \in A(h)$  do
       $v(h) \leftarrow \max\{v(h), \sum_{a \in A(I)} \pi_a^1 \text{UB}(\Gamma, ha, \pi^{adv}, \pi^1)\}$ 
  if ( $h \in I | P(I) = adv$ ) then
    for  $a \in A(h)$  do
       $v(h) \leftarrow \max\{v(h), \sum_{a \in A(I)} \pi_a^{adv} \text{UB}(\Gamma, ha, \pi^{adv}, \pi^1)\}$ 
  return ( $\Gamma, v$ )

```
