Exact numeric solve

 $\omega_{R}^{DN} = U f(r_D, r_{max}, \lambda, n)$

Weak mutations effects approximation

$$\lambda \ll r_{max}$$

effects of dimension n vanish

Approximated analytical closed form

$$\omega_R^{DN} pprox U \frac{e^{-lpha} \alpha^{-3/2}}{\sqrt{2\pi}}$$
 $lpha pprox rac{r_D^2}{4 \, r_{max} \, \lambda}$

The effective stress level

$$\phi_R^{SV} = g(r_D, r_{max}, \lambda, n)$$

$$\phi_R^{SV} \approx \frac{r_D}{\lambda n/2 + \alpha \lambda + r_D}$$