Shifted Linearized Constraint $\ell_{F_2}(x, x^{(t)})$

Legend:
- (gray solid line) $\{F_2 \leq 0\}$
- (orange solid line) $\{\ell_{F_2}(x, x^{(t)}) - (1 - \alpha)F_2(x^{(t)}) - \tau \leq 0\}$
- (purple dashed line) $\{\ell_{F_2}(x, x^{(t)}) \leq 0\}$
- (filled circle) $x^{(t)}$
- (open circle) $x_\alpha^{(t)}$
- (star) x^*