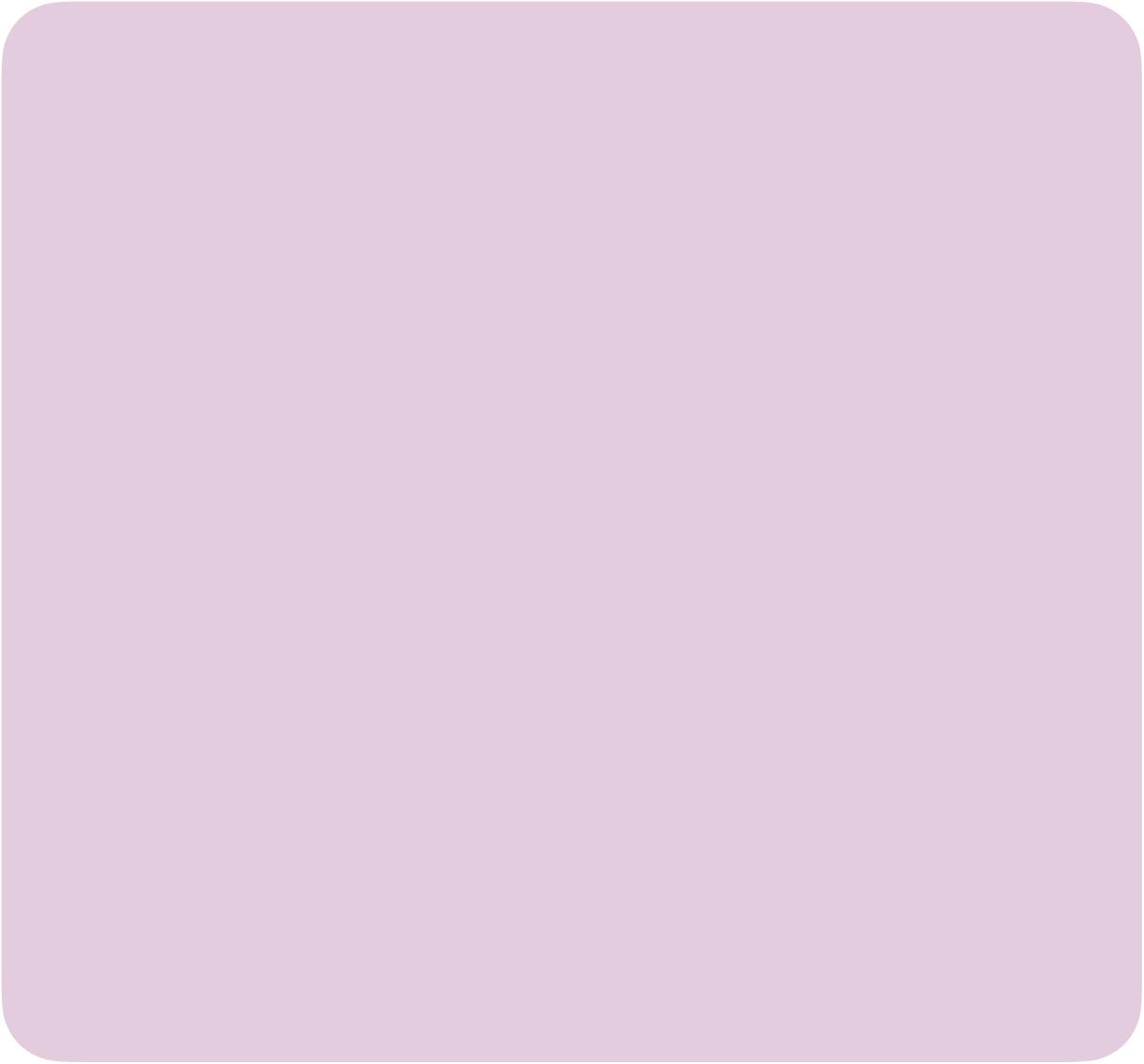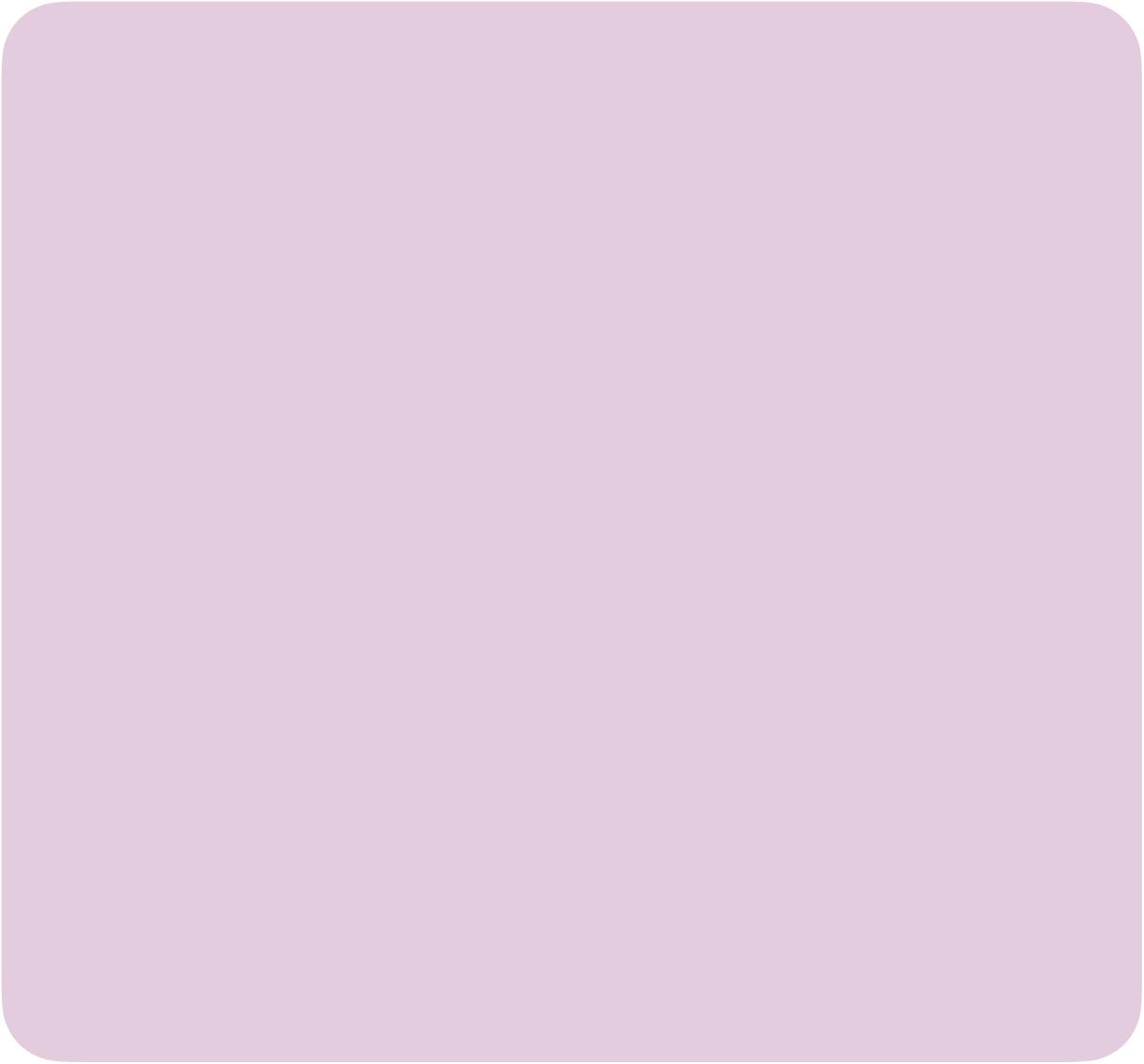# Trajectory Optimisation

Shooting methods

Optimisation variables: $a_0, \ldots, a_H$

Actions

$$J(a_{0:H}) = \sum_{t=0}^{H} r(s_t, a_t)$$

Optimisation variables: $a_0, s_0, \ldots, a_H, s_H$

Actions and states

$$J(a_{0:H}, s_{0:H}) = \sum_{t=0}^{H} r(s_t, a_t)$$

$$\text{s.t. } \|s_{t+1} - f(s_t, a_t)\| = 0$$

Collocation methods

Trajectory Optimisation

Shooting methods

Optimisation variables: $a_0, \ldots, a_H$

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Collocation methods

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Shooting Methods
Illustration

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