

$$\begin{aligned}
& \underset{\substack{V, \rho, L, L_t, \\ L_{0,i}, S_k, L}}{\text{minimize}} && \sum_{k=1}^N \text{vol}(\mathcal{E}(t_k)) = \\
& \text{subject to} && g(w) = 0, \\
& && n(w)6, \\
& && L(w) + r(x) = Kw + p, \\
& && h(x) = 0.
\end{aligned} \tag{1}$$

$$\begin{aligned}
& \inf_{\substack{V, \rho, L, L_t, \\ L_{0,i}, S_k, L}} \sum_{k=1}^N \text{vol}(\mathcal{E}(t_k)) \\
& \rho(0) - V(0, \bar{x}) - \sum_i^N L_{0,i}(\bar{x}) g_{0,i}(\bar{x}) \quad \text{is SOS}
\end{aligned}$$