| N | Set of players $\{0, 1, \ldots, n\}$ |
|-------------------|--|
| N^+ | Evaders $\{1, 2, \dots, n\}$ (0 is the catcher) |
| Ψ | Set of sites (e.g., targets in security games) |
| r_i | Resource of player i |
| $\ell_{i,\psi}$ | Resource limit player i can put on site ψ |
| $a_{i,\psi}$ | Alternating utility of player i on site ψ |
| $b_{i,\psi}$ | Base utility of player i on site ψ |
| $c_{i,\psi}$ | Constant utility of player i on site ψ |
| $d_{i,\psi}$ | Utility change (delta) of player i on site ψ |
| $x_{i,\psi}$ | Amount of resource i puts on ψ (strategy) |
| $x_{\Sigma,\psi}$ | Sum of all evaders' resource on ψ |
| $x_{-i,\psi}$ | Amount of resource i's opponent puts on ψ |
| $\mu_{i,\psi}$ | Per-resource utility of i on ψ : $b_{i,\psi} + d_{i,\psi}x_{-i,\psi}$ |
| $u_{i,\psi}$ | Utility of i on ψ : $\mu_{i,\psi}x_{i,\psi} + a_{i,\psi}x_{-i,\psi} + c_{i,\psi}$ |
| $	heta_i$ | Utility threshold of player i |