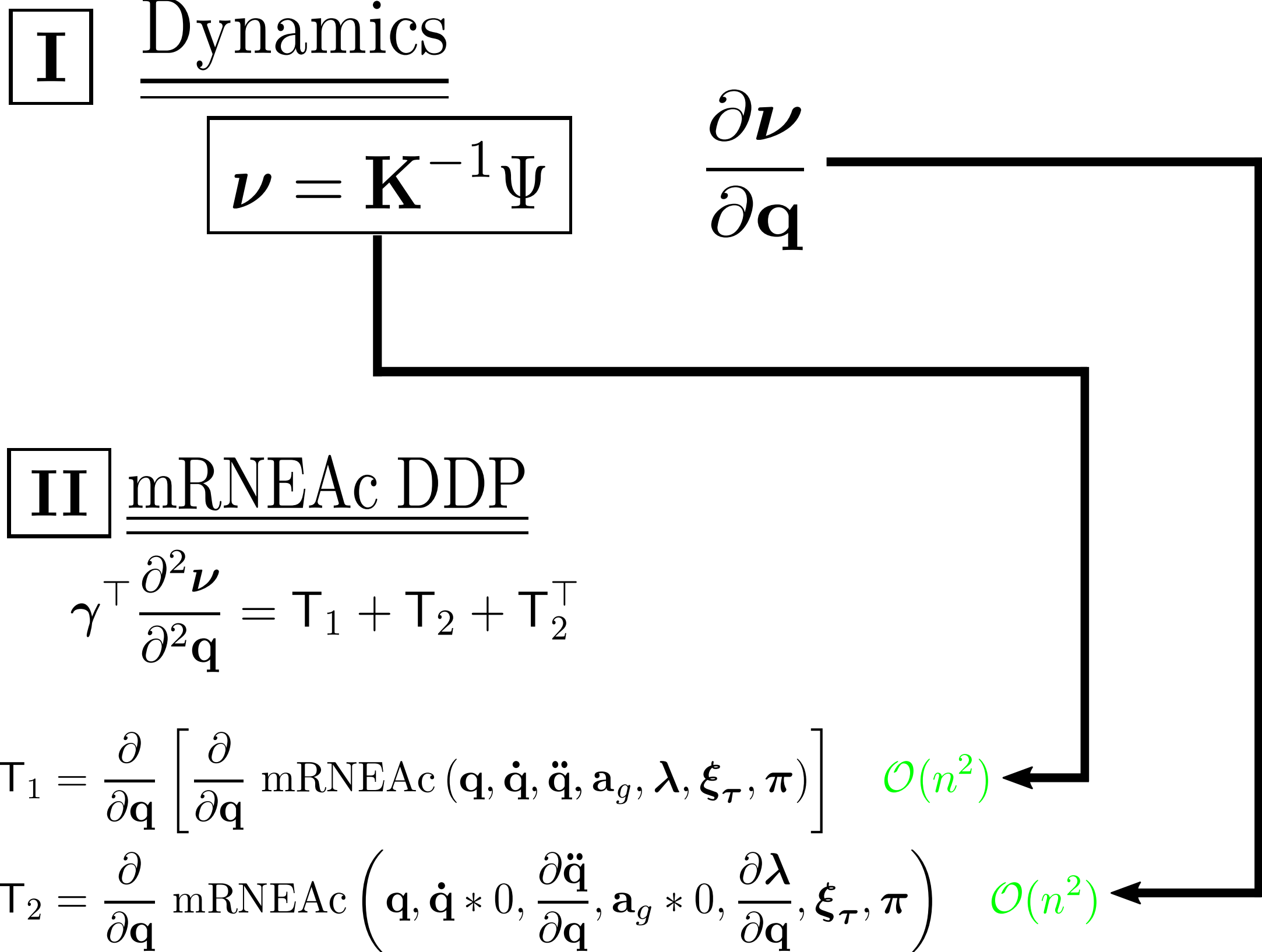
I Dynamics
$\boldsymbol{\nu} = \mathbf{K}^{-1}\Psi$
$\frac{\partial \boldsymbol{\nu}}{\partial \mathbf{q}}$
II mRNEAc DDP
$\boldsymbol{\gamma}^\top \frac{\partial^2 \boldsymbol{\nu}}{\partial^2 \mathbf{q}} = \mathsf{T}_1 + \mathsf{T}_2 + \mathsf{T}_2^\top$
$\mathsf{T}_1 = \frac{\partial}{\partial \mathbf{q}} \left[\frac{\partial}{\partial \mathbf{q}} \text{mRNEAc} \left(\mathbf{q}, \dot{\mathbf{q}}, \ddot{\mathbf{q}}, \mathbf{a}_g, \boldsymbol{\lambda}, \boldsymbol{\xi}_{\boldsymbol{\tau}}, \boldsymbol{\pi} \right) \right]$
$\mathcal{O}(n^2)$
$\mathsf{T}_2 = \frac{\partial}{\partial \mathbf{q}} \text{mRNEAc} \left(\mathbf{q}, \dot{\mathbf{q}} * 0, \frac{\partial \ddot{\mathbf{q}}}{\partial \mathbf{q}}, \mathbf{a}_g * 0, \frac{\partial \boldsymbol{\lambda}}{\partial \mathbf{q}}, \boldsymbol{\xi}_{\boldsymbol{\tau}}, \boldsymbol{\pi} \right)$
$\mathcal{O}(n^2)$