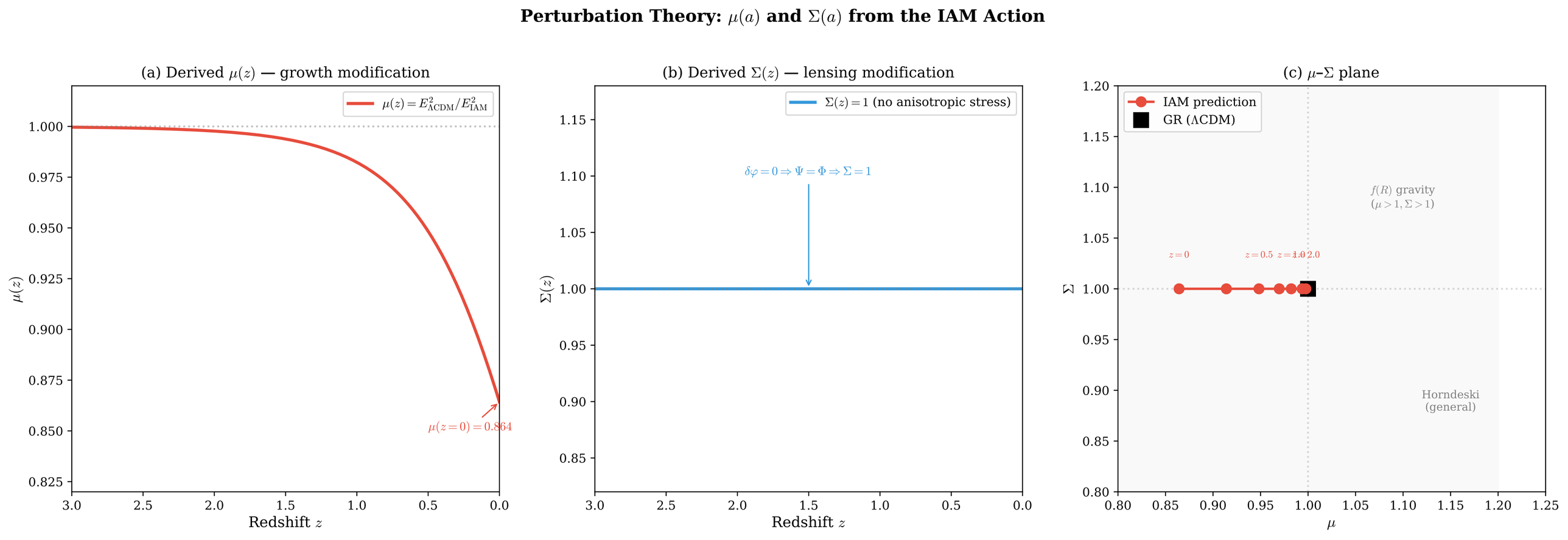
Perturbation Theory: $\mu(a)$ and $\Sigma(a)$ from the IAM Action
(a) Derived $\mu(z)$ — growth modification
$\mu(z) = E^2_{\Lambda\mathrm{CDM}}/E^2_{\mathrm{IAM}}$
$\mu(z=0) = 0.864$
$\mu(z)$
Redshift z
(b) Derived $\Sigma(z)$ — lensing modification
$\Sigma(z) = 1$ (no anisotropic stress)
$\delta\varphi = 0 \Rightarrow \Psi = \Phi \Rightarrow \Sigma = 1$
$\Sigma(z)$
Redshift z
(c) μ–Σ plane
IAM prediction
GR (ΛCDM)
$f(R)$ gravity
($\mu > 1, \Sigma > 1$)
Horndeski
(general)
$z=0$
$z=0.5$
$z=1.0$
$z=2.0$
Σ
μ