

$$\mathbf{x}^0 = [\mathbf{a}^0, \mathbf{q}^0]$$

 $\mathbb{P}_2$ 

Linearize  
 $\mathbf{g}_{\text{buck}}$  at  
point  $\mathbf{P}_k$

 $\tilde{\mathbf{g}}_{\text{buck}}$ 

Solve  
linearized  
problem  $\tilde{\mathbb{P}}_2$

 $\mathbf{x}^{k+1}$ 

No

$$\|\Delta \mathbf{x}\|_{\infty} \leq \text{tol}_{slp}$$

 $\bar{\mathbf{a}}^k$ 
 $n++$ 

Yes

Yes

$$n \leq n_{\max}$$

Reinitialization

No

$$\tilde{\mathbf{x}}^* = [\tilde{\mathbf{a}}^*, \tilde{\mathbf{q}}^*]$$

