Tabulka momentů, laplaceovských obrazů a konvolucí balancovaných hustot pravděpodobnosti

Hustota	**Parametry**	**Předpis** $g(x)$	**Momenty**
Exponenciální	$\lambda > 0$	$g(x) = \Theta(x)\lambda \mathsf{e}^{-\lambda x}$	$\mu_k(g) = \frac{k!}{\lambda^k}$
Erlangovo	$\lambda > 0, n \in \mathbf{N}$	$g(x) = \Theta(x)\frac{\lambda^n}{(n-1)!}x^{n-1}\mathsf{e}^{-\lambda x}$	$\mu_k(g) = \frac{(n-1+k)!}{\lambda^k(n-1)!}$
Gamma	$\alpha > 0, \lambda > 0$	$g(x) = \Theta(x)\frac{\lambda^\alpha}{\Gamma(\alpha)}x^{\alpha-1}\mathsf{e}^{-\lambda x}$	$\mu_k(g) = \frac{\Gamma(\alpha+k)}{\lambda^k\Gamma(\alpha)}$
GIG	$a, b > 0, p \in \mathbf{R}$	$g(x) = \frac{\left(\frac{a}{b}\right)^{\frac{p}{2}}}{2\mathcal{K}_p\left(\sqrt{ab}\right)}\Theta(x)x^{p-1}\mathsf{e}^{-\frac{ax+\frac{b}{x}}{2}}$	$\mu_k(g) = \left(\frac{b}{a}\right)^{\frac{k}{2}}\frac{\mathcal{K}_{k+p}\left(\sqrt{ab}\right)}{\mathcal{K}_p\left(\sqrt{ab}\right)}$

Hustota	**Laplaceův obraz** $G(s)$	**Konvoluce** $\overset{m}{\underset{\ell=0}{\bigstar}} g(x)$
Exponenciální	$\frac{\lambda}{\lambda+s}$	$\Theta(x)x^m\frac{\lambda^{m+1}}{m!}\mathsf{e}^{-\lambda x}$
Erlangovo	$\left(\frac{\lambda}{\lambda+s}\right)^n$	$\Theta(x)\frac{\lambda^{mn+n}}{(nm+n-1)!}x^{nm+n-1}\mathsf{e}^{-\lambda x}$
Gamma	$\left(\frac{\lambda}{\lambda+s}\right)^\alpha$	$\Theta(x)\frac{\lambda^{(m+1)\alpha}}{\Gamma((m+1)\alpha)}x^{(m+1)\alpha-1}\mathsf{e}^{-\lambda x}$
GIG	$\left(\frac{a}{a+2s}\right)^{\frac{p}{2}}\frac{\mathcal{K}_p\left(\sqrt{(a+2s)b}\right)}{\mathcal{K}_p\left(\sqrt{ab}\right)}$	$\frac{\Theta(x)\left(\frac{a}{b}\right)^{\frac{m+1}{2}p}x^{p(m+1)-1}}{2(m+1)^{(m+1)p}\mathcal{K}_{(m+1)p}\left((m+1)\sqrt{ab}\right)}\mathsf{e}^{-\frac{ax}{2}-\frac{b(m+1)^2}{2x}}$