

$$\text{PDF}(x) = \frac{1}{\Gamma\left(\frac{1}{n_l}\right) \frac{s_l}{n_l} + \Gamma\left(\frac{1}{n_r}\right) \frac{s_r}{n_r}} \begin{cases} e^{-(-x/s_l)^{n_l}} & : x \leq 0 \\ e^{-(x/s_r)^{n_r}} & : x > 0 \end{cases}$$

$$\text{CDF}(x) = \frac{1}{\Gamma\left(\frac{1}{n_l}\right) \frac{s_l}{n_l} + \Gamma\left(\frac{1}{n_r}\right) \frac{s_r}{n_r}} \begin{cases} \Gamma\left(\frac{1}{n_l}, \left(-\frac{x}{s_l}\right)^{n_l}\right) \frac{s_l}{n_l} & : x \leq 0 \\ \Gamma\left(\frac{1}{n_l}\right) \frac{s_l}{n_l} + \gamma\left(\frac{1}{n_r}, \left(\frac{x}{s_r}\right)^{n_r}\right) \frac{s_r}{n_r} & : x > 0 \end{cases}$$

$$\Gamma(x) \equiv \int_0^{\infty} u^{x-1} e^{-u} \, \mathrm{d}u$$

$$\Gamma(x, y) \equiv \int_y^{\infty} u^{x-1} e^{-u} \, \mathrm{d}u$$

$$\gamma(x, y) \equiv \int_0^y u^{x-1} e^{-u} \, \mathrm{d}u$$