

$$\begin{aligned}
& \min_{v \in \mathbb{R}, g \in \mathbb{R}^d} v \\
& \text{s.t. } \forall i, \quad v \geq u_i + \langle z_i^\star, x - x_i \rangle \\
& \quad + \frac{1}{2(1 - \ell/L)} \left(\frac{1}{L} \|g - z_i^\star\|^2 + \ell \|x - x_i\|^2 - 2 \frac{\ell}{L} \langle z_i^\star - g, x_i - x \rangle \right)
\end{aligned}$$